

UN-SPIDER

February 2012 Updates

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UN-SPIDER News

1. Fifth International UN-SPIDER Bonn Workshop

The Fifth International UN-SPIDER Bonn Workshop will take place on 24 -26 April 2012 in the premises of the United Nations Campus in Bonn, Germany. Under the title "Enhancing Resilience through Knowledge Management: Networks and the UN-SPIDER Knowledge Portal", the workshop aims to identify knowledge management strategies that will enhance synergies among institutions and mechanisms that generate space-based information and the disaster risk management and emergency response communities. The main topics to be discussed in the workshop include:

- The role of Portals, Gateways and Geo-viewers as platforms to access space-based data and information to support all phases of the disaster management cycle;
- Knowledge management in the context of space-based information: challenges and needs faced by institutions that promote the use of space-based information and by those that need to use it;
- Enhancement of synergies among networks, mechanisms and volunteer technical communities that generate space-based information to support government agencies in their tasks related to disaster risk management and emergency response;
- Novel geospatial IT tools and infrastructure to support disaster-risk management and emergency response;
- E-learning environments as tools to enhance the skills of professionals and practitioners on the topic of space-based information for disaster-risk management and emergency response.

Applications can be submitted online at http://www.un-spider.org/workshop-bonn-2012. The application deadline is **Friday 16 March 2012**. A very limited number of participants from developing countries will be offered financial support to attend the Workshop.

For further information >> Juan Carlos Villagran







2. 3rd Annual RSO Meeting conducted in Vienna

UN-SPIDER conducted the Third Annual Meeting of the UN-SPIDER Regional Support Offices (RSO) on 6 and 7 February 2012 as a side event of the Forty-ninth session of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space (COPUOS) from 6 to 17 February 2010. The meeting brought together representatives of nine of the twelve established RSOs and from four of the five prospective new RSOs. In her opening remarks, Ms. Mazlan Othman, Director of the Office for Outer Space Affairs, reiterated the fact that it is through the active participation of the RSOs that UN-SPIDER will increase its activities worldwide. The meeting combined plenary sessions and break-out groups, allowing RSOs to take note of activities being conducted by other RSOs worldwide, to become aware of the proposed plan of work of UN-SPIDER for the next biennium (2012-2013) and to discuss and agree on a set of activities to be carried out during the biennium. Representatives of RSOs commented on their engagement in a variety of outreach, technical advisory support, training and emergency support activities conducted under the umbrella of UN-SPIDER in Asia, Latin America and Caribbean, and Africa during 2011. In addition to supporting the conduction of these activities in the coming years, RSOs agreed to provide content material to the UN-SPIDER Knowledge Portal, to contribute to the VALID project, and will take the leadership in developing the "UN-SPIDER Recommended Practices" on the generation and use of space-based information targeting floods, droughts, and forest fires. Efforts will also include the review of case studies and examples on the use of archived imagery to track the extent to which land-use changes have modified the spatial and temporal dynamics of these three hazards in different regions of the world.

For further information >> **David Stevens**

3. UN-SPIDER to carry out a Technical Advisory Mission to Tonga (20 – 26 March 2012)

Thanks to the continuous and generous support provided by the Government of Austria, the UN-SPIDER Programme has been providing support to the Pacific Island Countries since 2008 beginning with a Regional Workshop, the "United Nations Regional UN-SPIDER Workshop: Building Upon Regional Space-based Solutions for Disaster Management and Emergency Response for the Pacific Region" which was held in Suva, Fiji, 16 to 19 September 2008 with several follow-up activities since which have provided additional opportunities to involve experts from several Pacific Island Countries, including Tonga, more recently during the 3rd Session of the Pacific Platform for Disaster Risk Reduction held in Auckland 1 – 5 August 2011. During the Auckland meeting it was agreed with representatives from Tonga that a Technical Advisory Mission would be carried out in Tonga in early 2012. The Government of the Kingdom of Tonga, through the Ministry of Lands, Survey & Natural Resources & Environment has subsequently invited UN-SPIDER to carry out a Technical Advisory Mission. UNOOSA will be joined by experts from SOPAC and UN OCHA, together with Dave Leng, a crowdsourcing expert.

