

IV. PROTECTING AND MANAGING THE NATURAL RESOURCE BASE OF ECONOMIC AND SOCIAL DEVELOPMENT

Disaster management

Action items in the Plan of Implementation (A/CONF.199/20, Resolution 2)		Relevant space applications	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(b)	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	Disaster Management – Elaboration of an Austrian Action plan for the implementation of the International Charter for Space and Natural Disasters	
			CSA, CNES, CONAE, ESA, JAXA, NOAA, ISRO	International Charter “Space and Major Disasters”	
			EADS Astrium, CS-SI, CEREN, CNES, FDC, MétéoFrance, PONT Intervention, SCOT, French Ministry of Research and New Technologies (France)	PARAFEU to combat forest fires	
			EADS Astrium, Alcatel Space, MétéoFrance, Cemagref, BRGM, SPOT Image, SCOT, MSI, Sertit Irit, IMFT, Ministry of Research and New Technologies (France)	PACTES: flood prediction and prevention using space technology	
			ASI	COSMO-SkyMed Programme for monitoring, prevention and management of both natural and technological environmental disasters even in extreme usage conditions. The Programme is to start operating in 2007 and reach full capacity in 2008.	

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			Federal Government of Mexico/ Aragón Technology Centre at the National Autonomous University of Mexico	Possible nanosatellite project of focusing on earthquake prediction through the analysis of electrical and electromagnetic precursors which appear in the atmosphere in the days leading up to a powerful earthquake. Inter-institutional meeting to assess the need for a comprehensive policy on space matters at the federal level, 1 December, Tlatelolco, Federal District.	
			OOSA	Space technology and disaster management (STDM)	http://www.oosa.unvienna.org/sapidx.html , oosa@unvienna.org
				Regional Centres for Space Science and Technology Education	
			WMO	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
		Atmospheric Research using Space Technology for disaster management	SUPARCO/ISNET (OIC's Space Technology Network/OOSA)	Training in Space Technology and Disaster Management Program (STDM) is being organized by the OIC Countries	

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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 – 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	
			ASI	COSMO-SkyMed Programme for scientific applications. The Programme is to start operating in 2007 and reach full capacity in 2008.	
			Federal Government of Mexico/ Aragón Technology Centre at the National Autonomous University of Mexico	Possible nanosatellite project of focusing on earthquake prediction through the analysis of electrical and electromagnetic precursors which appear in the atmosphere in the days leading up to a powerful earthquake. Inter-institutional meeting to assess the need for a comprehensive policy on space matters at the federal level, 1 December, Tlatelolco, Federal District.	
			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 in Asia and the Pacific (RESAP)	
			WMO	World Weather Watch Programme WMO Space Programme	http://www.wmo.ch/web/www/www.html http://www.wmo.ch/hinsman/satsun.html
UNOPS, UNITAR	Activities in support to disaster preparedness, capacity building and sustainable development	www.unosat.org			

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		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
		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://ioc.unesco.org/goos/africa/cross-cutting.htm
		Atmospheric Research using Space Technology for Post Disaster Management	SUPARCO/ISNET (OIC's Space Technology Network/OOSA)	Institutional capabilities of Islamic countries is being strengthened using Space Technology and Disaster Management Program (STDM)	

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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, Sertit Irit, IMFT, Ministry of Research and New Technologies (France)	PACTES	
			ELTE Geophysics Department (Hungary)	Research of river-basin Tisza	
			ASI	COSMO-SkyMed Programme for monitoring, prevention and management of both natural and technological environmental disasters even in extreme usage conditions. The Programme is to start operating in 2007 and reach full capacity in 2008.	
			OOSA	Space Technology and Disaster Management (STDM)	http://www.oosa.unvienna.org/sapidx.html oosa@unvienna.org
				Regional Centres for Space Science and Technology Education	
			ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)	http://www.unescap.org/icstd/SPACE/resap/resap_main.asp
			WMO	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			

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		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
		Atmospheric Research using Space Technology for disaster management	Pakistan Meteorological Deptt., WAPDA	Under Space Technology and Disaster Management Program (STDM), Early Warning of these phenomena are conducted.	
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.)	
				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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			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	
			CNES for DORIS and ESA for the ENVISAT satellite	DORIS instrument on ENVISAT	
			ASI	COSMO-SkyMed Programme for monitoring, prevention and management of both natural and technological environmental disasters even in extreme usage conditions. The programme can also perform monitoring of ice and ecology. The Programme is to start operating in 2007 and reach full capacity in 2008.	
			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
			WMO	World Climate Programme	http://www.wmo.ch/web/wcp/wcp_prog.htm

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		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
		Atmospheric Research for assessment of the effects of climate change	SUPARCO, Pakistan Meteorological Dept.	Global Monitoring of various Atmospheric parameters are regularly monitored under Space Technology and Disaster Management Programme (STDM)	
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	CSA, CNES, CONAE, ESA, JAXA, NOAA, ISRO	International Charter "Space and Major Disasters"	
			Hungarian Meteorological Service	Flood forecasting and management	
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			FAO	Global Information and Early Warning System (GIEWS), which uses the Advanced Real Time Environmental Monitoring Information System (ARTEMIS)	http://www.fao.org/giews/english/index.htm , http://geoweb.fao.org
				Southern African Development Community (SADC) Regional Remote Sensing Unit with the use of ARTEMIS	http://metart.fao.org , www.sadc.int
		OOSA	Space Technology and Disaster Management (STDM)	http://www.oosa.unvienna.org/sapidx.html	

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				Regional Centres for Space Science and Technology Education	oosa@unvienna.org
			ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)	http://www.unescap.org/icstd/SPACE/resap/resap_main.asp
			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
		Atmospheric Research/Monitoring for Early Warning.	SUPARCO/OOSA/WMO	Early Warning on a predicted disaster is publicized through SUPARCO's Web Site, and Media.	
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	CSA, CNES, CONAE, ESA, JAXA, NOAA, ISRO	International Charter "Space and Major Disasters"	
			ASI	COSMO-SkyMed Programme for monitoring, prevention and management of both natural and technological environmental disasters even in extreme usage conditions. The Programme is to start operating in 2007 and reach full capacity in 2008.	
			OOSA	Space Technology and Disaster Management (STDM)	http://www.oosa.unvienna.org/sapidx.html
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			ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)	http://www.unescap.org/icstd/SPACE/resap/resap_main.asp

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			WMO	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.disasterscharter.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	CSA, CNES, CONAE, ESA, JAXA, NOAA, ISRO	International Charter "Space and Major Disasters"	
			ASI	COSMO-SkyMed Programme for monitoring, prevention and management of both natural and technological environmental disasters even in extreme usage conditions. The Programme is to start operating in 2007 and reach full capacity in 2008.	
			OOSA	Space Technology and Disaster Management (STDM)	http://www.oosa.unvienna.org/sapidx.html , oosa@unvienna.org
				Regional Centres for Space Science and Technology Education	
			ESCAP	Regional Space Applications Programme for Sustainable Development (RESAP)	http://www.unescap.org/icstd/SPACE/resap/resap_main.asp
			WMO	Natural Disaster Prevention and Mitigation Programme	

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		Atmospheric Research using Space Technology for disaster management	SUPARCO/ISNET (OIC's Space Technology Network) OOSA	The stake holders from regional countries are trained on the subject under a collaboration program	