



## MAY 2014 UPDATES

### UN-SPIDER at a glance

#### **New brochure on UN-SPIDER available**

UNOOSA published a new brochure on the UN-SPIDER programme. The 16 page document illustrates UN-SPIDER's field of work and activities and explains why space technology is so relevant for disaster risk reduction and emergency management. It gives various examples of space applications and presents UN-SPIDER's different areas of work including knowledge management, technical advisory support, and partnerships.

Read more: [Knowledge Portal](#)

#### **UN-SPIDER speaks at International Peace Institute Seminar**

On 13 and 14 May 2014, the International Peace Institute in Vienna organized the seminar "War and Peace in a Digital Age". UN-SPIDER's Senior Programme Coordinator, Luc St-Pierre, was invited to speak about UN-SPIDER during the session "Technology for Peace". In his presentation, Mr. St-Pierre presented the scope of work and the strategic goals of UN-SPIDER and highlighted the relevance of satellite technologies for humanitarian purposes, such as disaster risk reduction or emergency management. He urged for an improved coordination in the use of these technologies so that all countries can access and use them for an improved disaster risk management. A recording of the webcast is available online.

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#### **UNOOSA co-chairs 14th UNGIWG Plenary Meeting in New York**

The United Nations Geographic Information Working Group (UNGIWG) held its 14th Plenary Meeting in New York from 14 to 16 May 2014, co-chaired by UNOOSA and UNDSS (Department for Safety and Security). The event was organized back-to-back with the 34th Interagency Meeting on Outer Space Activities (UN-Space). Several UNGIWG member organizations presented their work during the

meeting. OOSA presented among other topics the work of the International Committee on Global Navigation Satellite Systems (ICG) Working Groups, especially the recommendations related to reference frames, timing and applications. Formed in 2000, UNGIWG is a network of UN professionals working in the fields of cartography and geospatial information management science to address issues of common concern.

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#### **UN-SPIDER participates in International Symposium of Integrated Disaster Risk Governance**

On 8 and 9 May 2014, UN-SPIDER participated in the International Symposium of Integrated Disaster Risk Governance in Beijing. The event was jointly organized by the United Nations International Strategy for Disaster Reduction (UNISDR), the China National Commission for Disaster Reduction (NCDR), the Ministry of Civil Affairs of China, and the Ministry of Education of China. The symposium is part of the on-going multi-level and multi-theme consultations for the inputs to the post-2015 Framework for Action. UN-SPIDER's expert Mr. Shirish Ravan chaired Session 2 of the symposium on "Government Role and Governance". He gave a presentation entitled "Is Space Technology Contributing Enough to DRR - Challenges with Respect to Implementation of HFA and HFA2". His presentation is available online.

Read more: [Knowledge Portal](#)

#### **Floods in Balkan: UN-SPIDER compiles list with satellite resources**

In mid-May 2014, Serbia, Bosnia and Herzegovina and Croatia experienced the worst flood in over 120 years. The extreme floods had been caused by heavy rainfall during three days, from 14 to 16 May 2014. In Bosnia, one third of the country was flooded affecting over one million people. In Serbia, tens of thousands of people had to be evacuated



from their homes. UN-SPIDER compiled a list with freely available satellite imagery products covering the floods, including maps produced via the International Charter: Space and Major Disasters and the European Copernicus Emergency Mapping Service.

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### **UN-SPIDER contributes to seminar of International Civil Defence Organisation**

UN-SPIDER participated in the International Seminar on Application of Communication Technology in Disaster Reduction and Prevention organized by the International Civil Defence Organisation (ICDO) in Suzhou, China from 26 to 29 May 2014. UN-SPIDER's expert Ms Longfei Liu gave a lecture on space-based information for disaster assessment and prevention. 19 participants from 16 ICDO member countries and more than 10 international experts attended the seminar. It mainly aimed to enhance the understanding and practical experience of communication technology to support disaster risk reduction. The seminar introduced theories and applications of modern communication through lectures, technical analysis, case studies and simulation exercises focusing on the application of mobile, satellite and network communication technologies in disaster prevention and disaster reduction.

