



MARCH 2014 UPDATES

UN-SPIDER at a glance

UN-SPIDER and APSCO: Further cooperation in 2014

UN-SPIDER visited the office of the Asia-Pacific Space Cooperation Organization (APSCO) in Beijing, China on 13 March 2014 to discuss further joint activities in 2014. APSCO is an inter-governmental organization established to promote and to strengthen the collaboration on space programmes and technologies among its Asian Member States. APSCO and UN-SPIDER have been cooperating closely since UN-SPIDER opened its office in Beijing in 2010. In 2014, APSCO will support the 4th annual United Nations International Conference on Space based technologies for Disaster Management in Beijing. The organization will also participate in several other activities planned by UN-SPIDER this year such as capacity building activities in Beijing and a Technical Advisory Mission to Mongolia.

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Call for Experts: UN-SPIDER Technical Advisory Mission to Bhutan

UN-SPIDER invites applications from experts of relevant institutions, organizations, companies or universities interested in joining the expert team of the upcoming Technical Advisory Mission (TAM) to Bhutan. The mission will be conducted at the invitation of the Royal Government of Bhutan from 2 to 6 June 2014. The TAM aims to assess the current and potential use of space-based information in all the aspects of disaster management in Bhutan and to strengthen disaster risk management in the country by providing better access to space-based information for disaster risk reduction as well as for emergency response. Interested experts are kindly asked to send a short background, résumé or CV and a short indication of the current, planned or possible type of collaboration with Bhutan to Ms Juanjuan Han (juanjuan.han@unoosa.org) with copy to Mr Shirish Ravan (shirish.ravan@unoosa.org) before **5 April 2014**.

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Call for Experts: UN-SPIDER Technical Advisory Mission to Zambia

At the invitation of the Government of Zambia, UN-SPIDER will conduct a Technical Advisory Mission (TAM) to Zambia from 26 to 30 May 2014. UN-SPIDER is currently seeking four to six international experts from the Space, disaster management and disaster risk management communities who would like to volunteer for participating in this TAM. Preference will be given to experts who are either already collaborating or who are willing to collaborate with the authorities or relevant institutions in Zambia. Further selection criteria include experience in the country and affiliation with a regional or international entity working in Zambia or the region. If you are interested in joining this mission, please provide a short background, résumé or CV, an indication of your current, planned or possible type of collaboration with Zambia, an indication of your possible funding source as well as an indication of cost assumption (ticket/daily expenses) to lorant.czaran@unoosa.org. The deadline for application is **14 April 2014**.

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El Salvador: UN-SPIDER and partners conduct Expert Meeting on Early Warning Systems

On 31 March and 1 April 2014, UN-SPIDER, the Central American Coordination Centre for Natural Disaster Prevention (CEPREDENAC) and Secure World Foundation joined forces to conduct an expert meeting focusing on the use of space-based information in national early warning systems, with a particular focus on droughts. The meeting, which took place in San Salvador, El Salvador, brought together more than 30 experts from North, Central and South America, as well as from the Dominican Republic. Experts used the opportunity to identify strategies to institutionalize early warning systems operated at the national level, to identify strategies to incorporate the use of space-based applications in such systems, as well as to incorporate inputs from local



communities exposed to large events such as hurricanes, floods, and volcanic eruptions. At the request of the National Civil Defense Directorate of El Salvador, UN-SPIDER will also carry out a Technical Advisory Mission in the country in the first days of April.

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UN-SPIDER Technical Advisory Mission to Kenya successfully concluded

From 3 to 7 March 2014, UN-SPIDER carried out a Technical Advisory Mission to Kenya in order to assess the current state and the potential of using space-based information for Disaster risk management and emergency response in

the country. The Mission was conducted upon the invitation of the Government of Kenya through the National Disaster Operations Centre and National Space Secretariat of Kenya. The team of nine international experts visited 19 national and regional institutions, NGOs and United Nations agencies. The Mission assessed the role each organization plays in disaster management and the way they use space-based information. In addition, UN-SPIDER's Regional Support Office RCMRD carried out a one-day Workshop with 50 participants from various agencies and organizations. The workshop offered a platform to discuss the use of space technologies in disaster management.

