
COMMITTEE ON THE PEACEFUL USES OF
OUTER SPACE

Scientific and Technical Subcommittee

Forty-first session

Vienna, 16-27 February 2004

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

At its forty-sixth session, the Committee on the Peaceful Uses of Outer Space noted with satisfaction that the Scientific and Technical Subcommittee had endorsed the proposals of the Inter-Agency Meeting on Outer Space Activities to strengthen inter-agency cooperation in the use of outer space within the United Nations system¹. The proposals included inviting member States of the Committee to complete the list of space-related initiatives and programmes that respond to specific actions recommended in the Plan of Implementation of the World Summit on Sustainable Development (WSSD).

The present document contains draft lists that compile information submitted to the Office for Outer Space Affairs by member States of the Committee and entities of the United Nations system on their space-related initiatives and programmes that respond to specific recommendations contained in the WSSD Plan of Implementation (Annexes II and III).

The information contained in the list of initiatives and programmes carried out by entities of the United Nations system was reviewed and updated by the Inter-Agency Meeting at its twenty-fourth session, held from 21 to 23 January 2004 in Geneva, Switzerland. At that session, the Meeting also agreed that this document should be submitted to the Scientific and Technical Subcommittee at its forty-first session and posted on the web-site of the Inter-Agency Meeting (<http://www.uncosa.unvienna.org/iamos/index.html>).

The information contained in the attached lists, once completed and made available electronically as a combined list, could serve as a comprehensive survey of the space community's response to the WSSD outcomes. The combined list could also become a useful interactive source of reference for those policy makers and development community representatives, particularly in developing countries, who may be interested in taking advantage of the use of space science and technology and their applications to strengthen follow-up actions to the WSSD Plan of Implementation.

The present document is being circulated for information for the Subcommittee. Interested members of the Committee are invited to further contribute information on their space-related activities that respond to specific actions contained in the WSSD Plan of Implementation. A revised list, with additional information to be provided by the United Nations entities and members of the Committee, will be made available at the forty-seventh session of the Committee, in June 2004.

¹ A/AC.105/804, paras. 93-95.

Annex I

List of acronyms used in Annex II

AETS	-	European Application of Technology and Services
AFEID	-	French National Committee of the International Commission on Irrigation and Drainage
AMIS	-	Advanced Methods for Innovation in Science (CIRAD, France)
ANRH	-	National Agency for Water Resources (Algeria)
ASA	-	Austrian Space Agency
ASI	-	Italian Space Agency
BRLI	-	Bio-Reference Laboratories (USA)
CEA	-	French Atomic Energy Agency
Cemagref	-	Agricultural and Environmental Engineering Research (France)
CERFACS	-	European Centre for Research and Advanced Training in Scientific Computation (France)
CEREN	-	Centre d'essais et de recherche de l'Entente interdépartementale en vue de la protection de la forêt contre les feux (France)
CERN	-	European Organization for Nuclear Research
CESBIO	-	Centre d'Études Spatiales de la Biosphère (France)
CETP	-	Centre des Environnements Terrestre et Planétaires (France)
CIRAD	-	Centre de coopération internationale en recherche agronomique pour le développement/Agricultural Research for Developing Countries (France)
CLS	-	Collecte Localisation Satellites (France)
CONAE	-	Comisión Nacional de Actividades Espaciales (Argentina)
CNDP	-	Centre National de Documentation Pédagogique (France)
CNES	-	Centre National d'Études Spatiales (France)
CNRM	-	Centre National de Recherches Météorologiques (France)
CNRS	-	Centre National de la Recherche Scientifique
CSA	-	Canadian Space Agency
CS-SI	-	CS Systèmes d'Information
EADS	-	European Aeronautic Defence and Space Company
ESA	-	European Space Agency
EU	-	European Union
EUMETSAT	-	European Organization for the Exploitation of Meteorological Satellites
FDC	-	France Développement Conseil
GDTA	-	Groupe pour le Développement de la Télédétection Aérospatiale (France)
Ifremer	-	French Research Institute for Exploitation of the Sea

IGN	-	Institut Géographique National (France)
IMFT	-	Sertit Irit, Institut de Mécanique des Fluides de Toulouse (France)
INRA	-	National Institute for Agricultural Research (France)
INSU	-	Institut National des Sciences de l'Univers (France)
INTA	-	Instituto Nacional de Técnica Aeroespacial (Spain)
IPEV	-	French Polar Institute
IRD	-	Institut de Recherche pour le Développement (France)
IRMB	-	Insitut Royal Météorologique de Belgique (Belgium)
ISRO	-	Indian Space Research Organization
ITCF	-	Institut Technique des Céréales et des Fourrages (France)
JAXA	-	Japan Aerospace Exploration Agency
LOA	-	Laboratoire d'Optique Appliquée (France)
LPCE	-	Laboratory of Physics and Chemistry of the Environment (France)
MEDES	-	Institute for Space Medicine and Physiology (France)
MPG	-	Media Planning Group
MSI	-	Micro Star International
NASA	-	National Aeronautics and Space Administration (USA)
NCMR	-	National Centre for Marine Research
NERSC	-	Nansen environmental and Remote Sensing Centre
NOAA	-	National Oceanic and Atmospheric Administration (USA)
ONF	-	Office National des Forêts (France)
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNITAR	-	United Nations Institute for Training and Research
UNOPS	-	United Nations Office for Project Services
SHOM	-	Service Hydrographique et Océanographique de la Marine (France)
SNSB	-	Swedish National Space Board
SSTL	-	Surrey Satellite Technology Ltd. (UK)
ST	-	Sciences de la Terre (France)
WRC	-	World Radiation Centre (Switzerland)

Annex II

Outcomes of the World Summit on Sustainable Development and space-related activities that could assist in their implementation

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross- cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item		Agencies / Institution(s) Involved	Initiatives/Programmes	
	II. Poverty eradication				
7(f)	Deliver basic health services for all and reduce environmental health threats, taking into account the special needs of children and the linkages between poverty, health and environment, with provision of financial resources, technical assistance and knowledge transfer to developing countries and countries with economies in transition	Remote Sensing (RS) and geographical information systems (GIS), global navigation satellite systems (GNSS), satellite communications for tele-health	CNES, MEDES, CLS, CONAE, French and African hospital centres, Airbus Industrie, Pasteur Institute (France), INRA, CEA	Teleconsultation programme in Guyana and the Arctic on board airline-operated aircraft Tele-epidemiology programme in Senegal, Argentina, Guyana, Mali and Burkina Faso. "Projet S2E migrants": space surveillance of epidemics introduced by migrating birds. Data collection using Argos beacons Surgical multimedia maintenance and assistance service (SMMAC)	
7(g)	Ensure that children everywhere, boys and girls alike, will be able to complete a full course of primary schooling and will have equal access to all levels of education;	Satellite communications for tele-education	Communications and systems satellites, Praxim -CNES (France) EL TE Geophysics Department (Hungary) CNES, French, Indian and Tunisian universities and ministries of education and research UNESCO, CNDP, CNES Educational Centre for Research and Development (CRDP), National School of Geographical Sciences (ENSG), ESRI France, Cartosphere, Afigeo (France)	Yielding estimations and observations of vegetative cover Satel-IT project French Medical Virtual University French-Indian Cyber-University in Sciences (FICUS) European Distance Education Network (EDEN) GEWED project, web site providing geographical data and GIS for teachers, trainers and students	

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Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
7(j)	Transfer basic sustainable agricultural techniques and knowledge, including natural resource management, to small and medium-scale farmers, fishers and the rural poor, especially in developing countries, including through multi-stakeholder approaches and public-private partnerships aimed at increasing agriculture production and food security;	RS, GIS and GNSS for natural resources management (land, fish)	MétéoFrance – CETP – GEOSYS - AFEID INRA - CNRM - Météo-France-Astrium-SCOT (Satellite Communications on Board Terminal) (France) Astrium - INRA - GEOSYS (France) ITCF - GEOSYS (France), Ministry of Research and New Technologies (France) CIRAD - AMIS - SPOT Image (France) CNES, Astrium, SCOT (France) CNES, Bayer (France)	CITRAM irrigation advisory project. Irrigation management, soil water determination APOGEE project for land use planning assistance at regional level AGROCOM project for optimum maize cultivation SADAISI project, access by farmers to satellite images direct from the Internet SUCRETTE project: sugar cane remote sensing monitoring system FARMSTAR, providing advice on optimum crop management through intra-plot variability (precision agriculture) Crop Vision Project for precision agriculture	
7(i)	Combat desertification and mitigate the effects of drought and floods through measures such as improved use of climate and weather information and forecasts, early warning systems, land and natural resource management, agricultural practices and ecosystem conservation in order to reverse current trends and minimize degradation of land and water resources, including through the provision of adequate and predictable financial resources to implement the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, as one of the tools for poverty eradication	RS and GIS, meteorological satellites for mitigation of the effects of drought and floods	ELTE Geophysics Department (Hungary) Hungarian Meteorological Service CNES and Belgian, Swedish and Italian space agencies and the European Commission Ministry of Research and New Technologies (France), Alcatel Space, Astrium, Cernagref, MétéoFrance, BRGM (France), IMFT, MSI, SCOT, SPOT Image, Adage (France)	Satellite data processing (HRPT) Flood forecasting and management SPOT vegetation instrument for observation of crops and continental biosphere PACTES project: flood prediction and prevention using space technology	

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Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
8	... we agree to halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water (as outlined in the Millennium Declaration)...	RS and GIS for water resources management	BRGM, CLS, AETS, Ministry of Research and New Technologies (France)	RESSOURCE: Project to use space telecommunications for water data collection	
20	Promote an integrated approach to policy-making at the national, regional and local levels To promote sustainable development, including policies and planning for land use, infrastructure, public transport systems and goods delivery networks...., limiting urban sprawl, taking into account national priorities and circumstances.	RS and GIS for integrated land and resource management/ Study on Earth Observation Applications for Sustainable Development	ESA and Geoville (Austria)	Project in support for the Water Framework Directive and the Soil Protection Initiative	
	IV. <i>Protecting and managing the natural resource base of economic and social development</i>				
	- <i>Water management</i> -				
25(c)	Promote priority action by Governments, with the support of all stakeholders, in water management and capacity-building at the national level and, where appropriate, at the regional level, and promote and provide new and additional financial resources and innovative technologies to implement chapter 18 of Agenda 21;	RS and GIS for water resources assessment and water management	ESA Funded projects by Verbundplan GmbH, Austrian Research Centers and IMGI - Innsbruck (Austria)	Study Report on "International treaties, agreements and programmes relevant to non-scientific application of satellite based hydrological data"	
			BRGM, CLS, AETS, Ministry of Research and New Technologies (France)	RESSOURCE: Project to use space telecommunications for water data collection	
25(d)	Intensify water pollution prevention to reduce health hazards and protect ecosystems by introducing technologies for affordable sanitation and industrial and domestic wastewater treatment, by mitigating the effects of groundwater contamination and by establishing,	RS and GIS for water pollution monitoring systems			

<i>Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)</i>		<i>Space applications that could contribute to implementing the action/relevant cross- cutting issues involving the use of space science and technology</i>	<i>Space-related initiatives and programmes that could support the implementation of the action</i>		<i>Web-site(s) for further information</i>
<i>Para.</i>	<i>Action item</i>		<i>Agencies / institution(s) Involved</i>	<i>Initiatives/Programmes</i>	
	at the national level, monitoring systems and effective legal frameworks				
26(a)	Develop and implement national/regional strategies, plans and programmes with regard to integrated river basin, watershed and groundwater management and introduce measures to improve the efficiency of water infrastructure to reduce losses and increase recycling of water	RS and GIS for integrated river basin watershed and groundwater management	BRGM, CLS, AETS, Ministry of Research and New Technologies (France) ELTE Geophysics Department (Hungary)	RESSOURCE: Project to use space telecommunications for water data collection Research of river-basin Tisza	
26(b)	Employ the full range of policy instruments, including regulation, monitoring, voluntary measures, market and information-based tools, land-use management and cost recovery of water services, without cost recovery objectives becoming a barrier to access to safe water by poor people, and adopt an integrated water basin approach	RS and GIS for monitoring and information gathering for decision-making	BRGM, CLS, AETS, Ministry of Research and New Technologies (France)	RESSOURCE: Project to use space telecommunications for water data collection	
26(d)	Develop programmes for mitigating the effects of extreme water-related events	RS and GIS for preventing and mitigating effects of extreme water-related events	EADS, Astrium, Alcatel Space, MétéoFrance, Cemagref, BRGM, SPOT Image, SCOT (France), MSI, Seritit Irit, IMFT, Ministry of Research and New Technologies (France)	PACTES project: flood prediction and prevention using space technology	
27	Support developing countries and countries with economies in transition in their efforts to monitor and assess the quantity and quality of water resources, including through the establishment and/or further development of national monitoring networks and water resources databases and the development of relevant national indicators.	RS and GIS for water resources monitoring and assessment	National Agency for Water Resources (ANRH) (Algeria) ESA and Geoville (Austria)	Study of soil resources by remote sensing Technical study analyzing the progress in EO from Rio Earth Conference to the WSSD in Johannesburg. Reference to all chapters with EO relevance in the Plan of Implementation is made.	

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Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
28	Improve water resource management and scientific understanding of the water cycle through cooperation in joint observation and research, and for this purpose encourage and promote knowledge-sharing and provide capacity-building and the transfer of technology, as mutually agreed, including remote-sensing and satellite technologies , particularly to developing countries and countries with economies in transition.	RS and GIS for water resource management and scientific understanding of the water cycle	CNES - ISRO CNES- ESA-CDPI (France)	Mégha-Tropique project for water studies Surface Meteorological Observation System (SMOS) for global observation of land surface humidity and ocean salinity. Climate forecasting	
30(b)	- <i>Coastal area management</i> - Promote the implementation of chapter 17 of Agenda 21, which provides the programme of action for achieving the sustainable development of oceans, coastal areas and seas through its programme areas of integrated management and sustainable development of coastal areas, including exclusive economic zones	RS and GIS for integrated management of coastal areas and marine resources	Ministry for Regional Planning and the Environment (Algeria) CLS, IRD, Thales, SODENA (France), Ministry of Research and New Technologies (France) CLS	Mapping of development indicators by remote sensing. Blue Plan Integrated fish stock resource management aid service (SEAGERH) Argos beacon applications	
30(e)	Promote integrated, multidisciplinary and multisectoral coastal and ocean management at the national level and encourage and assist coastal States in developing ocean policies and mechanisms on integrated coastal management	RS and GIS for integrated coastal management	BRGM, BRLI, CNES, CIRAD, Ifremer, SCOT, Ministry of Research and New Technologies (France)	AGIL project for integrated coastal management. Development of services	

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Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
31(d)	Urgently develop and implement national and, where appropriate, regional plans of action, to put into effect the international plans of action of the Food and Agriculture Organization of the United Nations, in particular the International Plan of Action for the Management of Fishing Capacity ¹ by 2005 and the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing by 2004. Establish effective monitoring, reporting and enforcement, and control of fishing vessels, including by flag States, to further the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing	RS and GNSS to monitor fishing vessels; verification measures	SPOT Image, IRD, Ifremer, Ministry of Research and New Technologies (France) ESA/EU CLS	IBIS for tracking of vessels Galileo and satellite navigation applications Data collection with Argos beacons	
35	Governments, taking into account their national circumstances, are encouraged, recalling paragraph 8 of resolution GC (44)/RES/17 of the General Conference of the International Atomic Energy Agency, and taking into account the very serious potential for environment and human health impacts of radioactive wastes, to make efforts to examine and further improve measures and internationally agreed regulations regarding safety, while stressing the importance of having effective liability mechanisms in place, relevant to international maritime transportation and other transboundary movement of radioactive material, radioactive waste and spent fuel, including, inter alia, arrangements for prior notification and consultations done in accordance with relevant international instruments	Work of the Scientific and Technical Subcommittee of COPUOS in the use of nuclear sources in outer space/Study on Earth Observation Applications for Sustainable Development	ESA and Geoville (Austria)	Technical study analyzing the progress in EO from Rio Earth Conference to the WSSD in Johannesburg. Reference to all chapters with EO relevance in the Plan of Implementation is made.	