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### **UN-SPIDER publishes article in Geospatial World magazine**

UN-SPIDER published an article about its programme and areas of work in the current issue of Geospatial World magazine. The article aims to raise awareness on the importance of space-based information for disaster risk management and emergency response and the relevance

of UN-SPIDER's activities in this context including capacity building, networking, knowledge management and technical advisory support.

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### **57th session of the Committee on the Peaceful Uses of Outer Space**

From 11 to 20 June 2014, Member States will convene at the Vienna International Centre in Austria for the 57th session of the Committee on the Peaceful Uses of Outer Space (COPUOS). The committee members will discuss issues related to the peaceful use and exploration of space including ways and means of maintaining space for peaceful purposes and the relevance of space for sustainable development, for water issues or for climate change. Other topics include the use of space technology in the United Nations system and the future role of the committee.

Read more: [UNOOSA](#)

### **UN-Space: 34th UN Interagency Meeting on Outer Space Activities**

On 13 and 14 May 2014, United Nations agencies convened in New York for the 34th Interagency Meeting on Outer Space Activities (UN-Space). The meeting focused on the role of space-related activities in a context of the global development agenda. On 14 May, an open informal session for Member States and other stakeholders was organized. The new director of the United Nations Office for Outer Space Affairs (UNOOSA), Ms Simonetta di Pippo, opened the session. UNOOSA, as an Executive Secretariat for both the International Committee on Global Navigation Satellite Systems (ICG) and the Providers' Forum, presented the latest developments in the ICG and its activities.

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## News from our Regional Support Offices

### **ROSA: Launch of European Space Education Resource Office**

Romania joined nine other countries in the Network of European Space Education Resource Offices (ESERO), as the Romanian Space Agency (ROSA) announced. ROSA is one of UN-SPIDER's Regional Support Offices. The official launch event took place during the 'Romanian Space Week,' an annual scientific conference organised by ROSA between 12 and 16 May 2014. ESERO is a project established by the

European Space Agency (ESA) in collaboration with national space agencies to promote space technology to younger generations. ESERO, ROSA and ESA will support primary and secondary schools in teaching/learning STEM subjects (Science, Technology, Engineering and Mathematics) to motivate younger generations to pursue STEM-related careers.

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### **IGAC: First forum for the Colombian Spatial Data Infrastructure**

The first forum for the Colombian Spatial Data Infrastructure (ICDE) called “Trends in Geospatial Information Management” was held on 29 and 30 May 2014, in Bogotá, Colombia, on the premises of AR Hotel Salitre. UN-SPIDER’s Regional Support Office in Colombia, the Agustin Codazzi Geographic Institute (IGAC), organized the event in its role as the coordinator of ICDE, which is a group of the Colombian Space Commission (CEC). This event is aimed at managers, coordinators, technologists and professionals from different disciplines who are involved in management activities regarding geospatial information as a planning tool in the territories of Colombia.

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### **IGAC: Training Course on interpreting SAR Images for Land Cover Monitoring**

The Research and Investigation Centre of Remote Sensing and Geographic Applications (CIAF), which is part of UN-SPIDER’s Colombian Regional Support Office in Colombia, IGAC, together with the support of the brand company Telespazio Geos (Telespazio) developed a training course on the interpretation of SAR images for application monitoring systems as a strategy to drive the research process and to update the knowledge database of active sensors. The course will take place from 10 to 13 June 2014. The aim of the course will be to train participants in the processing of SAR images, particularly those from Cosmo SkyMed constellation of satellites, as a general basis for the use of SAR radar technology and its various applications.

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### **SUPARCO: First remote sensing lab for crops inaugurated**

On 20 May 2014, Pakistan’s Agriculture Secretary, Ahmed Bakhsh Narejo, inaugurated the country’s first satellite remote sensing laboratory specifically dedicated to monitoring crops in the province Sindh. The remote sensing lab is a collaboration between Pakistan’s Space and Upper Atmosphere Research Commission (SUPARCO) - one of UN-SPIDER’s Regional Support Offices - and the Food and Agriculture Organization (FAO). It will serve to gather, monitor and forecast crop data. The experts will monitor crop conditions, estimate yields and aid planners and policy makers with timely measurements in order to maintain crop quality.