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News from our Regional Support Offices

ASAL: Remote Sensing for locust infestation in Algeria and Mauritania

Within the framework of its collaboration with the Algerian Ministry of Agriculture and Rural Development, the Algerian Space Agency (ASAL) - host to one of UN-SPIDER's Regional Support Offices - has mapped potential locust reproduction zones in the South of Algeria and the North-East of Mauritania. Thirteen satellite images with medium resolution (22 m), supplied by the British Disaster Monitoring Constellation UK-DMC-2, were processed for the maps. These images covered a total area of 935 671 square km in the South of Algeria (Wilayas of Illizi, Tamanrasset, Adrar and Tindouf) and the North-East of Mauritania. The medium resolution images allowed with good accuracy the identification of zones showing high chlorophyll levels. High chlorophyll levels indicate favorable conditions for the locust to reproduce, thus representing a high risk for the insects' infestation to increase.

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IGAC: Development of a Spectral Library

The Geographic Institute Agustín Codazzi (IGAC), UN-SPIDER's Regional Support Office in Colombia, has been working on a spectral library project. It includes research on spectrometry applied to the analysis of land cover (water bodies, soil and minerals, vegetation and island areas), in order to build spectral libraries for each type of land cover. The project will result in a large database of spectral signatures, which can be used in digital processing of remote sensing images. The project is carried out by IGAC's research centre CIAF.

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CONAE: Strengthening technical capacities of EIGEO in the Dominican Republic

The National Argentinean Space Commission CONAE, UN-SPIDER's Regional Support Office in Argentina, is providing a two-phase technical training course to the inter-institutional working group EIGEO in the Dominican Republic in order to strengthen the capacity of the EIGEO staff on the use of satellite imagery for disaster response. The first phase of the training course took place from 10 to 14 March 2014 with an introduction to optical image processing and its application in emergencies. The second phase is scheduled from 31 March to 3 April 2014 with an introductory course to radar imagery processing and its application in emergencies. This training course is a follow up activity to a previous course held by UN-SPIDER and its Regional Support Offices CATHALAC and IGAC in May 2013.

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RCMRD: East African Global Land Cover Workshop

The Regional Centre for Mapping of Resources for Development (RCMRD), UN-SPIDER's Regional Support Office in Kenya, hosted the East African Global land cover Workshop from 10 to 14 March 2014. The workshop was organized in partnership with the Interior International Technical Assistance Program of the U.S. Department of the Interior and the U.S. Geological Survey. The aim of the Workshop was to enable the participants to use and update information on land cover through satellite imagery.

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CATHALAC: Training course on Mapping and Application of GPS

On 23 February 2014, CATHALAC, UN-SPIDER's Regional Support Office in Panama, finished its training course "Mapping and Application of GPS" which offered professionals in Latin America and the Caribbean a deeper understanding of the use of Global Positioning Systems (GPS) for mapping. The course allowed the participants to learn and strengthen

their basic understanding of cartography, so that it could be easily applied in their daily activities with the use of GPS. Participants had the opportunity to handle GPS navigation systems, take coordinates such as "waypoint", "Route" and "track" parameters, and learned how to use GPS tools for smartphones as well as how to export GPS data to a GIS format using an open source application.

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News from our Community

Open data: UK Environment Agency releases flood data to public

The UK has been heavily affected by floods for months with peaks in February affecting thousands of people and companies. This has led to a decision within the UK Environment Agency to release flood-related data in order to improve early warning and better decision-making for individuals and businesses. The datasets were released as "free data" for commercial re-use at the urging of Cabinet Office minister Francis Maude. Previously, the Agency had already released data to the "flood hack" project aimed at developing flood-relief apps. Overall, UK government agencies are moving towards a more open data policy.

Read more: [Knowledge Portal](#)

Qatar plans digital archive for Satellite and GIS data

The Remote Sensing and Geographic Information System (GIS) Unit at the Environmental Studies Centre of the University of Qatar has started preparations to launch a digital archive for its collection of satellite imagery, aerial photography and GIS data. The catalogue will include Qatar and Gulf marine communities, coastal waters, marine physical parameters and digital maps, which will be available to the Centre's staff, the Centre's partners and students, who work with geospatial data.