¹ Rome, Food and Agriculture Organization of the United Nations, 1999.

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Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
36.	World Summit on Sustainable Development – Plan of Implementation – specific references to Earth Observation	Study on Earth Observation Applications for Sustainable Development RS to monitor ocean	ESA and Geoville (Austria)	Project in support for the Water Framework Directive and the Soil Protection Initiative	
36(a)	Increase scientific and technical collaboration, including integrated assessment at the global and regional levels, including the appropriate transfer of marine science and marine technologies and techniques for the conservation and management of living and non-living marine resources and expanding ocean-observing capabilities for the timely prediction and assessment of the state of marine environment		CNES - NASA	TOPEX-Poseidon for altimetric measurements (ocean circulation, etc.) Jason-1 for global altimetric measurements of the oceans, following TOPEX-Poseidon. General meteorology and climate understanding MERCATOR for ocean simulation on the basis of satellite observation; for climate forecasting	
			CNES - MétéoFrance - IRD - SHOM	Surface Meteorological Observation System (SMOS) for global observation of land surface humidity and ocean salinity; climate forecasting	
36(c)	Build capacity in marine science, information and management, through, inter alia, promoting the use of environmental impact assessments and environmental evaluation and reporting techniques, for projects or activities that are potentially harmful to the coastal and marine environments and their living and non-living resources	RS for marine management	CNES - ESA - CDPI (France)	French participation in the Global Ocean Observing System (GOOS) using CORIOLIS and MERCATOR	
			Thales, SODENA, IRD, CLS, Ministry of Research and New Technologies (France)	SEAGERH project	
			CLS	Data collection using Argos beacons	
			BRGM - BRLI - CNES - CIRAD - Ifremer - SCOT (France)	AGIL project for integrated coastal management	

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Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
36(d)	Strengthen the ability of the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, the Food and Agriculture Organization of the United Nations and other relevant international and regional and subregional organizations to build national and local capacity in marine science and the sustainable management of oceans and their resources	RS for marine science and sustainable management of oceans and their resources	CNRS – CNRS – IRD - IPEV-Ifremer – MétéoFrance - SHOM	French participation in the GOOS project with CORIOLIS and MERCATOR	
37(b)	- <i>Disaster management</i> - Support the establishment of effective regional, subregional and national strategies and scientific and technical institutional support for disaster management	RS and GIS, satellite communications, GNSS for disaster management	BMVIT – Austrian Federal Ministry for Transport, Innovation and Technology CSA, CNES, CONAE, ESA, JAXA, NOAA, ISRO EADS Astrium, CS-SI, CEREN, CNES, FDC, MétéoFrance, PONT Intervention, SCOT, Ministry of Research and New Technologies (France) EADS Astrium, Alcatel Space, MétéoFrance, Cemagref, BRGM, SPOT Image, SCOT, MSI, Serfit Irit, IMFT, Ministry of Research and New Technologies (France)	Disaster Management – Elaboration of an Austrian Action plan for the implementation of the International Charter for Space and Natural Disasters International Charter “Space and Major Disasters” PARAFEU to combat forest fires PACTES: flood prediction and prevention using space technology	

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Para.	Action item		Agencies / institution(s) involved			
37(c)	Strengthen the institutional capacities of countries and promote international joint observation and research, through improved surface-based monitoring and increased use of satellite data, dissemination of technical and scientific knowledge, and the provision of assistance to vulnerable countries	RS and GIS for joint observation and research	CNES – ESA – NASA – LPCE – CETP – Media Planning Group (MPG)	DEMETER (Detection of Electro-Magnetic Emissions Transmitted from Earthquake Regions)		
			CNES-CNRS, supported by IRMB and WRC	PICARD for determining solar forcing influence on Earth climate		
			ELTE Geophysics Department (Hungary)	Satellite data processing		
37(d)	Reduce the risks of flooding and drought in vulnerable countries by, inter alia, promoting wetland and watershed protection and restoration, improved land-use planning, improving and applying more widely techniques and methodologies for assessing the potential adverse effects of climate change on wetlands and, as appropriate, assisting countries that are particularly vulnerable to those effects	RS and GIS for improved land use planning	Alcatel Space Industries (ASPI), Astrium, MétéoFrance, Cemagref, BRGM, SPOT Image, SCOT, MSI, Seritit Irit, IMFT, Ministry of Research and New Technologies (France)	PACTES		
			ELTE Geophysics Department (Hungary)	Research of river-basin Tisza		
37(e)	Improve techniques and methodologies for assessing the effects of climate change, and encourage the continuing assessment of those adverse effects by the Intergovernmental Panel on Climate Change	RS for assessment of the effects of climate change	CNES-NASA	TOPEX-Poseidon and the DORIS instrument for altimetric measurements (ocean circulation, etc.)		
			CNES-NASA	Jason-1 and the DORIS instrument for global altimetric measurements of the oceans, following TOPEX-Poseidon. General meteorology and climate understanding		
			CNES – MétéoFrance – IRD - SHOM	MERCATOR for ocean simulation on the basis of satellite observation for climate forecasting		
			CNES-CNRS, supported by IRMB and WRC	PICARD to determine solar forcing influence on Earth climate		
			CNES	PARASOL to determine influence of radiative impact of clouds and aerosols on climate change		

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Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
			CNES - NASA	Cloud-Aerosol Lidar and Infrared Pathfinder Satellite (CALIPSO) study on radiative impact of clouds and aerosols on understanding of climate systems and global change	
			CNES – ESA - CDPI	SMOS for global observation of land surface humidity and ocean salinity; climate forecasting	
			CNES - CLS	SALP production, archiving and distribution of TOPEX-Poseidon, Jason, DORIS and ENVISAT mission products	
			CNES, the Belgian, Swedish and Italian space stations and the European Commission	VEGETATION instrument for crop and continental biosphere observation	
37(h)	Develop and strengthen early warning systems and information networks in disaster management, consistent with the International Strategy for Disaster Reduction	RS and satellite communications for early warning	CNES for DORIS and ESA for the ENVISAT satellite	DORIS instrument on ENVISAT	
			CSA, CNES, CONAE, ESA, JAXA, NOAA, ISRO	International Charter “Space and Major Disasters”	
37(i)	Develop and strengthen capacity at all levels to collect and disseminate scientific and technical information, including the improvement of early warning systems for predicting extreme weather events, especially El Niño/La Niña, through the provision of assistance to institutions devoted to addressing such events, including the International Centre for the Study of the El Niño phenomenon	RS, GNSS and satellite communications for early warning	Hungarian Meteorological Service	Flood forecasting and management (Hungary)	
			CSA, CNES, CONAE, ESA, JAXA, NOAA, ISRO	International Charter “Space and Major Disasters”	
37(j)	Promote cooperation for the prevention and mitigation of, preparedness for, response to and recovery from major technological and other disasters with an adverse impact on the environment in order to	RS, satellite communications, GNSS for prevention, mitigation,	CSA, CNES, CONAE, ESA, JAXA, NOAA, ISRO	International Charter “Space and Major Disasters”	

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Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
	enhance the capabilities of affected countries to cope with such situations.	preparedness, response and recovery			
	- <i>Climate change</i> -				
38(d)	Build and enhance scientific and technological capabilities, inter alia, through continuing support to the Intergovernmental Panel on Climate Change for the exchange of scientific data and information especially in developing countries	Earth observation (EO) satellites and satellite communications for exchange of scientific data and information	CNES - CNRS - Institut National des Sciences de l'Univers (INSU) CNES - CLS - MétéoFrance - SHOM - European Centre for Research and Advanced Training in Scientific Computation (CERFACS) CNES - MétéoFrance - IRD-SHOM	ETHER database on atmospheric chemistry AVISO ocean, altimetry and climate database MERCATOR for ocean simulation on the basis of satellite observation; climate forecasting Research of climate change (NOAA data)	
38(g)	Promote the systematic observation of the Earth's atmosphere, land and oceans by improving monitoring stations, increasing the use of satellites and appropriate integration of these observations to produce high-quality data that could be disseminated for the use of all countries, in particular developing countries	EO satellites for systematic observation of Earth's atmosphere, land and oceans	CNES - ESA - CDPI CNES - ESA - NASA - LPCE - CETP - MPG CNES - NASA CNES - ISRO	SMOS for global observation of surface humidity of land and salinity of oceans; climate forecasting DEMETER for measuring geophysical parameters of the terrestrial ionosphere affecting earthquakes or volcanic activity CALIPSO study of radiative impact of clouds and aerosols on understanding of climate systems and global change Megha-Tropiques for study of atmospheric water cycle in the intertropical band	

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Part	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
			CNES - European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	Infrared atmospheric sounding interferometer (IASI) instrument of the METOP satellites for spectral analysis of the atmosphere and its chemical composition	
			ESA - Alcatel Space - Ifremer - MétéoFrance - MERCATOR-Ocean - CLS and DNV-Nansen environmental and Remote Sensing Centre (NERSC)-GTD-Starlab-National Centre for Marine Research (NCMR)-ESYS-Simulation Optimization Systems (SOS)	Global Monitoring for Environment and Security (GMES) RealTime Ocean Services for Environment and Security (ROSES) project	
			CNES-SPOT Image, supported by Belgium and Sweden	SPOT satellites	
			Alcatel Space - ESA	Medium Resolution Imaging Spectrometer (MERIS) instrument on ENVISAT for study of biosphere	
			CNES - NASA	TOPEX-Poseidon for altimetric measurements (ocean circulation etc.)	
			CNES - NASA	Jason-1 for global altimetric measurements of the oceans, following TOPEX-Poseidon. General meteorology and climate understanding	
			CNES - Italian Space Agency (ASI) - Instituto Nacional de Técnica Aeroespacial (INTA) - BNRS	Optical and radar federated Earth observation (ORFEO) system	
			CNES - CNRS supported by WRC and IRMB	PICARD to determine solar forcing influence on Earth climate	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
38(h)	Enhance the implementation of national, regional and international strategies to monitor the Earth's atmosphere, land and oceans, including, as appropriate, strategies for integrated global observations, inter alia, with the cooperation of relevant international organizations, especially the specialized agencies, in cooperation with the Convention	EO satellites for integrated global observations	CNES	PARASOL to determine influence of radiative impact of clouds and aerosols on climate change	
			Hungarian Meteorological Service	Agricultural surface physical parameters research	
			Algerian Space Agency, Surrey Satellite Technology Ltd. (SSTL)	Disaster Monitoring Constellation Consortium DMC	
			ESA - EU	GMES European concept	
			Spot Image	SPOT series satellites	
39(a)	Strengthen capacities of developing countries and countries with economies in transition to measure, reduce and assess the impacts of air pollution, including health impacts, and provide financial and technical support for these activities	RS for measurement of air pollution	ASI - CNES - INTA - Swedish National Space Board (SNSB)	ORFEO project	
			Hungarian Meteorological Service	Agricultural surface physical parameters research	
			CNES - MétéoFrance and French laboratories	PARASOL project to measure the radiative impact of aerosols on Earth	
39(c)	Further support the effective regime for the protection of the ozone layer established in the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol, including its compliance mechanism	EO satellites for monitoring ozone layer and verifying compliance with the Montreal Protocol	ACRI - Sciences de la Terre (ST) - IPSL - MétéoFrance - Laboratoire d'Optique Appliquée (LOA) - Ministry of Research and New Technologies (France)	Ultraviolet Forecasting Operational Service (UFOS) for exploitation of stratospheric ozone measurements, cloud cover and atmospheric aerosol content, by ENVISAT (MERIS and Global Ozone Monitoring by Occultation of Stars (GOMOS))	
			French, Belgian and Swedish space agencies and laboratories	Odin atmospheric mission to investigate atmospheric chemistry	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
40(b)	- Agriculture - Develop and implement integrated land management and water-use plans that are based on sustainable use of renewable resources and on integrated assessments of socio-economic and environmental potentials and strengthen the capacity of Governments, local authorities and communities to monitor and manage the quantity and quality of land and water resources	RS and GIS for management of land and water resources	MétéoFrance – CETP – GEOSYS - AFEID	CITRAM irrigation advisory project. Irrigation management, soil water determination	
			INRA – CNRM – MétéoFrance – Astrium - SCOT	APOGEE project for land use planning assistance at regional level	
			CIRAD-Institut Géographique National (IGN)-ministries of the environment of the relevant countries, Ministry of Research and New Technologies (France)	SHERPA hydrological and environmental monitoring project for Central America	
			ITCF-GEOSYS- Ministry of Research and New Technologies (France)	SADAISI project, access by farmers to satellite images direct from the Internet	
40(c)	Increase understanding of the sustainable use, protection and management of water resources to advance long-term sustainability of freshwater, coastal and marine environments Promote programmes to enhance in a sustainable manner the productivity of land and the efficient use of water resources in agriculture, forestry, wetlands, artisanal fisheries and aquaculture, especially through indigenous and local community-based approaches	RS and GIS for water resources management	CIRAD - AMIS-Spot Image	SUCRETTE project: sugar cane teledetection monitoring system	
			Animation and graphic portfolio manager (AGPM) Technique-INRA-GEOSYS-Vivadoir, Ministry of Research and New Technologies (France)	AGROCOM project for optimum maize cultivation	
			ESA-EU	Applications of the Galileo European satellite navigation system for precision agriculture	
			BRGM, CLS, AETS, Ministry of Research and New Technologies (France)	RESSOURCE: Project to provide space telecommunications support for water data collection	
40(d)		RS and GIS to manage the use of water resources	BRGM, CLS, AETS, Ministry of Research and New Technologies (France)	RESSOURCE: Project to provide space telecommunications support for water data collection	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
40(j)	Reverse the declining trend in public sector finance for sustainable agriculture, provide appropriate technical and financial assistance, and promote private sector investment and support efforts in developing countries and countries with economies in transition to strengthen agricultural research and natural resource management capacity and dissemination of research results to the farming communities	RS and GIS for natural resource management	BRGM, CLS, AETS, Ministry of Research and New Technologies (France)	RESSOURCE: Project to provide space telecommunications support for water data collection	
40(n)	Enhance international cooperation to combat the illicit cultivation of narcotic plants, taking into account their negative social, economic and environmental impacts	RS and GIS for monitoring illicit cultivation of narcotic plants			
41(a)	- Desertification - Mobilize adequate and predictable financial resources, transfer of technologies and capacity-building at all levels	EO satellites for monitoring desertification	SPOT Image	SPOT satellite vegetation instrument	
			ASI-CNES-INTA-SNSB	ORFEO project	
41(b)	Formulate national action programmes to ensure timely and effective implementation of the Convention and its related projects, with the support of the international community, including through decentralized projects at the local level	EO satellites for monitoring desertification	SPOT Image	SPOT satellite vegetation instrument	
41(d)	Integrate measures to prevent and combat desertification as well as to mitigate the effects of drought through relevant policies and programmes, such as land, water and forest management, agriculture, rural development, early warning systems, environment, energy, natural resources, health and education, and poverty eradication and sustainable development strategies	RS and GIS for land, water and forest management, early warning systems, environment monitoring and assessment	ASI-CNES-INTA-SNSB	ORFEO project	
			EADS-Geomatics-Cemagref-Centre d'Études Spatiales de la Biosphère (CESBIO)-Office National des Forêts (ONF)-Media France, Ministry of Research and New Technologies (France)	METIS project on forest management and control	
			Hungarian Meteorological Service	Surface parameters – climate change modeling (ALADIN – HU)	

