



UN-SPIDER

July 2010 Updates

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UN-SPIDER News

1. Regional Center for Mapping of Resources for Development (RCMRD) joins the network of UN-SPIDER Regional Support Offices

The Regional Center for Mapping of Resources for Development (RCMRD) and the United Nations Office for Outer Space Affairs (UNOOSA) signed a cooperation agreement on the occasion of the UN-SPIDER Regional Workshop – “Building Upon Regional Space-based Solutions for Disaster Management and Emergency Response for Africa” in Addis Ababa on Wednesday, 7 July 2010. In its role as UN-SPIDER Regional Support Office, RCMRD will support the development and strengthening of national capacities in the Eastern African region, contribute to horizontal cooperation and technical assistance to countries and organizations involved in disaster prevention and mitigation, as well as assist in generating and sharing knowledge for the use of valuable space-based information in decision making processes.

For further information >> [UN-SPIDER News](#)

2. Regional Workshop for the African continent conducted by UN-SPIDER

From 6 to 9 July 2010, UN-SPIDER successfully conducted its regional workshop for the African continent in Addis Ababa, Ethiopia, in cooperation with the Economic Commission for Africa (UNECA). More than 80 senior experts and decision-makers from 27 countries and international organizations participated in this 4-day event, which benefitted considerably from the support provided by the Government of Austria and the Secure World Foundation. Through this workshop, UN-SPIDER sought to obtain elements to define a Plan of Action to tailor its activities in Africa to bridge the gap between space-based technologies and the disaster management communities, and to improve communication and coordination among existing initiatives in African countries in disaster management, emergency response, and health-related issues.

For further information >> [UN-SPIDER News](#)

3. SpaceAid supporting response to floods in Moldova, Burkina Faso and Pakistan

In the past month, three countries have received support through UN-SPIDER's SpaceAid framework, all in response to floods. In the beginning of July, continuous rains caused the flooding of various areas in **Moldova**, particularly along the rivers Prut and Nistru. The Services and Applications For Emergency Response (SAFER) was activated on 8 July at the request of the European Union Monitoring and Information Center (MIC), with SERTIT as a value-adder. In addition, UN-SPIDER was contacted by its Romanian Regional Support Office (RSO), who was in contact with the Agency for Land Relations and Cadastre of the Republic of Moldova, to seek any possible support. The SpaceAid framework thus became active in ensuring that responders in Moldova get access to all possible products and imagery data covering the floods. Efforts were made to ensure the flow of information with the local authorities and the UNDP Office in Moldova, as well as with the SAFER value-adder and the Romanian RSO. A Charter activation was immediately considered but not requested following the SAFER activation, to avoid duplication of efforts and help ensure focus of resources. Access to the imagery, though it was also requested by the Moldova authorities, could not be facilitated through the existing mechanisms, however various good flood maps and radar (TerraSAR-X)-derived geospatial data were prepared and delivered to the end-users promptly.

Continuing floods caused by heavy rains are currently affecting north-central regions of **Burkina Faso**. The activation of SAFER for this disaster was requested by the World Food Programme (WFP) on behalf of UNOOSA/UN-SPIDER on 30 July and was accepted that same day. On its SpaceAid Updates page UN-SPIDER is providing the coordinates of the areas of interest and is constantly updating information about the satellite imagery that is scheduled to be collected. A number of flood extent maps have already been produced by the Center for Satellite Based Crisis Information (ZKI) and made available to the end user. Positive feedback was received from Burkina Faso authorities. Additional areas of interest may be imaged in the coming days. The contact data of national focal points for both disasters can also be found on the respective pages.

In response to the floods in **Pakistan** in late July, UNOOSA/UN-SPIDER has activated the UN-SPIDER SpaceAid framework in coordination with the UN-SPIDER Regional Support Office in Pakistan, hosted by the National Space Agency of Pakistan (SUPARCO). In close coordination with the National Space Agency of Pakistan, the UN-SPIDER SpaceAid framework supports the ongoing activities of the major international mechanisms that have been activated: The International Charter Space and Major Disasters, Sentinel Asia and SAFER. Available space-based information, including a satellite tasking table and initial products as well as contact details have been made available and will be continuously updated on the respective SpaceAid Updates page.