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### **SUPARCO: Emergency map for Afghanistan landslide**

UN-SPIDER’s Regional Support Office in Pakistan, SUPARCO, supported emergency response efforts following the massive landslide in Afghanistan on 2 May 2014. The experts prepared impact and damage maps for Ab Berek in the Province Badakhshan. The maps depict an analysis based on SPOT 5 satellite imagery from 17 January 2014 received at SUPARCO’s Satellite Ground Station in Islamabad and Worldview 2 imagery acquired on 2 May 2014 and provided by the US Geological Survey. The maps were prepared in collaboration with the United Nations Food and Agriculture Organization (FAO).

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### **ICIMOD: Glacier Status Change over 30 years based on Landsat Data**

UN-SPIDER’s Regional Support Office in Nepal, ICIMOD (International Centre for Integrated Mountain Development), released a publication that provides a comprehensive analysis of the status of glaciers in Nepal for the last 30 years based on Landsat satellite data. The aim of the report is to raise awareness for the impact of climate change on glaciers. The analysis is based on Landsat satellite processed images and Shuttle Radar Topography Mission (SRTM) based digital elevation models. The report concludes that there are 3,808 glaciers in the area, with the number increasing due to defragmentation. However, the total glacier area and ice reserves decreased by 24 % between 1977 and 2010.

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### **ICIMOD: Training youth in Earth Observation in Bangladesh**

UN-SPIDER’s Regional Support Office in Nepal, the International Centre for Integrated Mountain Development (ICIMOD), and the Bangladesh Centre for Advanced Studies conducted a SERVIR-Himalaya training event in Earth Observation called “Empowering youth with Earth Observation for Climate Actions”. Forty young people participated in the training that took place from 5 to 8 May 2014 in Dhaka, Bangladesh at the Local Government Engineering Department (LGED). The main goal of the event was to educate young people in Bangladesh on climate change and the possibilities that Earth Observation and related technologies offer in monitoring and fighting the impacts of climate change.

Read more: [Knowledge Portal](#)





### **EMERCOM: International Charter activated due to flood events in Serbia**

The International Charter: Space and Major Disasters was activated on 21 May in order to provide satellite-based maps for the flood events in Serbia. The activation was requested by the Russian Space Agency ROSCOSMOS and by UN-SPIDER's Regional Support Office in Russia - the Russian Agency for Support and Coordination of Russian Participation in International Humanitarian Operations (EMERCOM). Heavy rain fall during three days, from 14 to 16 May 2014, had caused the worst flooding event in the area in over a century. Authorities reported 17 people were killed and over 25,000 were evacuated. UN-SPIDER compiled a list of freely available satellite resources.

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### **IGAC: Technical Cooperation meeting on Disaster Monitoring Constellation**

The Research and Investigation Centre of Remote Sensing and Geographic Applications (CIAF) of UN-SPIDER's Colombian Regional Support Office IGAC, met with the UK-based private company Surrey Satellite Technology on 30 May 2014. The aim of the meeting was to discuss technical issues related to the Disaster Monitoring Constellation (DMC) and different applications that can be developed in the field of risk management and territorial organization. DMC is the first Earth observation constellation of low cost small satellites providing daily images for applications including global disaster monitoring. The constellation provides both commercial imaging services and free satellite imagery for humanitarian use in the event of major international disasters.

Read more: [Knowledge Portal](#)

## News from our Community

### **Kazakhstan: First Earth Observation satellite in orbit**

On 29 April 2014, Kazakhstan's first Earth Observation satellite, KazEOSat-1, was launched with the third Vega launcher from the Guiana Space Center. In a press release, launch services operator Arianespace stated: "KazEOSat-1 (DZZ-HR) is a high-resolution optical observation satellite that weighed 830 kg at launch. It will provide Kazakhstan with a wide range of civilian applications, including monitoring of natural and agricultural resources, mapping data and support for search & rescue operations during natural disasters."