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Para.	Action item		Agencies/ Institution(s) involved	Initiatives/Programmes	
41(e)	Provide affordable local access to information to improve monitoring and early warning related to desertification and drought	EO satellites and satellite communications to improve monitoring and early warning	SPOT Image, Eutelsat	SPOT satellite, Eutelsat fleet	
41(g)	Improve the sustainability of grassland resources through strengthening management and law enforcement and providing financial and technical support by the international community to developing countries	RS for the management of grassland resources			
	- <i>Mountain ecosystems</i> -				
42(b)	Implement programmes to address, where appropriate, deforestation, erosion, land degradation, loss of biodiversity, disruption of water flows and retreat of glaciers	RS for monitoring deforestation, erosion, land degradation, loss of biodiversity, etc.	Austrian Space Agency (ASA) and Austrian Federal Ministry for Transport, Innovation and Technology funded projects: JR, GEOSPACE, ENVEO (Austria)	"Management of Natural Resources in Alpine Regions by Advanced Remote Sensing Techniques", Project in the framework of the Austrian Space Application Programme	
			EADS-Geomatics-Cenagref-CESBIO-ONF-Media France, Ministry of Research and New Technologies (France)	METIS project on forest management and control	
42(d)	Implement programmes to promote diversification and traditional mountain economies, sustainable livelihoods and small-scale production systems, including specific training programmes and better access to national and international markets, communications and transport planning, taking into account the particular sensitivity of mountains	Satellite communications for better access to markets			

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
44(f)	- <i>Biodiversity</i>- Promote concrete international support and partnership for the conservation and sustainable use of biodiversity, including in ecosystems, at World Heritage sites and for the protection of endangered species, in particular through the appropriate channelling of financial resources and technology to developing countries and countries with economies in transition; - <i>Forest management</i> - Create and strengthen partnerships and international cooperation to facilitate the provision of increased financial resources, the transfer of environmentally sound technologies, trade, capacity-building, forest law enforcement and governance at all levels and integrated land and resource management to implement sustainable forest management, including the proposals for action of the Intergovernmental Panel on Forests/Intergovernmental Forum on Forests	RS and GIS for monitoring biodiversity at World Heritage sites	CLS	Data collection using Argos beacons	
45(f)		RS and GIS for integrated land and resource management	ASA, Austrian Federal Ministry for Transport, Innovation and Technology and ESA funded projects: GEOVILLE, ARCS and TU Wien – IPF (Austria)	“Testing of Novel Earth Observation Systems for Supporting Quality Control Activities required by the Kyoto-Protocol.” Acquisition of LULUCF3-Parameters (Land Use, Land Use Change and Forestry – LULUCF). Project in the framework of the Austrian Space Application Programme. A GeoVille led Kyoto project focusing on LULUCF project activities funded by ESA-ESRIN. METIS project on forest management and control	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
	- Mining -				
46(c)	Foster sustainable mining practices through the provision of financial, technical and capacity-building support to developing countries and countries with economies in transition for the mining and processing of minerals, including small-scale mining, and, where possible and appropriate, improve value-added processing, upgrade scientific and technological information and reclaim and rehabilitate degraded sites	RS for detection and management of minerals			
47(c)	<i>V. Sustainable development in a globalizing world</i> Enhance the capacities of developing countries, including the least developed countries, landlocked developing countries and small island developing States, to benefit from liberalized trade opportunities through international cooperation and measures aimed at improving productivity, commodity diversification and competitiveness, community-based entrepreneurial capacity and transportation and communication infrastructure development	Satellite communications for development of communications infrastructure			
52	Assist developing countries and countries with economies in transition in narrowing the digital divide, creating digital opportunities and harnessing the potential of information and communication technologies for development through technology transfer on mutually agreed terms and the provision of financial and technical support and, in this context, support the World Summit on the Information Society.	Satellite communications for narrowing digital divide (Contributions to the World Summit on Information Society)	CNES, France Télécom, La Poste Worldspace (France)	The French stand at WSIS presents French projects for bridging the digital divide: "Communicating villages", La Poste and the Cyberkiosque, France Télécom on the theme of the Internet by satellite. Tele-education and telemedicine demonstration. Direct digital radio broadcasting via Worldspace to Africa and Asia	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
54(b)	VI. Health and sustainable development Promote equitable and improved access to affordable and efficient health-care services, including prevention, at all levels of the health system, essential and safe drugs at affordable prices, immunization services and safe vaccines and medical technology	Satellite communications for tele-health	CNES, MEDES, CLS, CONAE, French and African hospital centres Airbus Industrie, Pasteur Institute, INRA, CEA	Teleconsultation programme in Guyana and the Arctic on board airline-operated aircraft Tele-epidemiology programme in Senegal, Argentina, Guyana, Mali and Burkina Faso. "Projet S2E migrants": Space surveillance of epidemics introduced by migrating birds. Telesurgery programme	
			Communications and systems satellites, Praxim-CNES	SMMAC	
54(c)	Provide technical and financial assistance to developing countries and countries with economies in transition to implement the Health for All Strategy, including health information systems and integrated databases on development hazards	Satellite communications for health information systems	CNES, MEDES, CLS, CONAE, French and African hospital centres, Airbus Industrie, Pasteur Institute, INRA, CEA	Teleconsultation programme in Guyana and the Arctic on board airline-operated aircraft Tele-epidemiology programme in Senegal, Argentina, Guyana, Mali and Burkina Faso. "Projet S2E migrants": Space surveillance of epidemics introduced by migrating birds. Telesurgery programme	
			Communications and systems satellites, Praxim-CNES	SMMAC	

Action Items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
54(e)	Promote and develop partnerships to enhance health education with the objective of achieving improved health literacy on a global basis by 2010, with the involvement of United Nations agencies, as appropriate	Satellite communications for tele-education on health	CNES, MEDES, CLS, CONAE, French and African hospital centres, Airbus Industrie, asteur Institute, INRA, CEA	Teleconsultation programme in Guyana and the Arctic on board airline-operated aircraft Tele-epidemiology programme in Senegal, Argentina, Guyana, Mali and Burkina Faso. "Projet S2E migrants": Space surveillance of epidemics introduced by migrating birds. Telesurgery programme	
			Communications and systems satellites, Praxim-CNES Education: CNES, French, Indian and Tunisian universities, ministries of education and research	Satel-IT project French Medical Virtual University: French-Indian Cyber-University in Sciences	
			Communications and systems satellites, Praxim-CNES Education: UNESCO, CNDP, CNES, Ministry of Research and New Technologies (France)	EDEN project	
			Communications and systems satellites, Praxim-CNES Education: CRDP, ENSG, ESRI France, Cartosphere, Afigeo, Ministry of Research and New Technologies (France)	GEWED project, web site providing geographical data and GIS for teachers, trainers and students	

<i>Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)</i>		<i>Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology</i>	<i>Space-related initiatives and programmes that could support the implementation of the action</i>		<i>Web-site(s) for further information</i>
<i>Para.</i>	<i>Action item</i>		<i>Agencies/ Institution(s) involved</i>	<i>Initiatives/Programmes</i>	
54(g)	Target research efforts and apply research results to priority public health issues, in particular those affecting susceptible and vulnerable populations, through the development of new vaccines, reducing exposures to health risks, building on equal access to health-care services, education, training and medical treatment and technology and addressing the secondary effects of poor health	Satellite communications for tele-health/medicine and tele-education	Government of Styria funded projects implemented by JOANNEUM RESEARCH (Austria)	Tele-coaching project for applications in mountain areas where terrestrial communications facilities are not available. Medical data from a heart monitor was transferred via small transportable VSAT terminal to Graz. The facilities are being further developed for tele-consultancy in the medical field and for providing remote medical advice on board of ships.	
			CNES, MEDES, CLS, CONAE, French and African hospital centres, Airbus Industrie, Pasteur Institute, INRA, CEA	Teleconsultation programme in Guyana and the Arctic on board airline-operated aircraft; Tele-epidemiology programme in Senegal, Argentina, Guyana, Mali and Burkina Faso. "Projet S2E migrants": Space surveillance of epidemics introduced by migrating birds. Telesurgery programme	
			Communications and systems satellites, Praxim-CNES	SMMAC	
			CNES; French, Indian and Tunisian universities, ministries of education and research	Satel-IT project, French Medical Virtual University: French-Indian Cyber-University in Sciences	
			UNESCO, CNDP, CNES, Ministry of Research and New Technologies	EDEN project	
			CRDP, ENSG, ESRI France, Cartosphere, Afigeo, Ministry of Research and New Technologies (France)	GEWED project, web site providing geographical data and GIS for teachers, trainers and students	

<i>Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)</i>		<i>Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology</i>	<i>Space-related initiatives and programmes that could support the implementation of the action</i>		<i>Web-sites for further information</i>
<i>Para.</i>	<i>Action item</i>		<i>Agencies/ Institution(s) involved</i>	<i>Initiatives/Programmes</i>	
54(k)	Launch international capacity-building initiatives, as appropriate, that assess health and environment linkages and use the knowledge gained to create more effective national and regional policy responses to environmental threats to human health	RS for the assessment of health and environment linkages	CNES-Pasteur Institute-CNRS-MEDES	Tele-epidemiology programme in Senegal, Argentina, Guyana, Mali and Burkina Faso. "Projet S2E migrants": Space surveillance of epidemics introduced by migrating birds.	
58(b)	<i>VII. Sustainable development of small island developing States</i> Implement further sustainable fisheries management and improve financial returns from fisheries by supporting and strengthening relevant regional fisheries management organizations, as appropriate, such as the recently established Caribbean Regional Fisheries Mechanism and such agreements as the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean	RS for sustainable fisheries management	Thales, SODENA, IRD, CLS, Ministry of Research and New Technologies (France)	SEAGERH project	
58(c)	Assist small island developing States, including through the elaboration of specific initiatives, in delimiting and managing in a sustainable manner their coastal areas and exclusive economic zones and the continental shelf, including, where appropriate, the continental shelf areas beyond 200 miles from coastal baselines, as well as relevant regional management initiatives within the context of the United Nations Convention on the Law of the Sea and the regional seas programmes of the United Nations Environment Programme	RS for management of coastal areas	BRGM-BRLI-CNES-CIRAD-Iframer, SCOT	AGIL project: assistance for integrated coastal management	
58(d) (i)	Provide support, including for capacity-building, for the development and further implementation of: (i) Small island developing States-specific components within programmes of work on marine and coastal biological diversity	RS for monitoring marine and coastal biological diversity	BRGM-BRLI-CNES-CIRAD-Iframer, SCOT Thales, SODENA, IRD, CLS, Ministry of Research and New Technologies (France)	AGIL project: assistance for integrated coastal management SEAGERH project	

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<i>Para.</i>	<i>Action item</i>		<i>Agencies / institution(s) involved</i>	<i>Initiatives/Programmes</i>	
58(h)	Extend assistance to small island developing States in support of local communities and appropriate national and regional organizations of small island developing States for comprehensive hazard and risk management, disaster prevention, mitigation and preparedness, and help relieve the consequences of disasters, extreme weather events and other emergencies	EO satellites and satellite communications for disaster management	CSA, CNES, CONAE, ESA, JAXA, NOAA, ISRO	Satellites of the partners in the International Charter "Space and Major Disasters"	
58(j)	Assist small island developing States in mobilizing adequate resources and partnerships for their adaptation needs relating to the adverse effects of climate change, sea level rise and climate variability, consistent with commitments under the United Nations Framework Convention on Climate Change, where applicable	EO satellites for assessing adverse effects of climate change	CNES-NASA	TOPEX-Poseidon for altimetric measurements (ocean circulation, etc.)	
			CNES-NASA	Jason-1 for global altimetric measurements of the oceans, following TOPEX-Poseidon. General meteorology and climate understanding	
			CNES-MétéoFrance-IRD-SHOM	MERCATOR for ocean simulation on the basis of satellite observation; for climate forecasting	
			CNES-CNRS, supported by IRMB and WRC	PICARD for determining solar forcing influence on Earth climate	
			CNES	PARASOL for determining influence of radiative impact of clouds and aerosols on climate change	
			CNES-NASA	CALIPSO study on radiative impact of clouds and aerosols on understanding of climate systems and global change	
			CNES-ESA-CDPI	SMOS for global observation of land surface humidity and ocean salinity. Climate forecasting	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web sites for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
			CNES-CLS	SALP production, archiving and distribution of TOPEX-Poseidon, JASON, DORIS and ENVISAT mission products	
59.	World Summit on Sustainable Development – Plan of Implementation – specific references to Earth Observation	Study on Earth Observation Applications for Sustainable Development	CNES and French, Belgian, Swedish and Italian manufacturers	VEGETATION instrument for crop and continental biosphere observation	
60(a)	Health-care services for promoting equitable access to health care	Satellite communications for tele-health	ESA and Geoville (Austria)	Project in support for the Water Framework Directive and the Soil Protection Initiative	
			CNES, MEDES, CLS, CONAE, French and African hospital centres, Airbus Industrie, Pasteur Institute, INRA, CEA	Teleconsultation programme in Guyana and the Arctic on board airline-operated aircraft; Tele-epidemiology programme in Senegal, Argentina, Guyana, Mali and Burkina Faso. "Projet S2E migrants": Space surveillance of epidemics introduced by migrating birds	
			Communications and systems satellites, Praxim-CNES	SMMAC	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Website(s) for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
			Government of Styria funded projects implemented by JOANNEUM RESEARCH (Austria)	Tele-coaching project for applications in mountain areas where terrestrial communications facilities are not available. Medical data from a heart monitor was transferred via small transportable VSAT terminal to Graz. The facilities are being further developed for tele-consultancy in the medical field and for providing remote medical advice on board of ships.	
	<i>VIII. Sustainable development for Africa</i>				
62(b)	Support the implementation of the vision of NEPAD and other established regional and subregional efforts, including through financing, technical cooperation and institutional cooperation and human and institutional capacity-building at the regional, subregional and national levels, consistent with national policies, programmes and nationally owned and led strategies for poverty reduction and sustainable development, such as, where applicable, poverty reduction strategy papers	Human and institutional capacity building in the use of space applications	Ministry for Regional Planning and the Environment (Algeria)	Action Plan for the New Partnership for Africa's Development (NEPAD) Environment Initiative, and the associated programme for the development of human and institutional capacities	
			CNES-Groupement pour le Développement de la Télédétection Aérospatiale (GDTA)	Supports staff training by the Centre Régional Africain des Sciences et Technologies de l'Espace en Langue Française (CRASTE-LF) in tele-detection and observation of the Earth for the Maghreb and French-speaking Black Africa	
62(c)	Promote technology development, transfer and diffusion to Africa and further develop technology and knowledge available in African centres of excellence	Development of space technology in Africa	Eumetsat	PUMA, to provide access to data from Meteosat second generation satellites for national meteorological services in Africa	
62(d)	Support African countries in developing effective science and technology institutions and research activities capable of developing and adapting to world class technologies	Development of space science and technology institutions in Africa	MétéoFrance; IRD, INSU	African Monsoon Multidisciplinary Analysis (AMMA)	

