UNITED NATIONS
Office for Outer Space Affairs

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NOVEMBER 2013 UPDATES

UN-SPIDER at a glance

Mozambique: UN-SPIDER/UNDP organize Workshop on Disaster Mapping

From 4 to 8 November 2013, eight organizations in Mozambique were trained on "Disaster mapping using space technology" in a workshop jointly organized by UN-SPIDER and UNDP-Mozambique. The participants, members of organizations that are involved in data management of disasters, were instructed in topics such as the use of remote sensing techniques for flood forecasting and flood detection, drought monitoring, rapid mapping of disasters and GIS techniques to evaluate the impact of disasters on the population. The participants were actively involved in the processing of digital elevation models, rainfall data, satellite imagery and geographic data on infrastructure, utilities and population. The training took place at a computer laboratory of the Eduardo Mondlane University, one year after the mission team of a UN-SPIDER Technical Advisory Mission in 2012 had evaluated the current and potential use of space-based information for disaster management in Mozambique.

Learn more: Knowledge Portal or contact coen.bussink@unoosa.org

Regional Workshop on Integral Disaster Risk Management in Central America

From 26 to 28 November 2013, UN-SPIDER participated in the Regional Consultation and Awareness Raising Workshop on Integral Disaster Risk Management in Central America which took place in Panama City, Panama. The workshop was conducted under the umbrella of the Central American Regional Policy on Integral Disaster Risk Management. The event brought together more than 120 participants to assess recent advances, challenges and needs as a way to identify how to proceed in the region taking into consideration issues such as climate change, environmental degradation, population growth and migration to urban centres. The workshop was also used to discuss potential strategies and suggestions to be submitted to UNISDR regarding the HFA-

2 consultation process initiated by UNISDR earlier this year. Additional discussions targeted ways to address the needs to strengthen the capacities of national disaster reduction systems in all countries of the region, additional public and private funding targeting IDRM, management of information and communications, resiliency in case of droughts, and knowledge management.

Learn more: Knowledge Portal or contact juan-carlos.villagran@unoosa.org

Philippines: UN-SPIDER facilitates support for Typhoon Haiyan response

UN-SPIDER activated its network in order to support responders to Super Typhoon Haiyan (locally named Yolanda) in the Philippines with satellite-based information. Haiyan/Yolanda was one of the most powerful typhoons ever recorded. It hit the Philippines on 7 and 8 November 2013 and then turned towards Vietnam. The storm made landfall in the Philippines on 8 November 2013, causing extensive wind and flood damage to the region with gusts reaching 379 km/h, waves high 15 m and rain levels up to 400 mm. Among the worst hit areas are Samar, Leyte, Negros Occidental, Northern Cebu, Masbate und Iloilo. 90 Percent of the builings in the city of Tacloban were destroyed. International relief organisations reported approximately 1,200 people dead. Upon the request of UN-SPIDER, the National Remote Sensing Centre (NRSC) of the Indian Space Research Organisation (ISRO) aquired RISAT-1 und ResourceSat-2 satellite data over the Philippines. It was made available to UN-SPIDER's Regional Support Office in Indonesia (LAPAN) and other partners. Several providers and organisations have captured the storm and its effects using space-based information. UN-SPIDER has compiled these links on the Knowledge Portal.

Learn more: Knowledge Portal or contact shirish.ravan@unoosa.org

UN-SPIDER participates in RESAP and Asia-Pacific Year Meetings

UN-SPIDER took part in the 17th Session of the Intergovernmental Consultative Committee (ICC) on the Regional Space Applications Programme for Sustainable Development (RESAP) and the High Level Decision Makers Meeting (HLDM) on Implementing the Asia-Pacific Year, which both took place in Bangkok, Thailand on 26 to 27 and 28 to 29 November 2013, respectively. The participants were briefed on the work progress of RESAP during 2012-2013 and its work plan for 2014-2015. The meeting also discussed how to implement the regional cooperative mechanism for disaster monitoring and early warning called 'Drought Mechanism'. The HLDM meeting discussed implementation of the Asia-Pacific Plan of Action for Applications of Space Technology and Geographic Information Systems for Disaster Risk Reduction and Sustainable Development 2012-2017.

Learn more: Knowledge Portal or contact shirish.ravan@unoosa.org

UN-SPIDER participates in 18th CSSTEAP Governing Board meeting

UN-SPIDER attended the 18th Governing Board meeting of CSSTEAP in Bangalore, India, on 21 November 2013. CSSTEAP is the Centre for Space Science and Technology Education for Asia and the Pacific affiliated to the United Nations. The governing board was informed that CSSTEAP has trained 1,260 students from 35 countries in Asia and the Pacific and 29 students from outside Asia-Pacific region. A total of 115 students have been awarded Masters in Technology degrees in remote sensing and GIS. The meeting also approved the performance report and audit report of CSSTEAP for 2013, as well as its programme of work and budget for 2014.