For further information >> [SpaceAid Moldova](#), [SpaceAid Burkina Faso](#), [SpaceAid Pakistan](#)

Community News

4. Disasters covered by Sentinel Asia in July 2010

Sentinel Asia, the Asia-Pacific Regional Space Agency Forum (APRSAF)-led initiative for supporting disaster management activities in the Asia-Pacific region by applying web-GIS and space-based technology, has been observing five disasters in the month of July. The corresponding satellite imagery has been uploaded to Sentinel Asia's website. They cover the flood which occurred in Tanah Bumbu district, South Kalimantan in Indonesia, floods in north-eastern India, the landslide which affected Chukha Dzongkhag in Bhutan, the area affected by the Typhoon in northern Vietnam, and the recent floods in Pakistan.

For further information >> [Sentinel Asia](#)

5. International Charter Space and Major Disasters activated for floods in China

The activation of the International Charter Space and Major Disasters was requested by the National Committee for Disaster Reduction of China on 19 July to support the response efforts to severe floods in southern China. As the International Charter informs on its website, about 52.000 people and 72 counties were affected by the heavy rains and more than 40.000 people were relocated.

For further information >> [International Charter Space and Major Disasters](#)

6. SAFER activated for floods in Moldova

Starting early July 2010, significant rainfall events caused flooding along the Prut and Nistru rivers, which flow in western and eastern areas of the Republic of Moldova. An alert was maintained along the 1,352 km of river stretches that make up these two major rivers in this land-locked country. The flooding primarily affected the cities of Briceni, Cahul, Causeni, Edinet and Ungheni, as well as more than 50 villages. Thousands of people were affected and considerable material damage done. Moreover, over 31.000 hectares of farmland and cropland are reported to have been destroyed along with bridges, dams and administrative buildings. An emergency map and several damage assessment maps were produced by SERTIT in the SAFER framework.

For further information >> [SAFER](#)

7. Global Fire Monitoring Center provides daily updates about wildfires in Russia

The Global Fire Monitoring Center (GFMC) was established in 1998 at the Fire Ecology and Biomass Burning Research Group, a subdivision of the Biogeochemistry Department of the Max Planck Institute for Chemistry at Freiburg University, Germany. The GFMC provides a global portal for wildland fire documentation, information and monitoring and is publicly accessible through the Internet. The regularly updated wildland fire products of the GFMC are generated by a worldwide network of cooperating institutions. Among other services the GFMC serves as advisory body to the UN system through the coordination of the UN-ISDR Wildland Fire Advisory Group and the ISDR Global Wildland Fire Network. The Center currently displays near-real time space-borne information to visualize active vegetation fires and fire effects, including the devastating wildfires in Russia, by utilizing two satellite systems/sensors, the NOAA AVHRR (Advanced Very High Resolution Radiometer) and, to a limited extent, the NOAA GOES (Geostationary Operational Environmental Satellite).

For further information >> [GFMC Home](#), [GFMC Russia](#)

8. TanDEM-X delivers first 3D images

On 22 July 2010, researchers at the German Aerospace Center (DLR) facility in Oberpfaffenhofen published the first 3D images from the TanDEM-X satellite mission. Just one month after the launch of TanDEM-X (TerraSAR-X add-on for Digital Elevation Measurement), which took place on 21 June 2010, DLR researchers have created the first digital elevation model – almost a week ahead of schedule. A group of Russian islands in the Arctic Ocean was selected for the first test. This new elevation data gives an idea of the Digital Elevation Model products that will be available from the TanDEM-X mission. For the first time, one sees the small height differences in roads, field boundaries and rivers. This opens up fantastic prospects for the application of this data, for example, for the prediction of flooding areas in the event of a disaster.

For further information >> [DLR](#)

9. University of New South Wales (UNSW) to develop satellite surveying technology

University of New South Wales (UNSW) researchers will develop satellite surveying technologies that will allow flooding, bushfires, deforestation and earthquakes to be monitored in real time under a USD 4.7 million Australian Space Research Program grant from the Federal Government. Associate Professor Dempster said the SAR Formation Flying project would ultimately enable real-time satellite monitoring of disasters such as floods and fires and may also be used to help predict earthquakes and volcanic eruptions by measuring ground surface distortion. The Australian Defence Department is committed to developing its own SAR satellite capabilities as part of a move to increase its self-reliance in space operations.

