



## JUNE 2015 UPDATES

### UN-SPIDER at a glance

#### **UN-SPIDER supports UNESCO-IOC workshop on coastal hazard assessment**

On June 2 the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) opened their training workshop “Coastal Hazard Assessment: Applications in Risk Assessment, Management and Mitigation” in Colombo, Sri Lanka, where the 2004 tsunami killed more than 35,000 people. The workshop, taking place from 2 to 5 June 2015, brought together 27 participants from 17 countries exposed to tsunamis in the Indian Ocean. Risk assessment and risk management are one of the three key areas of work of UNESCO-IOC. The workshop was part of the “Tsunami Risk Assessment and Mitigation for the Indian Ocean” project (TRATE), sponsored by UN ESCAP (United Nations Economic and Social Commission for Asia and the Pacific), and one of the activities of the recently established Working Group on Risk Assessment and Mitigation of the International Coordination Group of the Indian Ocean Tsunami Warning System.

Read more: [Knowledge Portal](#)

#### **UN-SPIDER and partners conclude EAS and ASEAN workshops**

From 2 to 5 June 2015 UN-SPIDER, the National Disaster Reduction Centre of China (NDRCC), and UNESCAP jointly organized the four-day workshop of East Asia Summit (EAS) workshop on ‘Applications of Space Information Technology in Major Natural Disaster Monitoring and Assessment’ and 2nd ASEAN workshop on ‘Development of mechanisms for acquisition and utilisation of space-based information during emergency response. Nearly 50 government representatives and experts from 11 countries, 7 regional and international organizations and 14 research institutes attended the workshop to share experiences on applications of space-based information in major natural disaster monitoring and assessment. Both events took place in Hangzhou, China.

Read more: [Knowledge Portal](#)

#### **UN-SPIDER supports International Workshop on Supporting Future Earth with Global Geo-information**

The UN-SPIDER Beijing Office in cooperation with the National Geomatics Center of China (NGCC), the Chinese National Committee for Future Earth (CNC-FE), the UN Project Management Office (National Administration of Surveying, Mapping and Geoinformation - NASG) and LIESMARS - Wuhan University co-organized the “International Workshop on Supporting Future Earth with Global Geo-information” from 9 to 10 June, Beijing, China. UN-SPIDER contributed to the session “Disaster Risk Reduction and Global Geo-information” to support sustainable development and Future Earth initiative with the effort of establishing reliable global geo-information.

Read more: [Knowledge Portal](#)

#### **#whyspacematters: UNOOSA and NASA social media contest**

TUNOOSA and NASA have launched a global social media campaign to raise awareness about the impact of the outer space on our daily lives and its importance for a sustainable development on Earth. The #whyspacematters photography contest aims to collect pictures showing why outer space matters to our everyday life. Astronaut Scott Kelly, stationed on the International Space Station for a one-year mission, will be posting the winning photo through his Instagram account every month.

Read more: [Knowledge Portal](#)

#### **Upcoming International Workshop and Training with the participation of UN-SPIDER**

UNESCO Category 2 Centre on World Natural Heritage Management & Training for the Asia-Pacific Region is organizing the “International Workshop and Training on The Role of Natural World Heritage Sites in Disaster Risk Reduction”, which will be held in the headquarters of the



Wildlife institute of India, in Dehradun, between the 24th and 28th of August. UN-SPIDER is also participating in the workshop, as well as UNISDR, IUCN-DRR, UNESCO, FAO, NDMA, ICIMOD, TISS-JTCMD and IIRS, in order to discuss, deliberate and train on the mitigation strategies to be adopted for Natural World Heritage sites and Protected Areas in the Asia-Pacific region.

Read more: [Knowledge Portal](#)

### **Step by step procedures for the “R” software included in UN-SPIDER Knowledge Portal**

UN-SPIDER has added to its Knowledge Portal step-by-step

procedures using the free software “R” for the recommended practice on drought monitoring. The recommended practice on drought monitoring was developed by the Iranian Space Agency using the commercial software Envi. The methodology has been turned into “R” software by UN-SPIDER and is now accessible through its Knowledge Portal. The advantage of “R” is that it is freely available and the whole processing chain can be automated, i.e. long time series can be processed automatically.

Read more: [Knowledge Portal](#)

## Data application of the month

**In this section, the UN-SPIDER team presents every month a specific example of a satellite data application for disaster risk reduction or emergency response.**

Access the full list [here](#).