Learn more: Knowledge Portal or contact shirish.ravan@unoosa.org

Iraq: UN-SPIDER network support flood response with satellite imagery

On 29 November 2013, the Iraqi government requested UN-SPIDER to provide satellite images to monitor and manage floods in Baghdad city. UN-SPIDER arranged to provide high resolution satellite images from China National Space Administration (CNSA). The Programme's Regional Support Office in Pakistan (SUPARCO) carried out rapid mapping using SPOT images archive prior to the flood and post-flood images provided by the CNSA. The products were made available to the Disaster Management Information Centre, Remote Sensing Research Centre in Iraq.

Learn more: Knowledge Portal or contact shirish.ravan@unoosa.org

News from our Regional Support Offices

ICIMOD: Grants Programme for utilizing geospatial Tools and Services

UN-SPIDER's Regional Support Office located in Nepal, the International Centre for Integrated Mountain Development (ICIMOD), has announced a Request for Proposals for the SERVIR-Himalaya Small Grants Program. The goal of the programme is to help growing the network of organizations, universities and institutions within the Hindu Kush-Himalaya region that utilize geospatial tools and services to improve decision-making related to sustainable mountain development with a special focus on climate adaptation, vulnerability or mitigation. However, only organizations within the SERVIR-Himalayas member countries are eligible to apply. Deadline for submitting the Concept Paper is **15 December 2013**.

Read more: Knowledge Portal

Romania: Towards a Satellite-based Operational Emergency Service

UN-SPIDER's Regional Support Office in Romania is currently implementing an updated version of the National Emergency Service in the framework of the "Platform for Geoinformation in Support of Disaster Management (GEODIM)" project. GEODIM acknowledges, welcomes and uses the emergency response services provided by the International Charter "Space and Major Disasters", Copernicus EMS and UN-SPIDER, but it complements them under a unique Romanian emergency response downstream service that offers value-added and validated products for each disaster management phase. The project will establish an advanced data center containing a spatial data infrastructure, customized algorithms, and value added-products together with their map templates.

Read more: Knowledge Portal

Ukraine RSO participates in UNOOSA Workshop on Space Technology Applications

Representatives of the UN-SPIDER Regional Support Office in Ukraine (SRI NASU-SSAU) took part in the United Nations/ Belarus Workshop on Space Technology Applications for Socio-Economic Benefits. This workshop was jointly organized by UN Office for Outer Space Affairs (UNOOSA) and the Government of Belarus and took place from 11 to 15 November 2013, in Minsk, Belarus. The workshop was hosted by the Belarusian State University on behalf of the Government of Belarus, and it was co-sponsored by Secure World Foundation. Ukrainian experts delivered presentations on "Flood Monitoring Activities in the UN-SPIDER RSO-Ukraine" (Prof. N. Kussul, Space Research Institute National Academy of Sciences of Ukraine and State Space Agency of Ukraine) and "Satellite Agricultural Monitoring in Ukraine" (Prof. A. Shelestov, National University of Life and Environmental Sciences of Ukraine).

Read more: Knowledge Portal

Earth Observation for Food and Agriculture: Ukraine RSO takes part in Workshop

Representatives of the UN-SPIDER Regional Support Office in Ukraine, hosted by SRI NASU-SSAU, took part in the International Meeting on Food Security, Earth Observations and Agricultural Monitoring. This workshop was held in Brussels on 21 November 2013 at the premise of the Secure World Foundation and was organized by Secure World Foundation, the European Commission, and the Group of Earth Observations Secretariat. The purpose of this meeting was to assess global observational facilities, models, and derived services needed to meet the demand in developed and developing countries regarding agricultural production. One of the Ukrainian experts from the Regional Support Office, Prof. Nataliia Kussul, delivered a presentation on national agricultural monitoring activities and took part in the discussion on the GEO-GLAM system implementation with other experts from Europe and other countries.

Read more: Knowledge Portal

News from our Community

MEA: multi-product data exploitation system with global data coverage since 1978

The Multi-sensor Evolution Analysis (MEA) platform supports Earth Observation communities in loading, visualizing and analysing multi-dimensional datasets. Implemented in the framework of the European Space Agency ASIM project, MEA has been recently adopted in the European Commission Earth Server initiative as a graphic user interface of the Climate Data Service. MEA is a multi-product satellite data management and exploitation system that allows its users to access to a wide set of satellite-based data (e.g. vegetation indexes, soil moisture, precipitation) and display the temporal evolution of these fields to identify long term trends as well as short term / abrupt changes. The global coverage as well as the fast response to data access, and the possibility to visualize many fields simultaneously, make of MEA a powerful tool to monitor the effect of long term trends (e.g. drought) and early identify the effect that climate change is having on areas more prone to natural hazards.