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<i>Para.</i>	<i>Action item</i>		<i>Agencies / Institution(s) involved</i>	<i>Initiatives/Programmes</i>	
62(e)	Support the development of national programmes and strategies to promote education within the context of nationally owned and led strategies for poverty reduction and strengthen research institutions in education in order to increase the capacity to fully support the achievement of internationally agreed development goals related to education, including those contained in the Millennium Declaration on ensuring that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling and that girls and boys will have equal access to all levels of education relevant to national needs	Satellite communications for tele-education	CNES, French, Indian and Tunisian universities, Ministries of Education and Research	Satel-IT projects French Medical Virtual University French-Indian Cyber-University in Sciences (FICUS)	
62(f)	Enhance the industrial productivity, diversity and competitiveness of African countries through a combination of financial and technological support for the development of key infrastructure, access to technology, networking of research centres, adding value to export products, skills development and enhancing market access in support of sustainable development	Access to space technology in Africa	MétéoFrance	RETIM Africa: Meteorological information system for professional end-users in Africa	
62(h)	Provide financial and technical support to strengthen the capacity of African countries to undertake environmental legislative policy and institutional reform for sustainable development and to undertake environmental impact assessments and, as appropriate, to negotiate and implement multilateral environment agreements	RS and GIS for environment impact assessment			
62(i)	Develop projects, programmes and partnerships with relevant stakeholders and mobilize resources for the effective implementation of the outcome of the African Process for the Protection and Development of the Marine and Coastal Environment	RS and GIS for monitoring of marine and coastal environment	BRGM, BRLLI, CNES, CIRAD, Ifremer, SCOT, Ministry of Research and New Technologies	AGIL project: assistance for integrated coastal management. Development of services	

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Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
62(k)	Assist African countries in mobilizing adequate resources for their adaptation needs relating to the adverse effects of climate change, extreme weather events, sea level rise and climate variability, and assist in developing national climate change strategies and mitigation programmes, and continue to take actions to mitigate the adverse effects on climate change in Africa, consistent with the United Nations Framework Convention on Climate Change	EO satellites for monitoring climate change and early warning for extreme weather events			
62(n)	Provide financial and technical support for afforestation and reforestation in Africa and to build capacity for sustainable forest management, including combating deforestation and measures to improve the policy and legal framework of the forest sector.	RS and GIS for monitoring deforestation	EADS-Geomatics-Cemagref-CESBIO-ONF-MétéoFrance- Ministry of Research and New Technologies (France)	METIS: Forest management and monitoring project	
63	Provide financial and technical support for Africa's efforts to implement the Convention to Combat Desertification at the national level and integrate indigenous knowledge systems into land and natural resources management practices, as appropriate, and improve extension services to rural communities and promote better land and watershed management practices, including through improved agricultural practices that address land degradation, in order to develop capacity for the implementation of national programmes	RS and GIS for land and watershed management			

<i>Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)</i>		<i>Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology</i>	<i>Space-related initiatives and programmes that could support the implementation of the action</i>		<i>Web site(s) for further information</i>
<i>Para.</i>	<i>Action item</i>		<i>Agencies/institution(s) involved</i>	<i>Initiatives/Programmes</i>	
64(a)	Promote equitable access to health-care services	Satellite communications for tele-health	CNES, MEDES, CLS, CONAE, French and African hospital centres, Airbus Industrie, Pasteur Institute, INRA, CEA	Teleconsultation programme in Guyana and the Arctic on board airline-operated aircraft Tele-epidemiology programme in Senegal, Argentina, Guyana, Mali and Burkina Faso "Projet S2E migrants": Space surveillance of epidemics introduced by migrating birds	
64(b)	Make available necessary drugs and technology in a sustainable and affordable manner to fight and control communicable diseases, including HIV/AIDS, malaria and tuberculosis, and trypanosomiasis, as well as non-communicable diseases, including those caused by poverty	RS for detecting outbreaks of communicable diseases	Communications and systems satellites, Praxim-CNES CNES, MEDES, CLS, CONAE French and African hospital centres, Airbus Industrie, Pasteur Institute, INRA, CEA	Telesurgery programme; SMMAC Teleconsultation programme in Guyana and the Arctic on board airline-operated aircraft Tele-epidemiology programme in Senegal, Argentina, Guyana, Mali and Burkina Faso "Projet S2E migrants": Space surveillance of epidemics introduced by migrating birds	
64(c)	Build capacity of medical and paramedical personnel	Satellite communications for tele-education/training in medicine	CNES; French, Indian and Tunisian universities, ministries of education and research	Satel-IT project French Medical Virtual University: French-Indian Cyber-University in Sciences (FICUS)	
64(e)	Research and control Ebola disease	Satellite communications for controlling Ebola outbreaks			

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
65(a)	Provide financial and technical assistance to strengthen the capacities of African countries, including institutional and human capacity, including at the local level, for effective disaster management, including observation and early warning systems, assessments, prevention, preparedness, response and recovery	Capacity building in the use of EO satellites and satellite communications for disaster management			
65(b)	Provide support to African countries to enable them to better deal with the displacement of people as a result of natural disasters and conflicts and put in place rapid response mechanisms	RS and GIS for planning for displacement of people	UNITAR, UNOPS, CNES, ESA, CERN - SPOT Image, Digitech, GAMMA remote sensing, Ministry of Foreign Affairs (France)	UNOSAT: Rapid response cartographic service and system for prevention and management of humanitarian crises	
65(c)	Support Africa's efforts for the prevention and resolution, management and mitigation of conflicts and its early response to emerging conflict situations to avert tragic humanitarian consequences	RS and GIS and satellite communications for early response to emerging conflict situations	UNITAR, UNOPS, CNES, ESA, CERN, SPOT Image, Digitech, GAMMA remote sensing, Ministry of Foreign Affairs (France)	UNOSAT: Rapid response cartographic service and system for prevention and management of humanitarian crises	
65(d)	Provide support to refugee host countries in rehabilitating infrastructure and environment, including ecosystems and habitats, that were damaged in the process of receiving and settling refugees	RS and GIS for rehabilitating infrastructure and environment	UNITAR, UNOPS, CNES, ESA, CERN, SPOT Image, Digitech, GAMMA remote sensing, Ministry of Foreign Affairs (France)	UNOSAT: Rapid response cartographic service and system for prevention and management of humanitarian crises	
66(b)	Develop and implement integrated river basin and watershed management strategies and plans for all major water bodies,...	RS and GIS for river basin and watershed management			
66(c)	Strengthen regional, subregional and national capacities for data collection and processing and for planning, research, monitoring, assessment and enforcement, as well as arrangements for water resource management	RS and GIS for water resources management			

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
67(a)	Support the development and implementation of national policies and programmes, including research programmes and development plans of African countries to regenerate their agricultural sector and sustainably develop their fisheries, and increase investment in infrastructure, technology and extension services, according to country needs. African countries should be in the process of developing and implementing food security strategies, within the context of national poverty eradication programmes, by 2005	Research programmes and development plans for space technology in Africa			
67(e)	Support livestock development programmes aimed at progressive and effective control of animal diseases	RS for control of animal diseases			
69	Bridge the digital divide and create digital opportunity in terms of access infrastructure and technology transfer and application through integrated initiatives for Africa. Create an enabling environment to attract investment, accelerate existing and new programmes and projects to connect essential institutions and stimulate the adoption of information communication technologies in government and commerce programmes and other aspects of national economic and social life	Satellite communications for bridging digital divide	CNES, France Télécom, La Poste, Worldspace	The French stand at WSIS presents French projects to bridge the digital divide: "Communicating villages", La Poste and the Cyberkiosque, France Télécom on the subject of the Internet by satellite. Tele-education and telemedicine demonstrations. Direct digital radio broadcasting via Worldspace to Africa and Asia	
70(e)	Support the conservation of Africa's biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, in accordance with commitments that countries have under biodiversity-related agreements to which they are parties, including such agreements as the Convention on Biological Diversity and the Convention on International Trade in Endangered Species of Wild Fauna and Flora, as well as regional biodiversity agreements	RS and GIS for monitoring Africa's biological diversity			

<i>Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)</i>		<i>Space-related initiatives and programmes that could support the implementation of the action</i>			<i>Web-sites for further information</i>
<i>Para.</i>	<i>Action item</i>	<i>Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology</i>	<i>Agencies / institution(s) involved</i>	<i>Initiatives/Programmes</i>	
104.	World Summit on Sustainable Development – Plan of Implementation – specific references to Earth Observation	Study on Earth Observation Applications for Sustainable Development	ESA and Geoville (Austria)	Project in support for the Water Framework Directive and the Soil Protection Initiative	
	<i>X. Means of implementation</i>				
	<i>- Environmentally sound technologies -</i>				
105(e)	Promote the access and transfer of technology related to early warning systems and to mitigation programmes to developing countries affected by natural disasters	EO satellites and satellite communications for early warning systems and mitigation programmes to combat natural disasters	ASC, CNES, CONAE, ESA, JAXA, NOAA, ISRO	International Charter "Space and Major Disasters"	
106	Improve the transfer of technologies to developing countries, in particular at the bilateral and regional levels, including through urgent actions at all levels	Transfer of space technology to developing countries			
106(a)	Improve interaction and collaboration, stakeholder relationships and networks between and among universities, research institutions, government agencies and the private sector	Transfer of space technology to developing countries			
106(b)	Develop and strengthen networking of related institutional support structures, such as technology and productivity centres, research, training and development institutions, and national and regional cleaner production centres	Transfer of space technology to developing countries			

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item	Agencies / Institution(s) involved	Initiatives/Programmes	
106(c)	Create partnerships conducive to investment and technology transfer, development and diffusion, to assist developing countries, as well as countries with economies in transition, in sharing best practices and promoting programmes of assistance, and encourage collaboration between corporations and research institutes to enhance industrial efficiency, agricultural productivity, environmental management and competitiveness	Transfer of space technology to developing countries		
	- <i>Building capacity</i> -			
107	Assist developing countries in building capacity to access a larger share of multilateral and global research and development programmes. In this regard, strengthen and, where appropriate, create centres for sustainable development in developing countries	Building capacity to access multilateral and global R&D in space-related areas.		
108	Build greater capacity in science and technology for sustainable development, with action to improve collaboration and partnerships on research and development and their widespread application among research institutions, universities, the private sector, governments, non-governmental organizations and networks, as well as between and among scientists and academics of developing and developed countries, and in this regard encourage networking with and between centres of scientific excellence in developing countries	Capacity building in the use of space science and technology for sustainable development	CNES-ESA	CNES-ESA-UNESCO Workshop on UNISPACE III recommendations on education; Development of a database to identify educational space projects
109(a)	Increase the use of scientific knowledge and technology and increase the beneficial use of local and indigenous knowledge in a manner respectful of the holders of that knowledge and consistent with national law	Increase the use of space science and technology		
109(b)	Make greater use of integrated scientific assessments, risk assessments and interdisciplinary and intersectoral approaches	Space applications for scientific assessments		

<i>Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)</i>		<i>Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology</i>	<i>Space-related initiatives and programmes that could support the implementation of the action</i>		<i>Web site(s) for further information</i>
<i>Para.</i>	<i>Action item</i>		<i>Agencies/ Institution(s) involved</i>	<i>Initiatives/Programmes</i>	
109(c)	Continue to support and collaborate with international scientific assessments supporting decision-making, including the Intergovernmental Panel on Climate Change, with the broad participation of developing country experts	Space applications for scientific assessments			
109(d)	Assist developing countries in developing and implementing science and technology policies	Development and implementation of space policy for development			
109(e)	Establish partnerships between scientific, public and private institutions, including by integrating the advice of scientists into decision-making bodies to ensure a greater role for science, technology development and engineering sectors	Greater role for space science and technology			
109(f)	Promote and improve science-based decision-making and reaffirm the precautionary approach as set out in principle 15 of the Rio Declaration on Environment and Development, which states: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."	Space science and technology applications for science-based decision-making			
110(a)	Improve their use of science and technology for environmental monitoring, assessment models, accurate databases and integrated information systems	Use of space science and technology for environmental monitoring, assessment models, accurate databases and integrated information systems.	Hungarian Meteorological Service	Radiation budget investigation	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web site(s) for further information
Para.	Action item		Agencies/Institution(s) involved	Initiatives/Programmes	
110(b)	Promote and, where appropriate, improve their use of <u>satellite technologies</u> for quality data collection, verification and updating, and further improve aerial and ground-based observations, in support of their efforts to collect quality, accurate, long-term, consistent and reliable data	Use of satellite technologies for quality data collection, verification and updating			
111	Establish regular channels between policy makers and the scientific community to request and receive science and technology advice for the implementation of Agenda 21 and create and strengthen networks for science and education for sustainable development, at all levels, with the aim of sharing knowledge, experience and best practices and building scientific capacities, particularly in developing countries.	Channels between policy makers and space community			
112	Use information and communication technologies, where appropriate, as tools to increase the frequency of communication and the sharing of experience and knowledge and to improve the quality of and access to information and communications technology in all countries, building on the work facilitated by the United Nations Information and Communications Technology Task Force and the efforts of other relevant international and regional forums	Satellite communications for increasing the frequency of communications and improving access to information			
116(b)	- Education - Provide all children, particularly those living in rural areas and those living in poverty, especially girls, with the access and opportunity to complete a full course of primary education	Satellite communications for tele-education in rural areas	CNES, French, Indian and Tunisian universities, ministries of education and research	Satel-IT French Medical Virtual University; FICUS projects	
			UNESCO, CNDP, CNES	EDEN distance education project	
			CRDP, ENSG, ESRI France, Cartosphere, Afigeo	GEWED project web site providing geographical data and GIS for teachers, trainers and students	

<i>Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)</i>		<i>Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology</i>	<i>Space-related initiatives and programmes that could support the implementation of the action</i>		<i>Web site(s) for further information</i>
<i>Para.</i>	<i>Action item</i>		<i>Agencies/ Institution(s) involved</i>	<i>Initiatives/Programmes</i>	
119.	World Summit on Sustainable Development – Plan of Implementation – specific references to Earth Observation		ESA and Geoville (Austria)	Project in support for the Water Framework Directive and the Soil Protection Initiative	
124(a)	Integrate information and communications technology in school curriculum development to ensure its access by both rural and urban communities and provide assistance, particularly to developing countries, inter alia, for the establishment of an appropriate enabling environment required for such technology	Study on Earth Observation Applications for Sustainable Development Satellite communications for tele-education in rural areas	CNES, French, Indian and Tunisian universities, ministries of education and research UNESCO, CNDP, CNES CRDP, ENSG, ESRI France, Cartosphere, Afigeo	Satel-IT French Medical Virtual University; FICUS projects EDEN distance education project GEWED project, web site providing geographical data and GIS for teachers, trainers and students	
125	- <i>Capacity-building</i> - Enhance and accelerate human, institutional and infrastructure capacity-building initiatives and promote partnerships in that regard that respond to the specific needs of developing countries in the context of sustainable development	Capacity-building in the use of space science and technology for sustainable development			
126	Support local, national, subregional and regional initiatives with action to develop, use and adapt knowledge and techniques and to enhance local, national, subregional and regional centres of excellence for education, research and training in order to strengthen the knowledge capacity of developing countries and countries with economies in transition through, inter alia, the mobilization from all sources of adequate financial and other resources, including new and additional resources	Capacity-building in the use of space science and technology for sustainable development			