For further information >> [GIS DEVELOPMENT](#)

10. Earth Disasters: A future vision of response and recovery tools

The influence of Earth remote sensing satellites in disaster management can be greatly enhanced over the next decade, becoming a far more powerful tool than today to help mitigate the effects of natural and human-made calamities. "The use of remote sensing - from space and the air - should be a routine and cost-effective means of support to disaster response and recovery," Dr. Williamson, Executive Director of Secure World Foundation, said. In the near future, remote sensing data should be routinely and quickly geo-referenced and analyzed, he said, resulting in information delivered to first responders within 24 hours of collection. Williamson also noted that satellite telecommunications can be used more effectively to deliver information to response and recovery teams throughout the recovery phase.

For further information >> [TERRA DAILY](#)

11. ISRO successfully launches Cartosat-2B alongside four other satellites

In a textbook launch, India's Polar Satellite Launch Vehicle (PSLV) successfully placed into orbit remote sensing satellite Cartosat-2B and four other satellites after a perfect lift off from the spaceport in Sriharikota, India. Cartosat-2B is an advanced remote sensing satellite built by ISRO. This is the latest in the Indian remote sensing satellite series and the 17th in this series. Cartosat-2B is mainly intended to augment remote sensing data services to the users of multiple spot scene imagery with 0.8 metre spatial resolution and 9.6 km swath in the panchromatic. Cartosat-2 and 2A, two Indian remote sensing satellites in orbit, are currently providing such services. The multiple spot scene imagery sent by Cartosat-2B camera would also be useful for village/cadastral level resource assessment and mapping, detailed urban and infrastructure planning and development, transportation system planning, preparation of large-scale cartographic maps, preparation of micro watershed development plans and monitoring of development works of villages.

For further information >> [THE TIMES OF INDIA](#)

12. Predicting dust storms with infrared satellites

Researchers based at the University of Pittsburgh have developed a method for predicting dust- and sandstorms that uses infrared satellite images to determine when conditions are ripe for the destructive phenomena, a technique that could be implemented globally and that the research team used to forecast a 2008 New Mexico dust storm two days beforehand. By studying thermal infrared images of moisture content and albedo -or sunlight reflected by the ground- at White Sands, the team found that the sand became drier and more reflective until it was a mass of loose sediment susceptible to strong winds. The researchers plan to build on their work at White Sands by observing arid and semi-arid areas with different soil characteristics, particularly albedo, which is uniquely high at White Sands. They also suggested that monitoring desert areas via ASTER can be further validated with field measurements of soil density, moisture, and composition.

For further information >> [SPACE DAILY](#)

13. First output of the project to assess coastal vulnerability

Department of Planning/Department of Transport, Australia, has delivered the first outputs of the project to assess coastal vulnerability and prepare for possible sea level rise. They include complete and seamless data files of water depths and broad seabed imagery from pseudo-reflectance and a high resolution coastal 3D model of the land and seabed between Two Rocks and Cape Naturaliste. The data collected will be used as input for several other purposes, such as: assessment of the impacts of climate change induced sea level rise on the coast; modeling flooding, groundwater, surface water, tsunamis and storm events; provide a basis for contingency planning and managing natural disasters; etc.

For further information >> [GIS DEVELOPMENT](#)

Conferences and Workshops

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

International Summer School 2010 on Geo-Technologies Applied to Marine Spatial Planning and Integrated Coastal Zone Management, Azores Island, 7-12 August 2010

GISlands 2010 is an International Summer School on Geotechnologies applied to Marine Spatial Planning (MSP) funded by Science, Technology and Equipment Secretary of the Azores Regional Government, and organized by the Geographical Information & Territorial Planning Centre (CIGPT) at the University of the Azores situated in the beautiful Azores archipelago in the North Atlantic. GISlands 2010 Summer School has selected a diverse and multinational team of lecturers from Spain, Germany, United Kingdom, USA and Portugal, with significant experiences in MSP, Integrated Coastal Zone Management (ICZM), GIS, Remote Sensing, Environmental Modelling and Spatial Data Infrastructure. In this 6-day course, lecturers will share their experiences with the students, and all students will present their MSP related research and also learn through theories and hands-on experiences on how to apply Geotechnologies on MSP.