For further information >> David Stevens

4. Karoly Robert University of Hungary joins UN-SPIDER as an RSO

On 7 February 2012, during the Forty-ninth session of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space (COPUOS), UN-SPIDER and the Karoly Robert University of Hungary signed the cooperation agreement to incorporate the *Research Institute of Remote Sensing* (RIRS) of the Faculty of Natural Resources Management and Rural Development in Gyongyos, Hungary, as the newest Regional Support Office of the UN-SPIDER Programme. RIRS conducts basic and applied remote sensing research, focusing on the applications of state-of-the-art remote sensing and GIS systems and on the development of techniques to enhance the usefulness of these systems in environmental applications. The Institute also offers a team of experienced professionals in the integration and deployment of various sensors, in remote sensing through LiDAR-, thermal- and hyper-spectral imaging technologies as well as in computer







sciences (digital image processing and analysis). The Institute hosts a number of laboratory facilities which can be used for capacity building purposes.

For further information >> Lorant Czaran

5. UN-SPIDER supports the Third Workshop on Space Technology Applications in Disaster-Risk Reduction and Emergency Response

After conducting two similar workshops in 2010 and 2011, UN-SPIDER is supporting this third workshop which is hosted by the National Institute of Disaster Management (NIDM), in New Delhi, India. The National Disaster Management Authority (NDMA), which is an apex policy-making body for disaster management in India, is associated with this workshop as well. The target group will be composed of members of State disaster management authorities, senior and middle level administrators of the Department of Disaster Management, faculty members of administrative training institutes, senior officers of State remote sensing applications centres and other organizations working with disaster management departments. The workshop will focus on the applications of space technology for disaster management and aims to define long-term needs related to capacity building and spatial data infrastructure to ensure the use of space-based and geospatial information in all phases of the disaster management cycle. This workshop will contribute to bridge the gap between the disaster management community and providers of space -based/geo-spatial applications.

For further information >> contact Shirish Ravan

6. VALID project update: Substantial scientific support.

UNOOSA/UN-SPIDER and the Joint Board of Geospatial Information Societies (JBGIS) VALID (The Value of Geo-Information for Disaster and Risk Management) are conducting this project aiming at a scientifically founded benefit and impact analysis of geo-information in disaster management. On 6 February 2012, the VALID editorial board met at the Institute of Photogrammetry and Remote Sensing in the Vienna Technical University to discuss the status of the project and further steps. A major point was a review of the offers of scientific support received so far from scientific associations, including the JBGIS member societies: Global Spatial Data Infrastructure Association (GSDI), International Association of Geodesy (IAG), International Cartographic Association (ICA), International Federation of Surveyors (FIG), and also by the European Spatial Data Research Network (EuroSDR) and the International Union of Geodesy and Geophysics (IUGG). The board also welcomed Henk Scholten, Professor in Spatial Informatics at Vrije Universiteit Amsterdam, as a new member.

Based on this substantial scientific support, the next major step in VALID will be a detailed web-based appraisal of geoinformation products by the global user community. The opportunity was used by the Editorial Team to inform the Director of UNOOSA, Mazlan Othman, on the project status and continuation, and to inform the network of UN-SPIDER RSOs during their third annual meeting.

For further information >> contact Robert Backhaus

7. European Seminar on Disaster Risk Management in Berlin.

UN-SPIDER was invited to participate in a seminar organized by the European Academy for Taxes, Economics and Law on 27 and 28 February 2012 in Berlin. The seminar focused on the Assessment and Management of Disaster Risks and targeted experts from civil protection and disaster management institutions. More than 20 participants representing governmental authorities and public agencies from Austria, Denmark, Finland, Germany, Ireland, Italy, Latvia, Portugal, Serbia, South Africa, Sweden and Switzerland took part in this event. The seminar was intended to provide expert knowledge to identify, analyze, evaluate and manage risks, to support timely and well-directed disaster prevention. The seminar included discussion the current status and future perspectives of the EU framework for an improved disaster prevention in Europe, exemplary national approaches and critical issues regarding their comparability, instruments of international disaster risk reduction and on technological and methodical issues regarding mapping disaster risks from space, and on







problems of assessing the impact and value of specific geo-information products in disaster and risk management, with reference to the approach and first results of the VALID project.

For further information >> contact Robert Backhaus

8. UN-SPIDER participation in "Expert Group Meeting on Geo-reference Disaster Risk Management System in Asia-Pacific Region", Bangkok, Thailand.