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web sites for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
127(d)	Build and, where appropriate, strengthen national capacities for carrying out effective implementation of Agenda 21	Capacity building in the use of space science and technology for the implementation of Agenda 21			
132	Promote the development and wider use of <u>earth observation technologies, including satellite remote sensing, global mapping and geographic information systems</u> , to collect quality data on environmental impacts, land use and land-use changes, including through urgent actions at all levels to...	Development and wider use of EO technologies	ESA-EU GDTA	Global Monitoring for Environment and Security (GMES) GDTA training programmes	
132(a)	Promote the development and wider use of <u>earth observation technologies, including satellite remote sensing, global mapping and geographic information systems</u> , to collect quality data on environmental impacts, land use and land-use changes, including through urgent actions at all levels to	RS for global observing systems	National Meteorology Office (Algeria)	Basic world network for ozone research	
132(b)	Develop information systems that make the sharing of valuable data possible, including the active exchange of <u>Earth observation data</u>	Satellite communications for information systems	ESA-EU GDTA	GMES GDTA training programmes	
132(c)	Encourage initiatives and partnerships for global mapping	RS for global mapping	SPOT Image	SPOT Image catalogue	
133(a)	Collect data that are accurate, long-term, consistent and reliable	EO satellites for long-term consistent data collection			
133(b)	Use <u>satellite and remote-sensing technologies</u> for data collection and further improvement of ground-based observations	RS for data collection and improvement of ground-based observations			

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space-related initiatives and programmes that could support the implementation of the action			Web-site(s) for further information
Para.	Action item	Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Agencies / Institution(s) involved	Initiatives/Programmes	
133(c)	Access, explore and use geographic information by utilizing the technologies of <u>satellite remote sensing, satellite global positioning, mapping and geographic information systems</u>	RS, GNSS and GIS for geographic information			
134(a)	Provide affordable access to disaster-related information for early warning purposes	RS and satellite communications for disaster-related information for early warning			
134(b)	Translate available data, particularly from global <u>meteorological observation</u> systems, into timely and useful products	Translating meteorological satellites data into timely and useful products			
135	Develop and promote the wider application of environmental impact assessments, inter alia, as a national instrument, as appropriate, to provide essential decision-support information on projects that could cause significant adverse effects to the environment.	RS and GIS in promoting the wider application of environmental impact assessments to provide decision-support information			

Outcomes of the World Summit on Sustainable Development and space-related activities that could assist in their implementation

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) Involved	Initiatives/Programmes	
	II. Poverty eradication				
7(f)	Deliver basic health services for all and reduce environmental health threats, taking into account the special needs of children and the linkages between poverty, health and environment, with provision of financial resources, technical assistance and knowledge transfer to developing countries and countries with economies in transition	Remote Sensing (RS) and geographical information systems (GIS), global navigation satellite systems (GNSS), satellite communications for tele-health	ESCAP	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP)	
7(g)	Ensure that children everywhere, boys and girls alike, will be able to complete a full course of primary schooling and will have equal access to all levels of education	Satellite communications for tele-education	ESCAP	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP) ESCAP-APSCC meeting on cooperation on satellite broadband services and applications, March, 2003, Bangkok, Thailand	
7(j)	Transfer basic sustainable agricultural techniques and knowledge, including natural resource management, to small and medium-scale farmers, fishers and the rural poor, especially in developing countries, including through multi-stakeholder approaches and public-private partnerships aimed at increasing agriculture production and food security	RS, GIS and GNSS for natural resources management (land, fish)	ESCAP	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP) Ad hoc Expert Group Meeting on Policies for promoting and Integration of Space Applications for Poverty Alleviation, August 2003, Bangkok, Thailand	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / Institution(s) Involved	Initiatives/Programmes	
7(l)	Combat desertification and mitigate the effects of drought and floods through measures such as improved use of climate and weather information and forecasts, early warning systems, land and natural resource management, agricultural practices and ecosystem conservation in order to reverse current trends and minimize degradation of land and water resources, including through the provision of adequate and predictable financial resources to implement the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, as one of the tools for poverty eradication;	RS and GIS, meteorological satellites for mitigation of the effects of drought and floods	FAO	Global Information and Early Warning System (GIEWS), which uses the Advanced Real Time Environmental Monitoring Information System (ARTEMIS) Southern African Development Community (SADC) Regional Remote Sensing Unit with the use of ARTEMIS Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP) Study on the framework of regional cooperative mechanisms supporting disaster management using space technology	www.fao.org/giews , http://geoweb.fao.org www.sadc-fanr.org.zw , http://metart.fao.org
			UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa" IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project Hydrology and Water Resources Programme World Climate Programme	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263 http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm http://www.wmo.ch/web/homs/1stpage.html http://www.wmo.ch/web/wcp/wcp_prog.htm

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
8	... we agree to halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water (as outlined in the Millennium Declaration)...	RS and GIS for water resources management	ESCAP	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP)	
			UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263
	IV. Protecting and managing the natural resource base of economic and social development			IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
	- <i>Water management</i> -				
25(c)	Promote priority action by Governments, with the support of all stakeholders, in water management and capacity-building at the national level and, where appropriate, at the regional level, and promote and provide new and additional financial resources and innovative technologies to implement chapter 18 of Agenda 21	RS and GIS for water resources assessment and water management	FAO	Global Information and Early Warning System (GIEWS), which uses the Advanced Real Time Environmental Monitoring Information System (ARTEMIS)	www.fao.org/giews , http://geoweb.fao.org
				Southern African Development Community (SADC) Regional Remote Sensing Unit with the use of ARTEMIS	http://metart.fao.org , www.sadc-fanr.org.zw
			FAO, UNEP	AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative	www.africover.org
			ESCAP	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP)	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ institution(s) involved	Initiatives/Programmes	
25(d)	Intensify water pollution prevention to reduce health hazards and protect ecosystems by introducing technologies for affordable sanitation and industrial and domestic wastewater treatment, by mitigating the effects of groundwater contamination and by establishing, at the national level, monitoring systems and effective legal frameworks	RS and GIS for water pollution monitoring systems	WMO	Hydrology and Water Resources Programme	http://www.wmo.ch/web/homs/1stpage.html
			UNESCO	Space Hydrology International Partnership (SHIP) in cooperation with European Space Agency's TIGER project	http://www.unesco.org/water
				Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263
			FAO, UNEP	AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative	www.africover.org
26.	Develop integrated water resources management and water efficiency plans by 2005, with support to developing countries.	RS/GIS and GNSS for evaluation of water resources and data collection	UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263
				IOCs' "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
			DESA	Satellite imagery and GPS are used to evaluate water resources potential and carry out data collection	
			UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) Involved	Initiatives/Programmes	
26(a)	Develop and implement national/regional strategies, plans and programmes with regard to integrated river basin, watershed and groundwater management and introduce measures to improve the efficiency of water infrastructure to reduce losses and increase recycling of water	RS and GIS for integrated river basin watershed and groundwater management	FAO, UNEP	AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative	www.africover.org
26(b)	Employ the full range of policy instruments, including regulation, monitoring, voluntary measures, market and information-based tools, land-use management and cost recovery of water services, without cost recovery objectives becoming a barrier to access to safe water by poor people, and adopt an integrated water basin approach	RS and GIS for monitoring and information gathering for decision-making	UNESCO	Space Hydrology International Partnership (SHIP) in cooperation with European Space Agency's TIGER project Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263 www.africover.org
			FAO, UNEP	AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative	http://www.unesco.org/water
			UNESCO	Space Hydrology International Partnership (SHIP) in cooperation with European Space Agency's TIGER project Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
26(d)	Develop programmes for mitigating the effects of extreme water-related events	RS and GIS for preventing and mitigating effects of extreme water-related events	FAO	Global Information and Early Warning System (GIEWS), which uses the Advanced Real Time Environmental Monitoring Information System (ARTEMIS)	www.fao.org/giews, http://geoweb.fao.org
			FAO, UNEP	Southern African Development Community (SADC) Regional Remote Sensing Unit with the use of ARTEMIS	http://metart.fao.org, www.sadc-fanr.org.zw
			FAO, UNEP	AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative	www.africover.org
			ESCAP	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP)	
			WMO	Hydrology and Water Resources Programme	http://www.wmo.ch/web/homs/1stpage.html
				Natural Disaster Prevention and Mitigation Programme	
			OOSA, UNOPS	Serving the UN with satellite imagery and value adding products through International Charter "Space and Major Disasters"	www.unosat.org, www.disastercharter.org
			UNOPS	Global Mapping Grant Facility	www.unosat.org
		RS and GIS information as decision making tools for policy makers and managers	UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174 &URL_DO=DO_TOPIC &URL_SECTION=201 &reload=1023781263

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross- cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ institution(s) Involved	Initiatives/Programmes	
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation	UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/ goos/Africa/ROOFS- AFRICA.htm
27	Support developing countries and countries with economies in transition in their efforts to monitor and assess the quantity and quality of water resources, including through the establishment and/or further development of national monitoring networks and water resources databases and the development of relevant national indicators.	RS and GIS for water resources monitoring and assessment	FAO	Global Information and Early Warning System (GIEWS), which uses the Advanced Real Time Environmental Monitoring Information System (ARTEMIS) Southern African Development Community (SADC) Regional Remote Sensing Unit with the use of ARTEMIS AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative Hydrology and Water Resources Programme Space Hydrology International Partnership (SHIP) in cooperation with European Space Agency's TIGER project Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	www.fao.org/giews , http://geoweb.fao.org http://metart.fao.org , www.sadc-fanr.org.zw www.africover.org http://www.wmo.ch/web/ homs/1stpage.html http://www.unesco.org/water http://portal.unesco.org/ ci/ev.php?URL_ID=2174 &URL_DO=DO_TOPIC &URL_SECTION=201 &reload=1023781263 http://ioc.unesco.org/ goos/Africa/ROOFS- AFRICA.htm

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space, science and technology		Space-related initiatives and programmes that could support the implementation of the action <i>Initiatives/Programmes</i>		Web-site(s) for further information
Para	Action item			Agencies / Institution(s) involved		
30(b)	- Coastal area management - Promote the implementation of chapter 17 of Agenda 21, which provides the programme of action for achieving the sustainable development of oceans, coastal areas and seas through its programme areas of integrated management and sustainable development of coastal areas, including exclusive economic zones	RS and GIS for integrated management of coastal areas and marine resources		ESCAP	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP)	
				WMO	World Weather Watch Programme	http://www.wmo.ch/web/www/www.html
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation		UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
30(e)	Promote integrated, multidisciplinary and multisectoral coastal and ocean management at the national level and encourage and assist coastal States in developing ocean policies and mechanisms on integrated coastal management	RS and GIS for integrated coastal management		ESCAP	Regional Space Application Programme for Sustainable Development in Asia and the Pacific (RESAP)	
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation		UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross- cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) Involved	Initiatives/Programmes	
31(d)	Urgently develop and implement national and, where appropriate, regional plans of action, to put into effect the international plans of action of the Food and Agriculture Organization of the United Nations, in particular the International Plan of Action for the Management of Fishing Capacity ¹ by 2005 and the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing by 2004. Establish effective monitoring, reporting and enforcement, and control of fishing vessels, including by flag States, to further the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing	RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation	UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm

¹ Rome, Food and Agriculture Organization of the United Nations, 1999.

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item	Agencies/ Institution(s) Involved	Initiatives/Programmes	
35	Governments, taking into account their national circumstances, are encouraged, recalling paragraph 8 of resolution GC (44)/RES/17 of the General Conference of the International Atomic Energy Agency, and taking into account the very serious potential for environment and human health impacts of radioactive wastes, to make efforts to examine and further improve measures and internationally agreed regulations regarding safety, while stressing the importance of having effective liability mechanisms in place, relevant to international maritime transportation and other transboundary movement of radioactive material, radioactive waste and spent fuel, including, inter alia, arrangements for prior notification and consultations done in accordance with relevant international instruments		Work of the Scientific and Technical Subcommittee of COPUOS in the use of nuclear sources in outer space	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology		Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item			Agencies/ institution(s) involved	Initiatives/Programmes	
36(a)	Increase scientific and technical collaboration, including integrated assessment at the global and regional levels, including the appropriate transfer of marine science and marine technologies and techniques for the conservation and management of living and non-living marine resources and expanding ocean-observing capabilities for the timely prediction and assessment of the state of marine environment	RS to monitor ocean		ESCAP	Regional Space Application Programme for Sustainable Development in Asia and the Pacific (RESAP)	
				WMO	Applications of Meteorology Programme	http://www.wmo.ch/web/aom/aom.html
				UNESCO	IOC's Global Ocean Observing System (GOOS) Regional Alliances	http://ioc.unesco.org/iocweb/index.php
				UNESCO, WMO, UNEP	Intergovernmental Oceanographic Commission's (IOC) Global Ocean Observing System (GOOS) Regional Alliances including those for Africa, Black Sea, Mediterranean, Caribbean, Indian Ocean, Pacific Islands, North-East and South-East Asia, South-East Pacific	
36(c)	Build capacity in marine science, information and management, through, inter alia, promoting the use of environmental impact assessments and environmental evaluation and reporting techniques, for projects or activities that are potentially harmful to the coastal and marine environments and their living and non-living resources	RS for marine management		ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)	
				UNESCO	Intergovernmental Oceanographic Commission's (IOC) Ocean Data and Information (ODIN) for Africa, the Caribbean and South America	http://ioc.unesco.org/iocweb/index.php
					IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) involved	Initiatives/Programmes	
36(d)	Strengthen the ability of the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, the Food and Agriculture Organization of the United Nations and other relevant international and regional and subregional organizations to build national and local capacity in marine science and the sustainable management of oceans and their resources	RS for marine science and sustainable management of oceans and their resources	WMO	Applications of Meteorology Programme	http://www.wmo.ch/web/aom/aom.html
			UNESCO	All Intergovernmental Oceanographic Commission's (IOC) programmes, including the Integrated Coastal Area Management (ICAM), Global Observing System (GOS) and International Oceanographic Data and Information Exchange (IODE) programmes, with the use of RS data	http://ioc.unesco.org/iocweb/index.php
37(b)	- Disaster management - Support the establishment of effective regional, subregional and national strategies and scientific and technical institutional support for disaster management	RS and GIS, satellite communications, GNSS for disaster management	OOSA	Space technology and disaster management (STDM)	http://www.oosa.unvienna.org/sapidx.html , oosa@unvienna.org
			ESCAP	Regional Centres for Space Science and Technology Education	
			WMO	Regional Space Applications Programme for Sustainable Development (RESAP)	
			UNOPS, UNITAR	Natural Disaster Prevention and Mitigation Programme	www.unosat.org
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models	UNESCO	Activities in support to disaster preparedness, capacity building and sustainable development IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm

Action Items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) involved	Initiatives/Programmes	
37(c)	Strengthen the institutional capacities of countries and promote international joint observation and research, through improved surface-based monitoring and increased use of satellite data, dissemination of technical and scientific knowledge, and the provision of assistance to vulnerable countries	RS and GIS for joint observation and research	OOSA	Space Technology and Disaster Management (STDM)	http://www.oosa.unvienna.org/sapidix.html oosa@unvienna.org
			ESCAP	Regional Centres for Space Science and Technology Education	
			WMO	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP)	
				World Weather Watch Programme	http://www.wmo.ch/web/www/www.html http://www.wmo.ch/hinsman/satsun.html www.unosat.org
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation	UNOPS, UNITAR	WMO Space Programme	
			UNESCO	Activities in support to disaster preparedness, capacity building and sustainable development	
				IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models	UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) Involved	Initiatives/Programmes	
37(d)	Reduce the risks of flooding and drought in vulnerable countries by, inter alia, promoting wetland and watershed protection and restoration, improved land-use planning, improving and applying more widely techniques and methodologies for assessing the potential adverse effects of climate change on wetlands and, as appropriate, assisting countries that are particularly vulnerable to those effects	RS and GIS for improved land use planning	OOSA	Space Technology and Disaster Management (STDM)	http://www.oosa.unvienna.org/sapidx.html oosa@unvienna.org
			ESCAP	Regional Centres for Space Science and Technology Education	
			WMO	Regional Space Applications Programme for Sustainable Development (RESAP)	
				Hydrology and Water Resources Programme	http://www.wmo.ch/web/homs/1stpage.html
				Natural Disaster Prevention and Mitigation Programme	
			UNOPS, UNITAR	Activities in support to disaster preparedness, capacity building and sustainable development	www.unosat.org
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models	UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
37(e)	Improve techniques and methodologies for assessing the effects of climate change, and encourage the continuing assessment of those adverse effects by the Intergovernmental Panel on Climate Change	RS for assessment of the effects of climate change	OOSA	Space Technology and Disaster Management (STDM)	http://www.oosa.unvienna.org/sapidx.html oosa@unvienna.org
			WMO	Regional Centres for Space Science and Technology Education	
				World Climate Programme	http://www.wmo.ch/web/wcp/wcp_prog.htm

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models	UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/ goos/Africa/ROOFS- AFRICA.htm
37(h)	Develop and strengthen early warning systems and information networks in disaster management, consistent with the International Strategy for Disaster Reduction	RS and satellite communications for early warning	FAO	Global Information and Early Warning System (GIEWS), which uses the Advanced Real Time Environmental Monitoring Information System (ARTEMIS) Southern African Development Community (SADC) Regional Remote Sensing Unit with the use of ARTEMIS	www.fao.org/giews , http://geoweb.fao.org
			OOSA	Space Technology and Disaster Management (STDM) Regional Centres for Space Science and Technology Education	http://www.oosa.unvienna.org/ sapidx.html oosa@unvienna.org
			ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)	
			WMO	Natural Disaster Prevention and Mitigation Programme	
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models	UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/ goos/Africa/ROOFS- AFRICA.htm

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) involved	Initiatives/Programmes	
37(i)	Develop and strengthen capacity at all levels to collect and disseminate scientific and technical information, including the improvement of early warning systems for predicting extreme weather events, especially El Niño/La Niña, through the provision of assistance to institutions devoted to addressing such events, including the International Centre for the Study of the El Niño phenomenon	RS, GNSS and satellite communications for early warning	OOSA	Space Technology and Disaster Management (STDM)	http://www.oosa.unvienna.org/sapidx.html oosa@unvienna.org
			ESCAP	Regional Centres for Space Science and Technology Education	
			WMO	Regional Space Applications Programme for Sustainable Development (RESAP)	
				World Weather Watch Programme	http://www.wmo.ch/web/www/www.html
			OOSA, UNOPS	Serving the UN with satellite imagery and value adding products through the International Charter "Space and Major Disasters"	www.unosat.org , www.disastercharter.org
		RS and GIS information as decision making tools for policy makers and managers; development of early warning systems for Africa	UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
37(j)	Promote cooperation for the prevention and mitigation of, preparedness for, response to and recovery from major technological and other disasters with an adverse impact on the environment in order to enhance the capabilities of affected countries to cope with such situations.	RS, satellite communications, GNSS for prevention, mitigation, preparedness, response and recovery	OOSA	Space Technology and Disaster Management (STDM)	http://www.oosa.unvienna.org/sapidx.html , oosa@unvienna.org
			ESCAP	Regional Centres for Space Science and Technology Education	
			WMO	Regional Space Applications Programme for Sustainable Development (RESAP)	
				Natural Disaster Prevention and Mitigation Programme	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross- cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) involved	Initiatives/Programmes	
38(d)	- Climate change - Build and enhance scientific and technological capabilities, inter alia, through continuing support to the Intergovernmental Panel on Climate Change for the exchange of scientific data and information especially in developing countries	Earth observation (EO) satellites and satellite communications for exchange of scientific data and information	FAO, UNEP	AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative	www.africover.org
			WMO	World Climate Programme	http://www.wmo.ch/web/wcp/wcp_prog.htm
		RS and GIS information as decision making tools for policy makers and managers; development of early warning systems for Africa	UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
38(g)	Promote the systematic observation of the Earth's atmosphere, land and oceans by improving monitoring stations, increasing the use of satellites and appropriate integration of these observations to produce high-quality data that could be disseminated for the use of all countries, in particular developing countries	EO satellites for systematic observation of Earth's atmosphere, land and oceans	ESCAP	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP)	
			FAO, UNEP	AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative	www.africover.org
			WMO	World Weather Watch Programme	http://www.wmo.ch/web/www/www.html
				WMO Space Programme	http://www.wmo.ch/hinsman/satsun.html
			UNESCO, WMO, UNEP	IOC - the Global Ocean Observing System (GOOS)	http://ioc.unesco.org/iocweb/index.php

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) involved	Initiatives/Programmes	
38(h)	Enhance the implementation of national, regional and international strategies to monitor the Earth's atmosphere, land and oceans, including, as appropriate, strategies for integrated global observations, inter alia, with the cooperation of relevant international organizations, especially the specialized agencies, in cooperation with the United Nations Framework Convention on Climate Change	EO satellites for integrated global observations	FAO, UNEP WMO UNESCO UNESCO, WMO, UNEP	AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative World Weather Watch Programme WMO Space Programme IOC's regional programme in the Caribbean (IOCARIBE), Western Pacific (WESTPAC) GOOS Regional Alliances, including those for Africa, Black Sea, Mediterranean, Caribbean, Indian ocean, Pacific Islands, North-East and South-East Asia, South-East Pacific	www.africover.org http://www.wmo.ch/web/www/www.html http://www.wmo.ch/hinsman/satsun.html http://ioc.unesco.org/iocweb/index.php http://ioc.unesco.org/iocweb/index.php
39(a)	Strengthen capacities of developing countries and countries with economies in transition to measure, reduce and assess the impacts of air pollution, including health impacts, and provide financial and technical support for these activities	RS for measurement of air pollution	WMO	Atmospheric Research and Environment Programme	http://www.wmo.ch/web/arep/arep-home.html
39(c)	Further support the effective regime for the protection of the ozone layer established in the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol, including its compliance mechanism	EO satellites for monitoring ozone layer and verifying compliance with the Montreal Protocol	WMO	Atmospheric Research and Environment Programme WMO Space Programme	http://www.wmo.ch/web/arep/arep-home.html http://www.wmo.ch/hinsman/satsun.html

Action items in the Plan of Implementation (A/CONE.199/20, Resolution 2)	Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Agencies / institution(s) involved	Space-related initiatives and programmes that could support the implementation of the action	Web-site(s) for further information
Para.	Action item		Initiatives/Programmes	
40(b)	- Agriculture - Develop and implement integrated land management and water-use plans that are based on sustainable use of renewable resources and on integrated assessments of socio-economic and environmental potentials and strengthen the capacity of Governments, local authorities and communities to monitor and manage the quantity and quality of land and water resources	RS and GIS for management of land and water resources RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation	ESCAP FAO, UNEP FAO FAO, WFP, WHO, UNEP WMO FAO, UNESCO, UNEP, WMO UNOPS, UNITAR UNESCO	www.africover.org www.asiacover.org www.fao.org/geonetwork http://www.wmo.ch/web/aom/aom.html www.fao.org/gtos www.unosat.org http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
40(c)	Increase understanding of the sustainable use, protection and management of water resources to advance long-term sustainability of freshwater, coastal and marine environments	RS and GIS for water resources management	ESCAP	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP)	
			FAO, UNEP	AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative	www.africover.org
			FAO	AsiaCover	www.asiacover.org
			FAO, WFP, WHO, UNEP	Geonetwork	www.fao.org/geonetwork
			FAO, UNESCO, UNEP, WMO	Global Terrestrial Observing System (GTOS)	www.fao.org/gtos
			UNESCO	IOC's uses of ocean based RS data to improve forecasts of rainfall in coastal areas; World Water Assessment Programme (WWAP)	http://ioc.unesco.org/iocweb/index.php
				Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263
				World Water Assessment Programme (WWAP)	http://www.unesco.org/water/wwap/index.shtml

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)	Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action	Web-site(s) for further information
Para.	Action item	Agencies/Institution(s) involved	Initiatives/Programmes
40(d)	Promote programmes to enhance in a sustainable manner the productivity of land and the efficient use of water resources in agriculture, forestry, wetlands, artisanal fisheries and aquaculture, especially through indigenous and local community-based approaches	ESCAP FAO, UNEP FAO FAO, WFP, WHO, UNEP FAO, UNESCO, UNEP, WMO UNESCO ESCAP FAO, UNEP FAO FAO, WFP, WHO, UNEP FAO, UNESCO, UNEP, WMO UNOPS	Regional Space Applications Programme for Sustainable Development (RESAP) AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative AsiaCover AgrometShell (AMS) GeoNetwork Global Terrestrial Observing System (GTOS) IOC's uses of ocean based RS data to improve forecasts of rainfall in coastal areas; World Water Assessment Programme (WWAP) World Water Assessment Programme (WWAP) Regional Space Applications Programme for Sustainable Development (RESAP) AFRICOVER/Land Cover Mapping; Global Land Cover Network (GLCN) Initiative AsiaCover GeoNetwork Global Terrestrial Observing System (GTOS) Global Mapping Grant Facility www.africover.org www.asiacover.org www.fao.org/geonetwork www.fao.org/gtos http://ioc.unesco.org/iocweb/index.php http://www.unesco.org/water/wwap/index.shtml www.africover.org www.asiacover.org www.fao.org/geonetwork www.fao.org/gtos www.unosat.org
40(j)	Reverse the declining trend in public sector finance for sustainable agriculture, provide appropriate technical and financial assistance, and promote private sector investment and support efforts in developing countries and countries with economies in transition to strengthen agricultural research and natural resource management capacity and dissemination of research results to the farming communities	RS and GIS for natural resource management	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/Institution(s) involved	Initiatives/Programmes	
40(n)	Enhance international cooperation to combat the illicit cultivation of narcotic plants, taking into account their negative social, economic and environmental impacts - <i>Desertification</i> -	RS and GIS for monitoring illicit cultivation of narcotic plants	FAO, UNESCO, UNEP, WMO	Global Terrestrial Observing System (GTOS)	www.fao.org/gtos
41(a)	Mobilize adequate and predictable financial resources, transfer of technologies and capacity-building at all levels	EO satellites for monitoring desertification	WMO	Technical Cooperation Programme WMO Space Programme	http://www.wmo.ch/web/tco/TCOHome.html http://www.wmo.ch/hinsman/satsun.html
41(b)	Formulate national action programmes to ensure timely and effective implementation of the Convention and its related projects, with the support of the international community, including through decentralized projects at the local level	EO satellites for monitoring desertification	FAO, UNESCO, UNEP, WMO WMO	Global Terrestrial Observing System (GTOS) WMO Space Programme	www.fao.org/gtos http://www.wmo.ch/hinsman/satsun.html
41(d)	Integrate measures to prevent and combat desertification as well as to mitigate the effects of drought through relevant policies and programmes, such as land, water and forest management, agriculture, rural development, early warning systems, environment, energy, natural resources, health and education, and poverty eradication and sustainable development strategies	RS and GIS for land, water and forest management, early warning systems, environment monitoring and assessment	ESCAP WMO FAO, WFP, WHO, UNEP UNESCO	Regional Space Applications Programme for Sustainable Development (RESAP) Hydrology and Water Resources Management Programme WMO Space Programme GeoNetwork World Water Assessment Programme (WWAP)	 http://www.wmo.ch/web/homs/1stpage.html http://www.wmo.ch/hinsman/satsun.html www.fao.org/geonetwork http://www.unesco.org/water/wwap/index.shtml

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / Institution(s) Involved	Initiatives/Programmes	
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation	UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263
41(e)	Provide affordable local access to information to improve monitoring and early warning related to desertification and drought	EO satellites and satellite communications to improve monitoring and early warning	ESCAP WMO	Regional Space Applications Programme for Sustainable Development (RESAP) World Weather Watch Programme WMO Space Programme GeoNetwork	 http://www.wmo.ch/web/www/www.html http://www.wmo.ch/hinsman/satsun.html www.fao.org/geonetwork
41(g)	Improve the sustainability of grassland resources through strengthening management and law enforcement and providing financial and technical support by the international community to developing countries	RS for the management of grassland resources	ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
	- Mountain ecosystems -				
42(b)	Implement programmes to address, where appropriate, deforestation, erosion, land degradation, loss of biodiversity, disruption of water flows and retreat of glaciers	RS for monitoring deforestation, erosion, land degradation, loss of biodiversity, etc.	ESCAP WMO UNESCO	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP) WMO Space Programme Man and Biosphere (MAB) programme and its Biosphere Reserve Integrated Monitoring (BRIM) initiative Programme for Community Multimedia Centre	http://www.wmo.ch/hinsman/satsun.html http://www.unesco.org/mab/index.htm http://portal.unesco.org/ci/ev.php?URL_ID=1263&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1075742490
42(d)	Implement programmes to promote diversification and traditional mountain economies, sustainable livelihoods and small-scale production systems, including specific training programmes and better access to national and international markets, communications and transport planning, taking into account the particular sensitivity of mountains	Satellite communications for better access to markets	UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa" Programme for Community Multimedia Centers Man and Biosphere (MAB) programme and its Biosphere Reserve Integrated Monitoring (BRIM) initiative	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology		Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item			Agencies / Institution(s) Involved	Initiatives/Programmes	
	- <i>Biodiversity</i> - Promote concrete international support and partnership for the conservation and sustainable use of biodiversity, including in ecosystems, at World Heritage sites and for the protection of endangered species, in particular through the appropriate channelling of financial resources and technology to developing countries and countries with economies in transition;					
44(f)		RS and GIS for monitoring biodiversity at World Heritage sites		UNESCO	Man and Biosphere (MAB) programme and its Biosphere Reserve Integrated Monitoring (BRIM) initiative Use of space technology for monitoring World Heritage sites	http://www.unesco.org/mab/index.htm
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation		UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) involved	Initiatives/Programmes	
	- <i>Forest management</i> -				
45(f)	Create and strengthen partnerships and international cooperation to facilitate the provision of increased financial resources, the transfer of environmentally sound technologies, trade, capacity-building, forest law enforcement and governance at all levels and integrated land and resource management to implement sustainable forest management, including the proposals for action of the Intergovernmental Panel on Forests/Intergovernmental Forum on Forests	RS and GIS for integrated land and resource management	FAO, WFP, WHO, UNEP UNESCO	GeoNetwork Man and Biosphere (MAB) programme and its Biosphere Reserve Integrated Monitoring (BRIM) initiative Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	www.fao.org/geonetwork http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263
	- <i>Mining</i> -				
46(c)	Foster sustainable mining practices through the provision of financial, technical and capacity-building support to developing countries and countries with economies in transition for the mining and processing of minerals, including small-scale mining, and, where possible and appropriate, improve value-added processing, upgrade scientific and technological information and reclaim and rehabilitate degraded sites	RS for detection and management of minerals	UNESCO	Mineral Resources Sustainability Programme (MRSD)	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
	V. Sustainable development in a globalizing world				
47(c)	Enhance the capacities of developing countries, including the least developed countries, landlocked developing countries and small island developing States, to benefit from liberalized trade opportunities through international cooperation and measures aimed at improving productivity, commodity diversification and competitiveness, community-based entrepreneurial capacity and transportation and communication infrastructure development	Satellite communications for development of communications infrastructure			
52	Assist developing countries and countries with economies in transition in narrowing the digital divide, creating digital opportunities and harnessing the potential of information and communication technologies for development through technology transfer on mutually agreed terms and the provision of financial and technical support and, in this context, support the World Summit on the Information Society	Satellite communications for narrowing digital divide (Contributions to the World Summit on Information Society)	WMO ITU UNOPS, UNITAR	Technical Cooperation Programme E-Strategy Programme UNOSAT web-portal and Grid data dissemination techniques	http://www.wmo.ch/web/tco/TCOHome.html www.unosat.org