Read more: Knowledge Portal

Official launch of AfriGEOSS at AfricGIS2013/GSDI14

AfriGEOSS was officially launched on 5 November 2013 during the AfricaGIS2013/GSDI14, held in Addis Abeba,

Ethiopia. AfriGEOSS is an initiative by the intergovernmental Group on Earth Observations (GEO) aimed at building infrastructural capacities in Africa to benefit from geospatial data for sustainable development. A key objective of AfriGEOSS is to strengthen the "infrastructural" capabilities of Africa, at continental, regional, and national scales. There is a crucial need for enhanced capabilities and networks, to ensure functionality across the continent for collecting Earth observation data, generating products and services and sustaining this value chain. In order to promote data democracy and data sharing, key African actors at the continental scale are being asked to shape a coordinated satellite data acquisition strategy for Africa, together with the network of data receiving stations.

Read more: Knowledge Portal

Somalia affected by unusual tropical cyclone

Somalia experienced one of the deadliest tropical cyclones in its history when from 10 to 11 November 2013, Tropical Cyclone 3A moved over Puntland causing flash floods. Tropical Cyclone 3A is just the fifth storm to strike Somalia since 1966, fact that states how rare are cyclones in this country. According to news reports, the cyclone left more than 100 dead and destroyed hundreds of homes as well as thousands of livestock. It was estimated that Tropical

Cyclone 3A would dump 100-200 millimeters (4-8 inches) of rain, with potentially higher amounts in some regions, which results impressive given that the average annual rainfall in Puntland ranges from less than 100 mm (4 inches) to 200 mm (8 inches).

Read more: Knowledge Portal

New interactive online map shows forest change during 2000-2012

A new high-resolution global map has been created as an interactive online tool that shows global forest loss and gain from 2000 to 2012. Based on 650,000 satellite images by Landsat 7, the map shows a number of key findings on forest change during the period, like an increasing in tropical forest loss by about 2,100 sq km per year. Researchers expect to use the map to assess the effectiveness of forest management programmes and to monitor the impacts of deforestation - including biodiversity threats, carbon storage and climate change. The map is publicly available and zooms in to a remarkably high level of local detail - a resolution of 30m.

Read more: Knowledge Portal

South Korea develops new GIS-based weather model to forecast disasters

Recognizing how important it is to find innovative solutions to save lives and reduce economic losses, researchers from the High Impact Weather Research Centre (HIWRC) at South Korea's Gangneung-Wonju National University have developed a new device which could soon predict disasters before they even hit. The information given to the local authorities by this new device could save numerous lives and reduce economic losses brought about by natural disasters. The device is able to forecast weather up to twelve hours before impact by using GIS technology and a weather model known as the Korea Local Analysis and Prediction System.

Read more: Knowledge Portal

International Charter activated four times in November 2013

The International Charter "Space and Major Disasters" was activated four times in November to provide space-based information for disaster response. The mechanism was triggered for volcanic activities in Indonesia, for storm Haiyan in the Philippines and in Vietnam, and for the floods in Oman. For most of these activations the images or image products are already available online.

Read more: International Charter

China: Successful launch of Yaogan XIX satellite

On 20 November 2013 China successfully launched the Yaogan XIX, a remote-sensing satellite. This launch marks the 184th mission for the nation's Long March rocket family. Yaogan XIX was sent into scheduled orbit on the back of a Long March 4C carrier rocket from the Taiyuan Satellite Launch Center in Taiyuan, capital of north China's Shanxi Province. According to the Taiyuan Satellite Launch Center, the satellite will be used to aid in preventing and reducing natural disasters, conduct scientific experiments, carry out land surveys and monitor crop yields.

Read more: Knowledge Portal

Upcoming events

9-11 December 2013, Hanoi, Vietnam: 9th International Conference on Geoinformation for Disaster Management (Gi4DM)

Geo-information for Disaster management (Gi4DM) is an annual conference devoted to the use and the application of geo-information technology in disaster management. Gi4DM 2013 will take place from 9 to 11 December 2013 in Hanoi, Vietnam. The fundamental goal of the conference is to provide a forum where disaster/disaster-risk managers, stakeholders, researchers, data providers and system developers can discuss challenges, share experience, discuss new ideas, demonstrate technology and analyse future research toward better support of risk and disaster management activities.

Read more: Gi4DM