UN-SPIDER participated in the "Expert Group Meeting on Geo-reference Disaster Risk Management System in the Asia-Pacific Region". This event took place on 15 to 17 February 2012 in the premises of ESCAP in Bangkok, Thailand. The meeting was organized as an inception meeting related to the UNDA project entitled "Improving capacity for disaster preparedness in the ESCAP region". The objectives of the Expert Group Meeting were to discuss and finalize the findings of the geo-referenced-data needs and gaps-assessment survey, to discuss the establishment of an online network of national and regional policy- and decision-makers and experts on georeferenced disaster risk reduction (DRR) and impact assessment. The meeting was also used to discuss the development of a standardized information system containing socio-economic statistics and geo-referenced information in support of DRR and preparedness. It was attended by representatives of several member states, United Nations and intergovernmental organizations. Considering the role of UN-SPIDER in disaster risk management, its participation in this meeting was as an important contribution to the initiatives carried out by the UN system. UN-SPIDER demonstrated its prominent role in Asia as exemplified through the conduction of Technical Advisory Missions to achieve the objectives and challenges outlined in this meeting. The event was also used to promote the joint JBGIS-UNOOSA publication entitled "Geo-infomation for Disaster and Risk Management" and the on-going project entitled "The Value of Geo-Information for Disaster and Risk Management (VALID).

For further information >> contact Shirish Ravan

RSO News

9. Algeria inaugurated the Centre of Satellite Development (CDS)

The President of Algeria, Abdelaziz Bouteflika, inaugurated the Algerian Centre for Satellite Development on 23, February 2012. This centre, located in Oran, is an operational entity of the Algerian Space Agency, which is a UN-SPIDER Regional Support Office. The opening of this Center is an activity contemplated in the National Space Programme - Horizon 2020. Built on an area of 4.7 hectares and including housing accommodations and sports grounds, the ACSD will boost the development of space technologies in Algeria. This infrastructure will allow Algeria to build the third Algerian Alsat-2 B satellite, a twin of the Alsat-2 Earth observation satellite, and future satellite series, as well as to provide the appropriate technological environment to allow engineers and researchers to carry out activities in space technology and other related fields.

For further information >> ASAL

10. ADRC conducted Training for Government Officials in Charge of DRM in Indonesia

From 27 to 29 January 2012, Indonesia's National Disaster Management Agency (BNPB) and the Asian Disaster Reduction Center (ADRC) conducted training for government officials in charge of disaster risk management in Jakarta, Indonesia. This was part of a capacity building project in ASEAN member countries that ADRC has been involved in since 2008. During the training, BNPB and ADRC conducted a training-of-trainers (TOT) for selected BNPB officials to enable them to give lectures in upcoming workshops at the provincial level. The program was divided into two sessions: (1) lectures on such topics as recovery from disasters and raising public awareness, and (2) effective training skills practice. Though the training only lasted a short period, the 20 participating officials actively exchanged opinions and stayed up late at night preparing their presentations. Each participant







gave a presentation on their area of DRM expertise, improving their understanding and training skills through the interactive discussion and evaluation process.

For further information >> ADRC

11. RCMRD conducted "Workshop on Disaster Rapid mapping and International Charter Operations"

With support from the GMES framework for Africa and the Regional Network for Information Exchange and Training in Emergencies (GARNET-E Project) funded by the European Union, a five-day workshop on 'Disaster Rapid mapping and International Charter Operations' opened on 27/02/2012 by The Regional Centre for Mapping of Resources (RCMRD), which is an UN-SPIDER RSO. The workshop focused on Disaster Rapid Mapping Techniques; International Space & Disaster Charter Activation/operation as well as Evaluation of GMES-SAFER Disaster Products. The main objective of the GARNET-E Project is to develop rapid mapping methodologies to mitigate disasters as well as for disaster risk reduction. Participants from the disaster agencies and mapping agencies of RCMRD Member States took place in this event.

For further information >> RCMRD

12. Iranian Space Agency, successfully launched the Navid-e-Elm and San'at (promise of Science and Technology) Satellite on February 3, 2012

The Navid-e-Elm and San'at satellite has been designed and manufactured with integrated systematic management of the Iranian Space Agency in collaboration with Iranian scientists from the Iran University of Science and Technology, under the leadership of Dr. Bolandi, who is the project manager. This Iranian satellite weighs 50 kg and was designed for deployment into LEO orbit at an altitude of up to 370 kilometers and it has a two-month lifetime passing over the country up to 6 times per day. The level-1 mission of Navid-e-Elm and San'at satellite is imaging of the surface in the visible spectrum. The images received from Navid satellite are being applied in the fields of atmospheric and meteorological sciences like weather forecasting, clouds density, air temperature and moisture, estimating of forest areas, and natural disasters including the detection of forest fires, coastlines, droughts, floods and earthquakes.