For more information and registration: [GISLANDS 2010](#)

2010 Meeting of the Americas, Foz do Iguacu, 8-12 August 2010

The major event will be a Union symposium "Natural Hazards and Disaster Risk in Latin America and the Caribbean". The symposium will contribute to a better understanding of physical phenomena behind natural hazards and to disaster risk analysis in Latin America and the Caribbean region and will promote further research in an interdisciplinary framework focused on natural hazards, risk assessment and reduction. The symposium's topics include geohazard processes associated with risk and disasters in the region; analysis of disaster risk causes, drivers and impacts; understanding the factors and processes that contribute to the social construction of risk; and climate change adaptation and disaster risk reduction.

For more information and registration: [AGU](#)

ISPRS Technical Commission VIII Symposium, Kyoto, 9-12 August 2010

This symposium will be co-sponsored by the ISPRS (International Society for Photogrammetry and Remote Sensing) and the JSPRS (Japan Society of Photogrammetry and Remote Sensing). ISPRS is a large international organization that includes remote sensing, photogrammetry and GIS. ISPRS consists of eight technical commissions which hold meetings in various parts of the world. Each Commission is entrusted to an Ordinary Member organization for the four-year term between Congresses, such as the year 2010. Presently, Japan is in charge of the Technical Commission VIII (The president of this commission is Professor Haruhisa Shimoda of Tokai University, Tokyo). The Technical Commission VIII consists of 10 working groups covering almost all the fields of remote sensing applications. In August 2010, the Commission VIII symposium will be held in Kyoto.

For more information and registration: [ISPRS](#)

Pacific Platform for Disaster Risk Management 2010, Suva, 9-13 August 2010

The Pacific Platform for Disaster Risk Management (PPDRM) was formally endorsed by the SOPAC Governing Council at its annual meeting held in Tuvalu on 28 October 2009. The Platform has been established to allow opportunities for exchange and sharing of experiences within the Pacific Islands Region in relation to policy and operational aspects of disaster risk reduction and disaster management and the link to climate change adaptation. The Pacific Platform for DRM for 2010 will comprise the 16th Regional Disaster Managers Meeting (9-10 August) and the 5th Annual Meeting of the Pacific Disaster Risk Management Partnership Network (11-13

August). Those meetings will provide an opportunity for direct exchange and learning on matters of mutual concern to Pacific Island Countries and Territories and also the Caribbean, as well as provide a platform to share experiences of collaboration with various stakeholders on DRM.

For more information: [ISDR](#)

Regional Training Course on Incident Command System for Disaster Management, Phuket, 9-15 August 2010

All emergencies and crisis events are by definition and nature chaotic and highly dynamic, creating physical, emotional, and social disorder. During such moments of emergencies, Incident Command System (ICS) has proven to be an effective mechanism to manage incidents of disarray and confusion and to restore order in a chaotic environment. The ICS is a single standardized emergency management system designed to allow users to adopt an integrated organizational structure equal to the complexity and demands of any size or type of emergency incident. It functions to incorporate and fully utilize all assigned resources and expertise from multiple agencies, and can operate in a multijurisdictional environment. The ICS provides accurate information, strict accountability, planning, and cost effective operations and logistical support for any incident.

For more information and registration: [ADPC](#)

The 5th Regional Training Course GIS for Disaster Risk Management - Level I (GIS4DM-I), Bangkok, 16-27 August 2010

Rapid population growth and urbanization combined with extreme climatic events are causing a rapid increase in vulnerability of communities exposed to hazardous events. As a result, disasters are increasingly taking a heavy toll of life and property. Unplanned growth both in urban and non-urban areas calls for an adequate preparation to reduce the impact of disasters. There is a need for inclusion of disaster risk information in development planning and create awareness among the disaster management professionals. The main objective of the course is to impart knowledge and skills to disaster management practitioners on using GIS and spatial data for disaster risk assessment and management. Participants will not only learn how to carry out disaster risk assessment for different hazard types, but also how to use risk information for emergency planning and preparedness.

For more information and registration: [ADPC](#)

International Interdisciplinary CODATA Workshop on Risk Models and Applications, Berlin, 26-27 August 2010

This international interdisciplinary CODATA workshop on Risk Models and Applications will enable sharing of best practices as well as giving space for discussing methodological problems in risk modeling from the information systems point of view. All involved stakeholders are welcome in the debate. Decision makers, users, civil servants, technicians, and researchers from the private and public sector in the EU and other regions are invited to communicate their experiences and to discuss the necessary strategies for methodological, technical and managerial improvements.