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International Charter activated for missing Malaysia Airlines Flight MH370

The International Charter: Space and Major Disasters was activated on 11 March to provide satellite images and image products in search of the missing Malaysia Airlines Flight MH370. The international mechanism was triggered by the China Meteorological Administration, which also served as the project manager for the activation. Malaysia Airlines Flight MH370 disappeared from the radar over the

South China Sea on 7 March 2014. The jet was carrying 239 people (12 crew and 227 passengers). Additionally to the activation of the Charter, the international community has initiated crowdsourcing efforts to find hints on the whereabouts of the plane on satellite imagery. On 25 March the Malaysian government officially confirmed that the Flight MH730 crashed in the Indian Ocean.

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Philippines: Sensors for Volcano and Earthquake Early Warning

The Philippine Institute of Volcanology and Seismology (PHIVOLCS) has developed a wide-area disaster monitoring system to detect volcanic and seismic activity that uses seismic intensity meters and tide indicators. The system gathers sensor data from the strong-motion seismographs and tide indicators located throughout the Philippines and transmits them via satellite-based communications. The system will enable the Institute to constantly monitor volcanic and seismic activity and to promptly convey information to the relevant ministries and agencies in the event of an earthquake or an eruption.

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Copernicus: EU Parliament paves way for operational phase of Earth Observation Programme

On 12 March 2014, the European Parliament adopted the Regulation of Copernicus, the European Union's Earth Observation Programme. With the adoption of the Regulation, the Copernicus programme is entering the operational phase after years of preparation. The next step is the launch of the first Copernicus satellite, Sentinel-1, on 3 April from Europe's Spaceport in French Guyana. The Copernicus Programme will ensure the regular observation and monitoring of Earth sub-systems, the atmosphere, oceans, and continental surfaces to support of a broad range of environmental and





security applications and decisions. One of the services of Copernicus is a mapping service for disaster management. It has a worldwide coverage and provides maps based on satellite imagery mainly to Civil Protection Authorities and Humanitarian Aid Agencies. The service started operations on 1 April 2012.

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GPS: New technique to improve weather models

A new technique, called GISMOS (GNSS Instrument System for Multistatic and Occultation Sensing) has been developed by a team of researchers led by geophysicist Jennifer Haase from the Scripps Institution of Oceanography at UC San Diego. The system, which uses GPS data, could enhance the prediction of hurricanes and storms. It incorporates a receiver of GPS satellite signals in aircrafts instead of using receivers fixed to ground or fixed to a satellite. This allows the receivers to pick up signals even over oceans. The system can thus deliver detailed GPS readings from various regions, especially areas where hurricanes might develop.

Read more: [Knowledge Portal](#)

FAO launches Global Land Cover SHARE Database

The Food and Agriculture Organization of the United Nations (FAO) recently released its Global Land Cover SHARE database (GLC-SHARE). It combines previously un-harmonized data on global land cover and land use. The information covers different types of land cover – croplands, forests, soils – which have been gathered by different countries and organizations. The database standardizes the information from numerous sources, using internationally accepted definitions as a way to generate datasets for the whole planet. The new information set could be used for land use forecast and climate change impact monitoring.

Read more: [Knowledge Portal](#)

Heavy rain and floods in Brazil: International Charter activated

The International Charter: Space and Major Disasters was activated on 21 March 2014 to provide satellite-image products supporting flood response efforts in the northern regions of Brazil. The mechanism was triggered by the Brazilian Disaster and Risk Management National Centre (CENAD). Heavy rains in the northern regions of Brazil have caused floods along the Madeira River since February 2014. Thousands of people have been evacuated, and the flooding is gradually growing worse. No casualties have been reported and this has been attributed to the quick

evacuation of the area.

Read more: [Knowledge Portal](#)

GPM Core Observatory: First images from NASA-JAXA Global Rain and Snowfall satellite

The joint NASA and JAXA Global Precipitation Measurement (GPM) Core Observatory mission was launched on 27 February 2014. In March, NASA has released the first images obtained from this satellite. The first images show a slump in precipitation inside the cyclone over the northwest Pacific Ocean on 10 March. The GMI instrument aboard GPM has 13 channels that measure natural energy radiated from the Earth and from precipitation. The GPM Core Observatory is the first satellite of this kind designed to detect light rain and snowfall from space.

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International Charter: New Newsletter published

The International Charter: Space and Major Disasters has issued its 8th newsletter. Among other topics, the newsletter highlights that the mechanism has been activated over 400 times since it was created almost fifteen years ago, including for major events such as Super Typhoon Haiyan in the Philippines in 2013, the 2010 earthquake in Haiti and the 2011 earthquake and tsunami in Japan. The newsletter also makes reference to the 30th Meeting of the International Charter “Space and Major Disasters” held from 19 to 22 November 2013 and hosted by the Charter’s current lead agency CONAE. It also covers an International Charter special side event at GEONETCast 2014.