For further information >> <u>ISA</u>

Community News

13. Secure World Foundation organizes a Round Table on "the Future of GMES"

On 17 February 2012, the Brussels Office of Secure World Foundation organized a round table to discuss opportunities and challenges facing the Global Monitoring for Environmental Security programme (GMES) in the coming decade. The Round Table brought together representatives from GMES, the European Commission's Enterprise and Industry Directorate, the European Space Policy Institute (ESPI), and from the private sector including the European Association of Remote Sensing Companies (EARSC) and Space Tec Partners. Dr. Josef Aschbacher, Head of GMES Space Office of the European Space Agency (ESA), provided an overview of the applications of GMES including disaster reduction, climate and climate change, environment, and natural resources. Dr. Aschbacher also commented on the future plans to increase spatial and temporal coverage through an enhanced constellation of satellites and on the challenge of securing long-term funding to carry out the proposed activities. Other members of the panel commented on alternatives to fund GMES in the coming decade, on cost/benefit exercises carried out in relation to the generation and use of space-based information through GMES and highlighted the need to provide figures of merit citing the usefulness of GMES, as well as simple and convincing examples regarding how European countries and citizens benefit from GMES. Secure World Foundation aims to find new ways to improve the use of space systems for human benefit and has supported and cooperated with UN-SPIDER in the conduction of several outreach events, including the







Expert Meetings on Space-based information for crowdsource mapping and workshops in different regions of the world.

For further information >> Secure World Foundation

14. A new generation of meteorological satellites

Europe's next fleet of meteorological satellites is set to debut in 2017 following the signing of the development contract on 24 February 2012. The Meteosat Third Generation (MTG) will ensure full continuity with the current Meteosat satellite family and will also introduce significant improvements. The contract between ESA and Thales Alenia Space was signed at an event held at ESA's headquarters in Paris. As a cooperative venture between Eumetsat and ESA, MTG will ensure continuity of high-resolution meteorological data to beyond 2037. The cooperation on meteorological missions between Eumetsat and ESA is a success story that started with the first Meteosat satellite in 1977 and continues today with Meteosat Second Generation and the polar-orbiting MetOp series.

For further information >> European Space Agency

15. Advanced Tool for Weather Forecasting Turned On Aboard NPP

Experts managing the Suomi National Polar-orbiting Partnership (NPP) satellite, formerly the National Polar-orbiting Operational Environmental Satellite System (NPOESS) Preparatory Project, say that the spacecraft has just turned on an instrument that will make it extremely suited for weather forecasting. The primary task of the Cross-track Infrared Sounder (CrIS) instrument is to produce temperature, atmospheric pressure, and moisture profiles of Earth's atmosphere, at very high resolutions and in 3D. This is bound to help NOAA improve its weather and climate forecasts. NPP data will be fed directly into the organization's existing climate simulations, allowing experts to be able to forecast the weather up to several days in advance with a high degree of accuracy.

For further information >> Softpedia

16. SMOS water mission turns hurricane hunter

ESA's Earth Explorers have again shown how they are surpassing expectations. Designed to map soil moisture and ocean salinity, the versatile SMOS satellite has demonstrated that it can also offer unique information to improve hurricane forecasts. The Soil Moisture and Ocean Salinity (SMOS) satellite carries a novel microwave radiometer that can capture images of 'brightness temperature'. These images correspond to radiation emitted from the surface of Earth and can be used to work out how much water is held in the soil and how much salt is in the surface waters of the oceans. This information is leading to a better understanding of the water cycle and the processes that link Earth's surface and atmosphere. The SMOS sensor works in the 'L-band', at frequencies around 1.4 GHz, which also allows surface wind speeds over oceans to be derived, even in cloudy and rainy conditions. When winds reach gale force over oceans, breaking waves and whitecaps affect the microwave radiation being emitted from the surface. This means that when a storm builds, changes in the emitted radiation can be linked directly to the strength of the wind over the sea. This means that SMOS has the potential to improve accuracy for forecasting the strength of tropical cyclones.