For more information and registration: [RMA2010](#)

Benefiting from Earth Observation - Bridging the Data Gap for Adaptation to Climate Change in the Hindu Kush-Himalayan Region, Kathmandu, 4-6 October 2010

The main objective of the international symposium is to foster regional and international cooperation to promote the use and access to earth observation for improved scientific knowledge and understanding for adaptation to climate change in the Hindu Kush-Himalayan region. Besides inaugural and valedictory sessions by prominent speakers, there will be six session themes from scientists, researchers, development practitioners, policy makers and donors from the Hindu Kush-Himalayan region and beyond. The themes are:

- Remote sensing of cryosphere
- Spatial decision support systems for ecosystem management
- Space-based information for disaster management
- Land cover change and Reducing Emissions from Deforestation and Forest Degradation (REDD)

- Transboundary air pollution monitoring
- Spatial data infrastructure for climate change adaptation

For more information and registration: [UN-SPIDER Events](#)

Upcoming UN-SPIDER Outreach Activities

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

Upcoming UN-SPIDER events

4th United Nations International UN-SPIDER Bonn Workshop on Disaster Management and Space Technology: “The 4C – Challenge: Communication – Coordination – Cooperation – Capacity Development”, Bonn, 12-14 October 2010

The United Nations Office for Outer Space Affairs (UNOOSA), through its UN-SPIDER Programme (United Nations Platform for Space-based Information for Disaster Management and Emergency Response) together with the German Aerospace Center (DLR) are organizing the above mentioned workshop to promote the access and use of space-based technologies and solutions for disaster management and emergency response within relevant communities. Specifically, this Fourth International Workshop in Bonn will provide an opportunity to bring together decision-makers and experts from both the space technology and disaster management communities, international scientific organizations, knowledge transfer and educational institutions, as well as internationally active private companies, with the intention of sharing their best practices and to bring their knowledge, products and technologies for risk and disaster management, humanitarian aid and emergency response. Main topics of the fourth workshop will include:

- Space technology in support of risk and disaster management
- Satellite communications technology
- International support mechanisms and SpaceAid
- The UN-SPIDER network

For more information and registration: [UN-SPIDER Events](#)

Upcoming events supported by UN-SPIDER

8th International Conference of the African Association of Remote Sensing and the Environment, Addis Ababa, 25-29 October 2010

The four major scientific sub-themes of the conference are:

- Food and water security (mapping production zones, yield forecast, agricultural and pastoral systems, assessing (quality and quantity) of water resources in Africa, surface water body monitoring, seasonal hydrological characteristics assessment, flood forecasting).
- Energy resources (mapping, monitoring and management of energy resources, power infrastructure management, etc.).

- Disaster risk reduction (risk assessment for sustainable development, provision of geo-information on hazards and risks, disaster risk reduction in national policy, strengthening community level capacities to reduce disaster risk at the local level, disaster mitigation, vulnerability to compounded disasters, predicting vulnerability to urbanization and to climate change).
- Marine and coastal management (resources & sustainable development, marine ecosystem, coastal, marine, and oceanography resources management, assimilation, modeling and forecasting: towards ocean and coastal products and services in Africa, quantitative indicators of risk and resilience of coastal populations, impacts of coastal inundation on coastal ecosystems, monitoring and modeling coastal lagoons).

For more information and registration: [AARSE](#)

Gi4DM 2011 – GeoInformation for Disaster Management, Antalya, 3-8 May 2011

Geomatics technologies are able to support management and recovery in the aftermath of manmade and natural disasters. However, disaster management also poses big challenges in all aspects of the geo-information cycle, from data acquisition, processing, management and delivery. For the seventh time, the International Symposium on Geo-information for Disaster Management (Gi4DM) brings together researchers, developers, data providers and users from all over the world to discuss these challenges. The Gi4DM is coordinated by the ISPRS Ad hoc Committee on Risk and Disaster Management, Working Group 1 (Disaster) of the ISPRS Commission VIII (Remote Sensing and Policies) and Working Group 8 (3D Spatial Data Integration for Disaster Management and Environmental Monitoring) of the ISPRS Commission IV (Geodatabases and Digital Mapping). The indicative topics of interest will at least cover the fields of enterprise crisis management, public security and crisis management in city development, geo-information systems for disaster management, industrial crisis management, incident management systems, etc. The following themes are for reference:

- User Requirements
- Monitoring and processing
- Early Warning systems
- Early Impact systems
- Spatial Data Infrastructures

For more information and registration: [Gi4DM](#)

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.