Read more: [Knowledge Portal](#)

### **India: Second regional navigation satellite in orbit**

On 23 April, the Indian Space Research Organization (ISRO) reported the successful orbital arrival of the second inclined geosynchronous orbiting (IGSO) satellite RNSS-1B. This satellite is part of the Indian Regional Navigation Satellite System (IRNSS), which will eventually include seven satellite constellations. IRNSS-1B was part of a payload launched on board India's Polar Satellite Launch Vehicle (PSLV) from the Satish Dhawan Space Center on 4 April 2014. The first satellite of this constellation, IRNSS-1A, was launched in July 2013. With two more satellites proposed to be launched later this year, the system will be operational after the instillation of four satellites.

Read more: [Knowledge Portal](#)

### **UNISDR and Esri partner up to map disaster risk**

The United Nations Office for Disaster Risk Reduction (UNISDR) will collaborate with the Geographic Information Systems technology provider Esri to make local communities more resilient. Esri and UNISDR announced their cooperation at the high-level meeting "Abu Dhabi Ascent". The company will supply the UN with data in order to make communities aware of the possibilities new technologies offer in disaster risk management. The new partnership will support efforts of the 1,800 cities which are already part of UNISDR's "Making Cities Resilient" Campaign to improve land use and urban planning with regards to disaster risk reduction.

Read more: [Knowledge Portal](#)

### **CNES and NASA to collaborate on global water and ocean surface survey**

The French Space Agency CNES and the US Space Agency NASA have come together in an agreement to conduct the first ever detailed global ocean mapping and surface water survey. The two agencies will be working together in all aspects of the life cycle of a water and ocean surface satellite mission from the design of the spacecraft, its launch and operation during the mission and decommissioning. CNES and NASA initially began joint studies for the mission in 2009 and the preliminary design phase is scheduled to be





completed by 2016, with a launch planned for 2020. CNES and NASA have a history of collaboration on ocean surface monitoring beginning in the 1980s.

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### **China: Fengyun III satellite is operational**

The China Meteorological Administration (CMA) announced that the country's third Fengyun-III satellite became operational on 5 May. The satellite was launched on 23 September last year. The third Fengyun-III satellite is a polar orbiting meteorological satellite, which together with the second Fengyun-III satellite will build a network of constant 3D, multiple spectrum and remote-sensing observation of the Earth. The satellite data will be used for global environmental surveillance, disaster risk reduction and climate change observations.

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### **United States: Extensive drought captured by satellites**

In early May 2014, the United States National Drought Center, in cooperation with the United States Department of Agriculture, the National Oceanic and Atmospheric Administration (NOAA), and the University of Nebraska-Lincoln, developed a map which shows the extended area affected by high temperatures and subsequent droughts in the United States. The map is based on satellite and on the ground information regarding climate, sea and water conditions from all over the country. The results are based on NASA measurements and models of drought monitoring and show that nearly 15 per cent of the country was suffering of extreme to exceptional drought in the beginning of May 2014.

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### **Air quality monitoring satellite Sentinel-5P one step closer to launch**

On 27 May 2014, the EU Copernicus programme's Sentinel-5 Precursor satellite passed an important milestone on its mission to monitor global air quality and provide data on trace gases and aerosols. The satellite platform built in the UK by Airbus Space and Defense was reported as ready for installation of the ultraviolet to shortwave infrared imaging spectrometer. The Tropomi instrument was jointly developed by the Netherlands Space Office, Dutch Royal Meteorological Institute and other Dutch institutes. Sentinel-5P is scheduled for launch in 2016 and will join the Sentinel satellite constellation designed for Europe's Copernicus initiative to be the world's largest environmental observation system in operation.