For further information >> <u>European Space Agency</u>

17. GMES: e-GEOS wins contracts from the European Commission to provide satellite data and maps for emergency management

e-GEOS has won two tenders launched by the European Commission worth a total of EUR 9.6 million, as part of the GMES (Global Monitoring for Environment and Security) programme. e-GEOS, will provide geospatial information and satellite maps of areas affected by emergencies to the European Commission, which will then make it available to the civil protection services and competent authorities of EU countries. Furthermore, the





Commission will be able to provide pre- and post-event maps of any area in the world within a few hours of the onset of the emergency, thereby facilitating the conduction of aid operations. The 24-hour-a-day service can be used in all crisis situations (floods, earthquakes, fires, technological disasters, etc), and will be managed by e-GEOS, which will lead a consortium consisting of the German subsidiary GAF, the Italian company Ithaca and the French group SIRS. The two contracts concern "rush" and "non-rush" production, and are managed by the European Commission's Joint Research Centre (JRC). UN-SPIDER will be joining the first User Meeting of the GMES Initial Operations of the Emergency Management Service-Mapping which will be held on 7 March 2012 in Brussels.

For further information >> e-Geos

18. Princeton system tracks drought to aid disaster relief

Drought is often the precursor to disaster, but getting leads on its stealthy approach through remote or wartorn areas can be so difficult that relief agencies sometimes have little time to react before a bad situation becomes a calamity. Therefore, researchers at Princeton University developed an approach that dodges those problems and uses satellite data and historical records to track drought as it emerges. Experts believe their monitoring project, installed this month at AGRHYMET's research center in Niamey, Niger, may go a long way in addressing problems related to drought that have long plagued Africa. Due to the fact that meteorological data is not available in many areas of the continent, the Princeton researchers use a mathematical model to simulate the water cycle and, from this simulation, determine when specific regions begin to experience a drought. Essentially, the model maps the landscape and provides a likely estimate of hydrological conditions based on current inputs and historical patterns.

For further information >> Princeton University

19. Esri and GeoEye Developing Global Crisis Response Service

GeoEye Inc., a leading source of geospatial information and insight, announced that it will jointly develop a new crisis response imagery service with Esri, the leading global geographic information software provider. This service, expected to be released this spring, will augment Esri's current disaster response capability with GeoEye's ability to task its satellite to collect high-resolution satellite imagery after a crisis. The new service will provide Esri and their user community access to timely and quality imagery during disasters. ArcGIS users will be able to leverage GeoEye's map-accurate imagery and Esri tools to gain clear and timely insight before, during and after a crisis, emergency or global event.

For further information >> GeoEye

20. Timely Upgrade of Weather Information Systems

The United States Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) has been upgrading Emergency Managers Weather Information Systems (EMWINs) in the Pacific to ensure that local officials and decision makers receive timely warning for better disaster management planning and awareness. Funded by the U.S. State Department and USAID's Office of Foreign Disaster Assistance (OFDA), these systems will bring essential satellite imagery and products for weather forecasting, and will provide critical, time sensitive multi-hazard information to national meteorological and disaster management offices in case of floods, typhoons, tsunamis, and other high impact events.

For further information >> <u>Taimi Media Network</u>

21. Earth Observation and Tsunami Warning System Seen as Critical to Revitalizing Japan

In the wake of the devastating earthquake and tsunami, Japan is investing in sensors and systems to ensure resilience. The country looks for more real-time feedbacks and better predictive models as a way to improve preparedness and reduce the impacts from future disasters. The country is also pursuing a real-time tsunami





warning system that makes use of satellite imagery for quicker forecasts. The idea is that a geostationary satellite linked to sensor buoys in the ocean could provide the ultimate insight and continuous observation. For further information >> Asian Surveying and Mapping

22. Romantis Provides Turnkey Satellite Telemedicine Network to All-Russian Center for Disaster Medicine

Romantis, a global provider of satellite capacity and satellite networking equipment, has announced the successful implementation of the state project on delivery of communication, management and interaction systems to connect the Regional Centers for Disaster Medicine (RCDM) of the Russian Federation with the unified national system of prevention and management of emergency situations. The project is the next step in the plan to develop a satellite telecommunication network for the All-Russian Center for Disaster Medicine «Zashchita», which now covers the Russian Federation providing support to medical specialists working in the field and allows for the coordination of first aid during disasters and accidents. The network operates via the satellite capacity provided by Romantis and supports voice and data transmission, including protected medical information, as well as videoconferencing.

For further information >> Romantis

23. ISRO sets ball rolling for Indian 'GPS' / navigation system

The first of India's own regional positioning satellites may be launched into orbit this year. The seven-satellite constellation, called the Indian Regional Navigational Satellite System, will be far more accurate than the GPS that the world depends on when fully implemented in the coming years. Mr S.Satish, ISRO's Director of Publicity and Public Relations, said that the GPS signals and position data received in the country are often wide of the mark. "When we have our own IRNSS, it will be equal to, if not better than, the GPS." An ISRO release said. "The regional navigational satellite system will provide users in the Indian region a position accuracy that is better than 20 meters on a 24/7 all-weather basis."