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
	VI. Health and sustainable development				
54(b)	Promote equitable and improved access to affordable and efficient health-care services, including prevention, at all levels of the health system, essential and safe drugs at affordable prices, immunization services and safe vaccines and medical technology	Satellite communications for tele-health	ESCAP UNESCO	Regional Space Applications Programme for Sustainable Development (RESAP) Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263
54(c)	Provide technical and financial assistance to developing countries and countries with economies in transition to implement the Health for All Strategy, including health information systems and integrated databases on development hazards	Satellite communications for health information systems. RS/GIS and GNSS for health situation analysis	ESCAP WHO	Regional Space Applications Programme for Sustainable Development (RESAP) Inter-American Network on the Use of Geographic Information System/Remote Sensing (GIS/RS) to Control Infectious Diseases Development of Health Situation Analysis (HAS)	http://listserv.paho.org/archives/inrsgishealth.html
54(e)	Promote and develop partnerships to enhance health education with the objective of achieving improved health literacy on a global basis by 2010, with the involvement of United Nations agencies, as appropriate	Satellite communications for tele-education on health	ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) Involved	Initiatives/Programmes	
	VII. Sustainable development of small island developing States				
58(b)	Implement further sustainable fisheries management and improve financial returns from fisheries by supporting and strengthening relevant regional fisheries management organizations, as appropriate, such as the recently established Caribbean Regional Fisheries Mechanism and such agreements as the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean	RS for sustainable fisheries management			

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
58(c)	Assist small island developing States, including through the elaboration of specific initiatives, in delimiting and managing in a sustainable manner their coastal areas and exclusive economic zones and the continental shelf, including, where appropriate, the continental shelf areas beyond 200 miles from coastal baselines, as well as relevant regional management initiatives within the context of the United Nations Convention on the Law of the Sea and the regional seas programmes of the United Nations Environment Programme	RS for management of coastal areas RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation	UNESCO, WMO, UNEP UNESCO	IOC's Global Ocean Observing System (GOOS) Regional Alliances including those for Africa, Black Sea, Mediterranean, Caribbean, Indian Ocean, Pacific Islands, North-East and South-East Asia, South-East Pacific IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/iocweb/index.php http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
58(d)(i)	Provide support, including for capacity-building, for the development and further implementation of: (i) Small island developing States-specific components within programmes of work on marine and coastal biological diversity	RS for monitoring marine and coastal biological diversity			

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) Involved	Initiatives/Programmes	
58(h)	Extend assistance to small island developing States in support of local communities and appropriate national and regional organizations of small island developing States for comprehensive hazard and risk management, disaster prevention, mitigation and preparedness, and help relieve the consequences of disasters, extreme weather events and other emergencies	EO satellites and satellite communications for disaster management	ESCAP WMO UNESCO, WMO, UNEP UNESCO	Regional Space Applications Programme for Sustainable Development (RESAP) Technical Cooperation Programme IOC's Global Ocean Observing System (GOOS) Regional Alliances including those for Africa, Black Sea, Mediterranean, Caribbean, Indian Ocean, Pacific Islands, North-East and South-East Asia, South-East Pacific IOC's uses of ocean based RS data to improve forecasts of rainfall in coastal areas Disaster Prevention Programme Technical Cooperation Programme	 http://www.wmo.ch/web/tco/TCOHome.html http://ioc.unesco.org/iocweb/index.php http://ioc.unesco.org/iocweb/index.php
58(j)	Assist small island developing States in mobilizing adequate resources and partnerships for their adaptation needs relating to the adverse effects of climate change, sea level rise and climate variability, consistent with commitments under the United Nations Framework Convention on Climate Change, where applicable	EO satellites for assessing adverse effects of climate change RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation	WMO UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	 http://www.wmo.ch/web/tco/TCOHome.html http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology		Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information	
Para.	Action item	Agencies / Institution(s) involved	Initiatives/Programmes				
60(a)	Health-care services for promoting equitable access to health care	Satellite communications for tele-health	ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)			
VIII. Sustainable development for Africa							
62(b)	Support the implementation of the vision of NEPAD and other established regional and subregional efforts, including through financing, technical cooperation and institutional cooperation and human and institutional capacity-building at the regional, subregional and national levels, consistent with national policies, programmes and nationally owned and led strategies for poverty reduction and sustainable development, such as, where applicable, poverty reduction strategy papers	Human and institutional capacity building in the use of space applications	OOSA	Activities in natural resources management and environmental monitoring, basic space science, and satellite communications		http://www.oosa.unvienna.org/ spidx.html , oosa@unvienna.org	
				Regional Centres for Space Science and Technology Education			
			UNESCO	Space Hydrology International Partnership (SHIP) in cooperation with European Space Agency's TIGER project		http://www.unesco.org/water	
			RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation	UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"		http://portal.unesco.org/ ci/ev.php?URL_ID=2174 &URL_DO=DO_TOPIC &URL_SECTION=201 &reload=1023781263
					IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project		http://ioc.unesco.org/ goos/Africa/ROOFS- AFRICA.htm

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ institution(s) involved	Initiatives/Programmes	
62(c)	Promote technology development, transfer and diffusion to Africa and further develop technology and knowledge available in African centres of excellence	Development of space technology in Africa	WMO	WMO Space Programme	http://www.wmo.ch/hinsman/satsun.html
			OOSA	Activities in natural resources management and environmental monitoring, basic space science, and satellite communications	http://www.oosa.unvienna.org/sapidx.html , oosa@unvienna.org
			UNESCO	Regional Centres for Space Science and Technology Education	http://www.unesco.org/water
				Space Hydrology International Partnership (SHIP) in cooperation with European Space Agency's TIGER project	
				Space Education Programme (SEP)	http://www.unesco.org/science/earthsciences/sep.htm
				Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
62(d)	Support African countries in developing effective science and technology institutions and research activities capable of developing and adapting to world class technologies	Development of space science and technology institutions in Africa	WMO	WMO Space Programme	http://www.wmo.ch/hinsman/satsun.html http://www.oosa.unvienna.org/sapidx.html, oosa@unvienna.org
			OOSA	Activities in basic space science Regional Centres for Space Science and Technology Education	
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation	UNESCO	Space Education Programme (SEP)	http://portal.unesco.org/ ci/ev.php?URL_ID=2174 &URL_DO=DO_TOPIC &URL_SECTION=201 &reload=1023781263 http://ioc.unesco.org/ goos/Africa/ROOFS- AFRICA.htm
			UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa" IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / Institution(s) Involved	Initiatives/Programmes	
62(e)	Support the development of national programmes and strategies to promote education within the context of nationally owned and led strategies for poverty reduction and strengthen research institutions in education in order to increase the capacity to fully support the achievement of internationally agreed development goals related to education, including those contained in the Millennium Declaration on ensuring that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling and that girls and boys will have equal access to all levels of education relevant to national needs	Satellite communications for tele-education	UNESCO	Programme for Community Multimedia Centres	
62(f)	Enhance the industrial productivity, diversity and competitiveness of African countries through a combination of financial and technological support for the development of key infrastructure, access to technology, networking of research centres, adding value to export products, skills development and enhancing market access in support of sustainable development	Access to space technology in Africa	OOSA	Activities in natural resources management and environmental monitoring, basic space science, and satellite communications Regional Centres for Space Science and Technology Education	http://www.oosa.unvienna.org/sapidx.html , oosa@unvienna.org

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ institution(s) involved	Initiatives/Programmes	
62(h)	Provide financial and technical support to strengthen the capacity of African countries to undertake environmental legislative policy and institutional reform for sustainable development and to undertake environmental impact assessments and, as appropriate, to negotiate and implement multilateral environment agreements	RS and GIS for environment impact assessment	UNEP	Global Resource Information Database (GRID)	
62(i)	Develop projects, programmes and partnerships with relevant stakeholders and mobilize resources for the effective implementation of the outcome of the African Process for the Protection and Development of the Marine and Coastal Environment	RS and GIS for monitoring of marine and coastal environment	UNESCO, WMO, UNEP	Intergovernmental Oceanographic Commission's Regional Ocean Observing and Forecasting System for Africa (ROOFS-Africa) initiative of the GOOS-Africa programme in the context of NEPAD's coastal programme	
			UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ institution(s) involved	Initiatives/Programmes	
62(k)	Assist African countries in mobilizing adequate resources for their adaptation needs relating to the adverse effects of climate change, extreme weather events, sea level rise and climate variability, and assist in developing national climate change strategies and mitigation programmes, and continue to take actions to mitigate the adverse effects on climate change in Africa, consistent with the United Nations Framework Convention on Climate Change	EO satellites for monitoring climate change and early warning for extreme weather events	WMO UNESCO UNESCO, WMO, UNEP UNEP UNESCO	World Climate Programme Space Hydrology International Partnership (SHIP) in cooperation with European Space Agency's TIGER project Intergovernmental Oceanographic Commission's Regional Ocean Observing and Forecasting System for Africa (ROOFS-Africa) initiative of the GOOS-Africa programme in the context of NEPAD's coastal programme Global Resource Information Database (GRID) IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project GeoNetwork Activities in natural resources management and environment monitoring Regional Centres for Space Science and Technology Education Activities in support to post-conflict assessments	http://www.wmo.ch/web/wcp/wcp_prog.htm http://www.unesco.org/water http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm www.fao.org/geonetwork http://www.oosa.unvienna.org/sapidx.html , oosa@unvienna.org www.unosat.org , http://postconflict.unep.ch/
62(n)	Provide financial and technical support for afforestation and reforestation in Africa and to build capacity for sustainable forest management, including combating deforestation and measures to improve the policy and legal framework of the forest sector	RS and GIS for monitoring deforestation	FAO, WFP, WHO, UNEP OOSA UNOPS, UNEP		

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
63	Provide financial and technical support for Africa's efforts to implement the Convention to Combat Desertification at the national level and integrate indigenous knowledge systems into land and natural resources management practices, as appropriate, and improve extension services to rural communities and promote better land and watershed management practices, including through improved agricultural practices that address land degradation, in order to develop capacity for the implementation of national programmes	RS and GIS for land and watershed management	UNESCO	World Water Assessment Programme (WWAP)	http://www.unesco.org/water/wwap/
64(a)	Promote equitable access to health-care services	Satellite communications for tele-health, satellite images for assessment to health care	WHO	Development of a telehealth strategy Development of Health Situation Analysis	
64(b)	Make available necessary drugs and technology in a sustainable and affordable manner to fight and control communicable diseases, including HIV/AIDS, malaria and tuberculosis, and trypanosomiasis, as well as non-communicable diseases, including those caused by poverty	RS for detecting outbreaks of communicable diseases	WHO	Establishment of the Inter-American Network on the use of GIS/RS to control Infectious Diseases	

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Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
64(c)	Build capacity of medical and paramedical personnel	Satellite communications for tele- education/training in medicine	ITU WHO	E-Strategy Programme Regional Technical Cooperation Project on GIS Applied to Public Health and Health Situation Mobile data collection tools Health Mapper SIGEpi Software TM Global Atlas on Infectious Diseases.	
64(e)	Research and control Ebola disease	Satellite communications for controlling Ebola outbreaks			
65(a)	Provide financial and technical assistance to strengthen the capacities of African countries, including institutional and human capacity, including at the local level, for effective disaster management, including observation and early warning systems, assessments, prevention, preparedness, response and recovery	Capacity building in the use of EO satellites and satellite communications for disaster management	OOSA	Space Technology and Disaster Management (STDm); Regional Centres for Space Science and Technology Education	http://www.oosa.unvienna.org/sapidx.html , oosa@unvienna.org
			OOSA, UNOPS	Serving the UN with satellite imagery and value adding products through the International Charter "Space and Major Disasters"	www.unosat.org , www.disastercharter.org
			UNOPS	Global Mapping Grant Facility	www.unosat.org

Action items in the Plan of Implementation (A/CONF. 199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
		RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models	UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/ goos/Africa/ROOFS- AFRICA.htm
65(b)	Provide support to African countries to enable them to better deal with the displacement of people as a result of natural disasters and conflicts and put in place rapid response mechanisms	RS and GIS for planning for displacement of people	UNHCR	Partnership with Metria (improvement of the role that Very High Resolution Satellite (VHRS) imagery can play within refugee situations)	
			OOSA, UNOPS	Serving the UN with satellite imagery and value adding products through the International Charter "Space and Major Disasters"	www.unosat.org , www.disastercharter.org
			UNOPS	Global Mapping Grant Facility	www.unosat.org
			UNHCR	Partnership with Metria (improvement of the role that Very High Resolution Satellite (VHRS) imagery can play within refugee situations)	
65(c)	Support Africa's efforts for the prevention and resolution, management and mitigation of conflicts and its early response to emerging conflict situations to avert tragic humanitarian consequences	RS and GIS and satellite communications for early response to emerging conflict situations	OOSA, UNOPS	Serving the UN with satellite imagery and value adding products through the International Charter "Space and Major Disasters"	www.unosat.org , www.disastercharter.org
			UNOPS	Global Mapping Grant Facility	www.unosat.org

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)	Action Item	Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
			Agencies/ Institution(s) Involved	Initiatives/Programmes	
65(d)	Provide support to refugee host countries in rehabilitating infrastructure and environment, including ecosystems and habitats, that were damaged in the process of receiving and settling refugees	RS and GIS for rehabilitating infrastructure and environment	UNEP/UNHCR	Satellite images of the pre-conflict environment in order to assess the consequences in Iraq	
			UNOPS, UNEP	Activities in support to post-conflict assessments	
			WMO	Hydrology and Water Resources Programme	
66(b)	Develop and implement integrated river basin and watershed management strategies and plans for all major water bodies,...	RS and GIS for river basin and watershed management	UNESCO	World Water Assessment Programme (WWAP)	http://www.unesco.org/water/wwap/index.shtml
			UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263
			WMO	Hydrology and Water Resources Programme	http://www.wmo.ch/web/homs/1stpage.html
66(c)	Strengthen regional, subregional and national capacities for data collection and processing and for planning, research, monitoring, assessment and enforcement, as well as arrangements for water resource management	RS and GIS for water resources management	UNESCO	World Water Assessment Programme (WWAP)	http://www.unesco.org/water/wwap/index.shtml