Read more: [Knowledge Portal](#)

### **Indonesia: GIS used for real-time fire response information sharing**

Firefighters and field officers in Bekasi, Indonesia, can now collect first hand data and share real-time information by using a newly deployed GIS data capture application. This application enhances the awareness of firemen of the situation and facilitates the department heads' decision making on deployment. It also allows users to edit, measure, query and display spatial data.

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### **Philippines launch Yolanda Rehabilitation Scientific Information Center**

On 26 May 2014, the Yolanda Rehabilitation Scientific Information Center (YoRInfoCenter) was launched by the Philippine Department of Science and Technology (DOST) and Department of Environment and Natural Resources (DENR). The information center will be providing scientific data to the national agencies and humanitarian organizations in the Philippines to aid in the rehabilitation of the Eastern region of Visayas that was ravaged by typhoon Yolanda, also known as typhoon Haiyan, in November 2013. In partnership with DOST, the University of the Philippines' DREAM Project and DENR's Mines and Geosciences Bureau (DENR\_MGB) the YoRInfoCenter will provide all available data including satellite images and high resolution hazard maps to support systematic rehabilitation efforts.

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### **New study: Predicting Earthquakes with GNSS data**

A new study conducted by experts of the Japan Earthquake Science Exploration Agency (JESEA) shows that Global Navigation Satellite System (GNSS) signals can effectively be used as a means of earthquake prediction using the 2011 Great East Japan Earthquake as a case study. Although it has been previously claimed in the academic community that the prediction of forthcoming seismic events was impossible with existing measuring techniques, this study succeeded in detecting several pre-signals six months, five months, one month and three days before the Great Earthquake through GNSS data.

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## Upcoming events

### **5-6 June 2014, Bonn, Germany: United Nations/Germany Expert Meeting on the Use of Space-based Information for flood and drought risk reduction**

On 5 and 6 June 2014, the UN-SPIDER Bonn Office is organizing its United Nations/Germany Expert Meeting on the Use of Space-based Information for Flood and Drought Risk Reduction at the UN Campus in Bonn, Germany. This year's United Nations/Germany Expert Meeting will focus on the use of space technologies to improve disaster-risk reduction. Floods and droughts will serve as examples for hazard types that have recently affected countries around the globe. Around 60 experts on disaster risk management for floods or droughts, as well as satellite technology specialists and representatives of the academia and the private sector will come together for this event.

Read more: [Knowledge Portal](#)

### **22 June 2014, Bangkok, Thailand: Pre-conference event by UN-SPIDER and GFDRR at 6th AMCDRR**

The 6th Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) will take place from 22 to 26 June 2014 in Bangkok, Thailand. UN-SPIDER invites participants of AMCDRR to attend a pre-conference event organised by UN-SPIDER and the World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR) on 22 June 2014 (09:00-12:30). The event title is "Investing in Geospatial and space-based information to support DRR & CCA investment" and will contribute to subtheme 2 of AMCDRR: Improving Public Investments for Disaster and Climate Risk Management to Protect and Sustain Development Gains.

Read more: [Knowledge Portal](#)

### **Apply now! 18-23 September 2014, Beijing, China: United Nations International Conference on Space-based Technologies for Disaster Management "Multi-hazard Disaster Risk Assessment"**

The "United Nations International Conference on Space-based Technologies for Disaster Management - "Multi-hazard Disaster Risk Assessment" taking place from 15 to 17 September 2014 in Beijing, is now open for applications. The objective of this conference is to promote the role of space-based and geospatial information in a multi-hazard disaster risk assessment. This conference is the fourth of its kind since 2011 and aims to offer a forum for disaster management communities and experts to strengthen their

capabilities in using space-based information to identify, assess, monitor and respond to disaster risks and integrate space technology into long-term disaster risk management efforts. UN-SPIDER is organizing this conference jointly with the Ministry of Civil Affairs of the People's Republic of China. It will bring together 120 disaster managers, policy makers, providers of space technology solutions/tools/applications from governments, and representatives of academia, research institutions, NGOs and the corporate sector. The final deadline for application is **29 June 2014**. Please note that the submission of an online application is mandatory for all participants.

Learn more and apply online: [Knowledge Portal](#)