For further information >> The Hindu

24. SAFER is activated for Bulgaria and Algeria

Due to heavy snow that has covered Bulgaria in the beginning of February 2012, several dams were overflowing. On 6 February 2012, the Ivanovo dam wall broke due to severe weather conditions flooding the villages of Biser and Leshnikovo in south eastern Bulgaria. Several other dams in these areas are also in risk of being damaged due to masses of water and snow. Heavy rains hit the El-Tarf region in Algeria on the 24th of February. The exceptional rainfall is the heaviest reported for this region in the 30 years. Moreover, the overflow from the Bougous, Mexa and Cheffia dams (El-Tarf) and that of Bouhamdane in the neighboring Guelma region, have caused floods, three fatalities, many homeless and damage to croplands and infrastructure. The communities most affected by the downpours are located on the plains of El-Frin, from the town of Ain Assel up to Drean; twenty kilometers from Annaba, where waters have affected the road network and a number of isolated hamlets. SAFER is activated for both flood events.

For further information >> <u>SAFER</u>

25. The International Charter is activated for Algeria and Peru

On 17 February 2012, intensive rain caused collapses in bridges over the Llave River, in Peru. The floods provoked fatalities, damaged houses, and crop losses. The waters left many people isolated. The Civil Protection Agency of Peru reports 3 deaths, 18.645 people homeless, and 12,202 affected. 4,329 houses were reported destroyed and 2,440 others affected, along with 1,265 hectares of crops affected. Heavy rains hit the El-Tarf region, Algeria on the 24th of February. The International Charter has been activated for both flood events.

For further information >> <u>The International Charter</u>





26. Sentinel Asia is Activated for Philippines

A M6.9 earthquake occurred offshore Negros Oriental (Tayasan) in the Philippines on 6 February 2012. 43 people were killed and 6366 houses were damaged by the earthquake. Sentinel Asia has been activated after the event.

For further information >> <u>Sentinel Asia</u>

Upcoming UN-SPIDER Outreach Activities

27. UN-SPIDER supports disaster management officials from member states to attend one month training programme on "Application of space technology for disaster risk reduction'

The UN affiliated Centre for Space Science Technology Education for Asia and the Pacific (CSSTEAP) is conducting a one month training course entitled: "Application of space technology for disaster risk reduction' from 9 April to 4 May 2012 in its campus at the Indian Institute of Remote Sensing in Dehradun, India. Being involved in this activity, UN-SPIDER is sponsoring five persons from the countries that are already receiving UN-SPIDER technical advisory support.

For further information >> contact Shirish Ravan

Country	Name
Bangladesh	Disaster Management & Relief Division, Ministry of Food & Disaster Management, Dhaka- 1000
Myanmar	Relief & Resettlement Dept, Ministry of Social Welfare, Office Building No. 23, Nay Pyi Taw
Solomon Islands	National Disaster Management Office, PO Box 21, Ministry of Environment Climate Change, Disaster management & Meteorology, Honiara
Sri Lanka	Disaster Management Centre, No. 498, R.A.De Mal, Mawatha, Colombo 03
	Coast Conservation Dept., PO Box 556, New Secretariat Building, Maligawatta, Colombo

Information on upcoming UN-SPIDER outreach activities can be obtained from the events section of the UN-SPIDER Knowledge Portal:

www.un-spider.org/events

We maintain a Calendar of Events with upcoming Conferences, Meetings and Events relevant to the area of space-based solutions for disaster management and emergency response. The Calendar can be viewed at:

www.un-spider.org/events







The **United Nations Office for Outer Space Affairs (UNOOSA)** implements the decisions of the General Assembly and of the Committee on the Peaceful Uses of Outer Space and its two Subcommittees, the Scientific and Technical Subcommittee and the Legal Subcommittee. The Office is responsible for promoting international cooperation in the peaceful uses of outer space, and assisting developing countries in using space science and technology. Headquartered in Vienna, Austria, UNOOSA maintains a website at http://www.unoosa.org.

In its resolution 61/110 of 14 December 2006 the United Nations General Assembly agreed to establish the "United Nations Platform for Space-based Information for Disaster Management and Emergency Response - UN-SPIDER" as a programme within UNOOSA. UN-SPIDER focuses on the need to ensure access to and use of space-based solutions during all phases of the disaster management cycle.