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) Involved	Initiatives/Programmes	
106	Improve the transfer of technologies to developing countries, in particular at the bilateral and regional levels, including through urgent actions at all levels	Transfer of space technology to developing countries			
106(a)	Improve interaction and collaboration, stakeholder relationships and networks between and among universities, research institutions, government agencies and the private sector	Transfer of space technology to developing countries	UNESCO	Space Hydrology International Partnership (SHIP) in cooperation with European Space Agency's TIGER project Geological Applications of Remote Sensing (GARS) programme Space Education Programme (SEP)	http://www.unesco.org/science/earthsciences http://www.unesco.org/science/earthsciences/sep.htm
			UNESCO, WMO, UNEP	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project IOC's Global Ocean Observing System (GOOS) Regional Alliances including those for Africa, Black Sea, Mediterranean, Caribbean, Indian Ocean, Pacific Islands, North-East and South-East Asia, South-East Pacific	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm http://ioc.unesco.org/iocweb/index.php

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ institution(s) involved	Initiatives/Programmes	
106(b)	Develop and strengthen networking of related institutional support structures, such as technology and productivity centres, research, training and development institutions, and national and regional cleaner production centres	Transfer of space technology to developing countries	UNESCO	Space Hydrology International Partnership (SHIP) in cooperation with European Space Agency's TIGER project	http://www.unesco.org/water
			UNESCO, WMO, UNEP	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
				IOC's Global Ocean Observing System (GOOS) Regional Alliances including those for Africa, Black Sea, Mediterranean, Caribbean, Indian Ocean, Pacific Islands, North-East and South-East Asia, South-East Pacific	http://ioc.unesco.org/iocweb/index.php
			UNESCO	Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263
			UNESCO, WMO, UNEP	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
106(c)	Create partnerships conducive to investment and technology transfer, development and diffusion, to assist developing countries, as well as countries with economies in transition, in sharing best practices and promoting programmes of assistance, and encourage collaboration between corporations and research institutes to enhance industrial efficiency, agricultural productivity, environmental management and competitiveness	Transfer of space technology to developing countries		IOC's Global Ocean Observing System (GOOS) Regional Alliances including those for Africa, Black Sea, Mediterranean, Caribbean, Indian Ocean, Pacific Islands, North-East and South-East Asia, South-East Pacific	http://ioc.unesco.org/iocweb/index.php

Action-items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / Institution(s) involved	Initiatives/Programmes	
107	- <i>Building capacity</i> - Assist developing countries in building capacity to access a larger share of multilateral and global research and development programmes. In this regard, strengthen and, where appropriate, create centres for sustainable development in developing countries	Building capacity to access multilateral and global R&D in space-related areas.	OOSA	Workshops and technical advisory services in the areas of basic space science, natural resources management and environment monitoring, satellite communications Regional Centres for Space Science and Technology Education Space Education Programme (SEP)	http://www.oosa.unvienna.org/sapidx.html oosa@unvienna.org
			UNESCO		http://www.unesco.org/science/earthsciences/sep.htm
			UNOPS, UNITAR	Activities in support to disaster preparedness, capacity building and sustainable development	www.unosat.org

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ institution(s) involved	Initiatives/Programmes	
108	Build greater capacity in science and technology for sustainable development, with action to improve collaboration and partnerships on research and development and their widespread application among research institutions, universities, the private sector, governments, non-governmental organizations and networks, as well as between and among scientists and academics of developing and developed countries, and in this regard encourage networking with and between centres of scientific excellence in developing countries	Capacity building in the use of space science and technology for sustainable development	ESCAP WMO OOSA	Regional Space Applications Programme for Sustainable Development (RESAP) WMO Space Programme Workshops and technical advisory services in the areas of basic space science, natural resources management and environment monitoring, satellite communications Regional Centres for Space Science and Technology Education Space for Science project in cooperation with the European Space Agency (ESA)	 http://www.wmo.ch/hinsman/satsun.html http://www.oosa.unvienna.org/sapidx.html oosa@unvienna.org http://portal.unesco.org/ci/ev.php?URL_ID=1263&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1075742490
109(a)	Increase the use of scientific knowledge and technology and increase the beneficial use of local and indigenous knowledge in a manner respectful of the holders of that knowledge and consistent with national law	Increase the use of space science and technology	UNOPS, UNITAR ESCAP UNOPS, UNITAR	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project Education and awareness raising on benefits from GIS and remote sensing through International Training Centre for Local Actors (CIFAL) network Regional Space Applications Programme for Sustainable Development (RESAP) Activities in support to disaster preparedness, capacity building and sustainable development	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm www.unitar.org/dcp/ , www.unosat.org www.unosat.org

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
109(b)	Make greater use of integrated scientific assessments, risk assessments and interdisciplinary and intersectoral approaches	Space applications for scientific assessments	UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
109(c)	Continue to support and collaborate with international scientific assessments supporting decision-making, including the Intergovernmental Panel on Climate Change, with the broad participation of developing country experts	Space applications for scientific assessments	FAO, UNESCO, UNEP, WMO	Global Terrestrial Observing System (GTOS)	www.fao.org/gtos
109(d)	Assist developing countries in developing and implementing science and technology policies	Development and implementation of space policy for development	UNESCO	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project Activities of the Division of Science Analysis and Policies	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm http://www.unesco.org/pao/
109(e)	Establish partnerships between scientific, public and private institutions, including by integrating the advice of scientists into decision-making bodies to ensure a greater role for science, technology development and engineering sectors	Greater role for space science and technology	UNESCO UNOPS, UNITAR	Space Education Programme (SEP) UNOSAT Initiative	http://www.unesco.org/science/earthsciences/sep.htm www.unosat.org

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Para.	Action item		Agencies/ Institution(s) Involved	Initiatives/Programmes	
109(f)	Promote and improve science-based decision-making and reaffirm the precautionary approach as set out in principle 15 of the Rio Declaration on Environment and Development, which states: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."	Space science and technology applications for science-based decision-making	FAO, UNESCO, UNEP, WMO UNESCO	Global Terrestrial Observing System (GTOS) Space Education Programme (SEP) IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	 http://www.unesco.org/science/earthsciences/sep.htm http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
110(a)	Improve their use of science and technology for environmental monitoring, assessment models, accurate databases and integrated information systems	Use of space science and technology for environmental monitoring, assessment models, accurate databases and integrated information systems.	WMO UNESCO UNEP UNEP UNOPS, UNITAR	WMO Space Programme Space Education Programme (SEP) IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project Abu Dhabi Global Environmental Data Initiative (AGEDI) Global Resource Information Database (GRID) UNOSAT Initiative	http://www.wmo.ch/hinsman/satsun.html http://www.unesco.org/science/earthsciences/sep.htm http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm www.unosat.org

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
110(b)	Promote and, where appropriate, improve their use of satellite technologies for quality data collection, verification and updating, and further improve aerial and ground-based observations, in support of their efforts to collect quality, accurate, long-term, consistent and reliable data	Use of satellite technologies for quality data collection, verification and updating	ESCAP	Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP)	
			WMO	WMO Space Programme	http://www.wmo.ch/hinsman/satsun.html
			UNEP	Global Resource Information Database (GRID)	
			UNESCO	Space Education Programme (SEP)	
			UNESCO, WMO, UNEP	IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm
				IOC's Global Ocean Observing System (GOOS) Regional Alliances including those for Africa, Black Sea, Mediterranean, Caribbean, Indian Ocean, Pacific Islands, North-East and South-East Asia, South-East Pacific	http://ioc.unesco.org/iocweb/index.php
			UNESCO	Space Education Programme (SEP)	http://www.unesco.org/science/earthsciences/sep.htm
			UNOPS, UNITAR	UNOSAT Initiative	www.unosat.org

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action Initiatives/Programmes		Web-site(s) for further information
Para.	Action item				
112	Use information and communication technologies, where appropriate, as tools to increase the frequency of communication and the sharing of experience and knowledge and to improve the quality of and access to information and communications technology in all countries, building on the work facilitated by the United Nations Information and Communications Technology Task Force and the efforts of other relevant international and regional forums	Satellite communications for increasing the frequency of communications and improving access to information	ESCAP WMO ITU UNESCO, WMO, UNEP	Regional Space Applications Programme for Sustainable Development (RESAP) World Weather Watch Programme E-Strategy Programme Intergovernmental Oceanographic Commission's Regional Ocean Observing and Forecasting System for Africa (ROOFS-Africa) initiative of the GOOS-Africa programme in the context of NEPAD's coastal programme IOC's Global Ocean Observing System (GOOS) Regional Alliances including those for Africa, Black Sea, Mediterranean, Caribbean, Indian Ocean, Pacific Islands, North-East and South-East Asia, South-East Pacific Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa" IOC's "Regional Ocean Observing and Forecasting Systems for Integrated Management of Ocean and Coastal Environment and Natural Disasters in Africa" (ROOFS-AFRICA) project	http://www.wmo.ch/web/www/www.html http://ioc.unesco.org/iocweb/index.php http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263 http://ioc.unesco.org/goos/Africa/ROOFS-AFRICA.htm

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ Institution(s) involved	Initiatives/Programmes	
	- Education -				
116(b)	Provide all children, particularly those living in rural areas and those living in poverty, especially girls, with the access and opportunity to complete a full course of primary education	Satellite communications for tele-education in rural areas	ESCAP ITU UNESCO	Regional Space Applications Programme for Sustainable Development (RESAP) E-Strategy Programme Harnessing information communication technologies for Education project Programme for Community Multimedia Centre	http://portal.unesco.org/ci/ev.php?URL_ID=1263&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1075742490
124(a)	Integrate information and communications technology in school curriculum development to ensure its access by both rural and urban communities and provide assistance, particularly to developing countries, inter alia, for the establishment of an appropriate enabling environment required for such technology	Satellite communications for tele-education in rural areas	UNESCO	Training of Primary Educators in Morocco using Interactive Television project Programme for Community Multimedia Centres	

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Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
125	- <i>Capacity-building</i> - Enhance and accelerate human, institutional and infrastructure capacity-building initiatives and promote partnerships in that regard that respond to the specific needs of developing countries in the context of sustainable development	Capacity-building in the use of space science and technology for sustainable development	ESCAP UNOPS, UNITAR UNESCO	Regional Space Applications Programme for Sustainable Development (RESAP) Education and awareness raising on benefits from GIS and remote sensing through International Training Centre for Local Actors (CIFAL) network Space Education Programme (SEP)	

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / Institution(s) Involved	Initiatives/Programmes	
126	Support local, national, subregional and regional initiatives with action to develop, use and adapt knowledge and techniques and to enhance local, national, subregional and regional centres of excellence for education, research and training in order to strengthen the knowledge capacity of developing countries and countries with economies in transition through, inter alia, the mobilization from all sources of adequate financial and other resources, including new and additional resources	Capacity-building in the use of space science and technology for sustainable development	ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)	
			UNOPS, UNITAR	Activities in support to disaster preparedness, capacity building and sustainable development	www.unosat.org
127(d)	Build and, where appropriate, strengthen national capacities for carrying out effective implementation of Agenda 21	Capacity building in the use of space science and technology for the implementation of Agenda 21	UNESCO	Space Education Programme (SEP)	http://www.unesco.org/science/earthsciences/sep.htm
			UNOPS, UNITAR	Activities in support to disaster preparedness, capacity building and sustainable development	www.unosat.org

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies / institution(s) involved	Initiatives/Programmes	
132	Promote the development and wider use of earth observation technologies, including satellite remote sensing, global mapping and geographic information systems , to collect quality data on environmental impacts, land use and land-use changes, including through urgent actions at all levels to...	Development and wider use of EO technologies RS and GIS information as decision making tools for policy makers and managers; development of forecasting and management models; training and research as a key to poverty alleviation	ESCAP UNESCO	Regional Space Applications Programme for Sustainable Development (RESAP) Space Education Programme (SEP) Cross-cutting project "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa"	http://portal.unesco.org/ci/ev.php?URL_ID=2174&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1023781263

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2) <i>Para.</i>	Action item	Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
			Agencies/ institution(s) involved	Initiatives/Programmes	
132(a)	Promote the development and wider use of earth observation technologies, including satellite remote sensing, global mapping and geographic information systems , to collect quality data on environmental impacts, land use and land-use changes, including through urgent actions at all levels to	RS for global observing systems	ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)	www.fao.org/geonetwork
			FAO, WFP, WHO, UNEP	GeoNetwork	
			UNEP	Global Resource Information Database (GRID)	
			UNESCO	Man and Biosphere (MAB) programme and its Biosphere Reserve Integrated Monitoring (BRIM) initiative	
				Geological Applications of Remote Sensing (GARS) programme	
				Pan-African Network for a Geological Information System (PANGIS) project	
				Southeast Asian Network for a Geological Information System (SANGIS) project	
			UNOPS, UNITAR	UNOSAT Initiative	www.unosat.org

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Space applications that could contribute to implementing the action/relevant cross-cutting issues involving the use of space science and technology	Space-related initiatives and programmes that could support the implementation of the action		Web-site(s) for further information
Para.	Action item		Agencies/ institution(s) involved	Initiatives/Programmes	
133(c)	Access, explore and use geographic information by utilizing the technologies of <u>satellite remote sensing, satellite global positioning, mapping and geographic information systems</u>	RS, GNSS and GIS for geographic information	WMO UNESCO UNOPS, UNGIWG UNOPS, UNITAR	WMO Space Programme Geological Applications of Remote Sensing (GARS) programme Very High Resolution Satellite Imagery database for UN Geographic Information Working Group (UNGIWG) members UNOSAT Initiative	http://www.wmo.ch/hinsman/satsun.html www.ungiwg.org , www.unosat.org www.unosat.org
134(a)	Provide affordable access to disaster-related information for early warning purposes	RS and satellite communications for disaster-related information for early warning	ESCAP WMO OOSA, UNOPS	Regional Space Applications Programme for Sustainable Development (RESAP) Natural Disaster Prevention and Mitigation Programme Serving the UN with satellite imagery and value adding products through the International Charter "Space and Major Disasters"	www.unosat.org , www.unosat.org www.unosat.org
134(b)	Translate available data, particularly from global <u>meteorological observation</u> systems, into timely and useful products	Translating meteorological satellites data into timely and useful products	UNOPS ESCAP WMO	Global Mapping Grant Facility Regional Space Applications Programme for Sustainable Development (RESAP) World Weather Watch Programme World Climate Programme	http://www.wmo.ch/web/www/www.html http://www.wmo.ch/web/wcp/wcp_prog.htm
135	Develop and promote the wider application of environmental impact assessments, inter alia, as a national instrument, as appropriate, to provide essential decision-support information on projects that could cause significant adverse effects to the environment.	RS and GIS in promoting the wider application of environmental impact assessments to provide decision-support information	UNEP	Global Resource Information Database (GRID)	