Read more: [Knowledge Portal](#)

Sudan: Connecting farmers with real-time flood management information

Sudan is frequently affected by devastating floods. In order farmers to be better prepared for flood events, they need access to real-time information and they need to be able to exchange and apply the information. To fill this gap, the Consultative Group on International Agriculture Research (CGIAR) recently completed research on the potential use of satellite data for farming in Sudan. The target of the project is to provide operational flood mapping services and to develop a flood forecasting system. Via Smart ICT (e.g. cell-phones backed up by the web), farmers and relevant authorities will be better informed on flood data for their respective decision making processes.

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Upcoming events

15-16 April 2014, Yogyakarta, Indonesia: ASEAN Workshop on the Development of Standard Operating Procedure (SOP) for utilisation of Space-based information during emergency response

This workshop is jointly organized by the AHA Centre, LAPAN, UN-SPIDER and ESCAP and is supported by UNOSAT. The workshop targets senior officials of the disaster management agencies, national mapping agencies, organisations involved in providing space-based and geospatial information including government agencies and international agencies. It aims to develop a standard operating procedure (SOP) for the use of space-based information during emergency response. The key objectives for the workshop are to raise awareness on international mechanisms that provide space-based information during emergencies; to leverage on UN and other initiatives for disasters that cannot be covered by international mechanisms (especially disasters at the sub-national level); to strengthen preparedness for effective emergency response by identifying gaps, capacity building needs, database needs, financial needs, mapping procedures, and institutional coordination; and to prepare rapid mapping products and their dissemination to the end-user.

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26-30 May 2014, Kiev, Ukraine, Fourth International Conference on Earth Observations for sustainable Development and Security

The goal of the Conference is to discuss the prospects of aero- and space-born data utilization for agriculture, natural resources management, sustainable development and security in the context of GEOSS, GMES/Copernicus, INSPIRE activities and implementation of the Ukrainian segment of GEOSS (GEO-UA system). A particular focus of the GEO-UA 2014 Conference will be on Earth observation applications in agriculture: international initiatives and projects (GEO-GLAM, JECAM, SIGMA), crop mapping and identification, crop yield forecasting, crop area estimation, biophysical parameters retrieval, calibration and validation.

Read more: [Knowledge Portal](#)

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

UN-SPIDER is pleased to announce its United Nations/

Germany Expert Meeting on the Use of Space-based Information for Flood and Drought Risk Reduction. It is scheduled to take place in Bonn, Germany, on 5 and 6 June 2014. The application form for participation is available online and will be open **until 22 April 2014**. 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.

Read more: [Knowledge Portal](#)

3-13 June 2014, Beijing, China: 2nd International training workshop on space technology for disaster mitigation

During this international training workshop, experts from institutions across the globe will share their experiences working in space technology for disaster mitigation, an increasingly critical field. The centre is jointly sponsored by the Third World Academy of Sciences (TWAS) and the Chinese Academy of Sciences (CAS), and will be hosted by the CAS Institute of Remote Sensing and Digital Earth. UN-SPIDER will provide a training session during the workshop. Selected applicants will be provided with full support of their costs for air travel to/from China as well as accommodation, meals and transport in Beijing. The application deadline is **4 April 2014**.

Read more: [Knowledge Portal](#)

24-28 August 2014, Davos, Switzerland: 5th International Disaster and Risk Conference IDRC

The 5th International Disaster and Risk Conference IDRC Davos 2014 will be held from 24 to 28 August 2014 in Davos, Switzerland under the theme "Integrative Risk Management - The role of science, technology & practice". IDRC Davos 2014 attempts to find solutions to today's challenges by managing risks, reducing disasters and adapting to climate change. The outcomes will be presented at the UN World Conference WCDRR in Sendai, Japan in March 2015 and aim to influence the post 2015 agenda such as the Post-2015 Framework for Disaster Risk Reduction (HFA2), the Sustainable Development Goals (SDGs), and the successor of the UNFCCC Kyoto Protocol. UNOOSA/UN-SPIDER is an endorsing partner of the conference.

Read more: [IDRC](#)