### Emergency Response

When a disaster occurs, situational awareness is imperative in decision making for response and emergency support. Information is needed on the scale of damage in an area and the location of the affected population, along with logistical information such as the location of hospitals, undamaged roads and bridges and communication infrastructure. In the days and weeks following a disaster, information concerning the

international agencies and NGOs operating in the area and the distribution of resources is needed to ensure aid reaches those who need it most and efforts are not duplicated, wasting precious time. Disaster managers and responders require timely and accurate information to understand and communicate the situation on the ground to others.

Read more: [Knowledge Portal](#)

## News from our Regional Support Offices

### **RCMRD: Stakeholder Workshop on the Use of MODIS Data for Early Warning**

On Thursday June 4th a one-day workshop on the “Use of Modis Data for Early Warning, Disaster Risk Reduction (DRR) and Environmental Monitoring” was held in Kasarani (Nairobi) by the Regional Centre for Mapping of Resources for Development (RCMRD), UN-SPIDER’s Regional Support Office in Kenya. This workshop is the result of a project between RCMRD and Google Foundation, SERVIR Africa, NASA and USAID in order to procure, install, and build capacity for MODIS direct readout antenna. Google Foundation awarded a grant to RCMRD while CSIR and NASA provided capacity building and technology transfer,

as well as the installation of the pre-processing tools for Earth Observation data.

Read more: [Knowledge Portal](#)

### **ICIMOD: New app to improve disaster relief**

“Disaster Reporting” is a new android application launched by UN-SPIDER’s Nepal Regional Support Office ICIMOD and Kathmandu University, Nepal, with the aim of easing relief processes of disaster events through contributive reports of the users. The users can select the type of disaster event and inform about the impact and damages caused, the number of people injured or the relief requirements on the field, among others. Users’ reports allow creating and





updating an interactive and freely accessible map, which helps better understanding and assessing the situation.

Read more: [Knowledge Portal](#)

### **CONAE and NASA Aquarius mission stops operating**

The Aquarius/Satélite de Aplicaciones Científicas (SAC)-D satellite observatory, a joint project between NASA and Argentina's Space Agency (CONAE), with participation from Brazil, Canada, France and Italy, has ended its activity after nearly four years.

The international Earth-observing mission, launched in 2011 to study the salinity of the ocean surface, has been brought to an end due to the shutdown of an essential part of the power and attitude control system for the SAC-D spacecraft.

Read more: [Knowledge Portal](#)

## News from our Community

### **IASON project concluded: Earth observation in the Mediterranean and Black Sea regions**

The IASON FP7 project has reached all its objectives and came to an end in May after its last event on April 22. This project, a joint effort within the FP7 ENV programme had the main goal of implementing the usage and application of Earth observation in the fields of climate change, resource efficiency and raw materials management. The scope of the project was determined by two geographical areas, the Mediterranean and the Black Sea regions. The IASON project aimed to establish there a fixed network of scientific and non-scientific institutions, stakeholders and private sector enterprises.

Read more: [Knowledge Portal](#)

### **ISDR Asia partnership meeting to implement Sendai Framework**

The first International Strategy for Disaster Reduction Asia Partnership (IAP) meeting of 2015 has been conducted from 3 to 5 June in Bangkok, Thailand. Representatives from Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Japan, Malaysia, Maldives, Mongolia, Myanmar, Pakistan, Philippines, Sri Lanka, Thailand, East Timor and Vietnam, seventeen of the world's most disaster-prone countries, have been discussing how to further implement the Sendai Framework for Disaster Risk Reduction across Asia.

Read more: [Knowledge Portal](#)

### **SUPARCO: Monitoring floods of Punjab rivers from space**

The Space and Upper Atmosphere Research Commission (SUPARCO) of Pakistan, UN-SPIDER's Regional Support Office, announced that all rivers of Punjab will be monitored by satellites operated by SUPARCO. The aim is to receive updated information of flow of water in rivers and nullahs in order to monitor floods. According to Chief Relief Commissioner Punjab and Senior Member Board of Revenue Nadeem Ashraf, "modern software had been developed to obtain information regarding the flow of water and its impact on surrounding areas. Information will also be received regarding rains through satellite before time so that planning could be made regarding relief in future."

Read more: [Knowledge Portal](#)

### **Enhancing surface deformation mapping through Sentinel-1A**

The remote sensing technique to map ground deformation is being improved thanks to scientific work based on frequent observations from the Sentinel-1A radar satellite data. The one-year old satellite data has been compared with those from the ERS and Envisat, former satellite radar missions. This work has enabled researchers of Italy's Institute for Electromagnetic Sensing of the Environment (IREA-CNR) to show a drastic improvement in mapping surface deformation and to draw a new path for earthquake and volcano monitoring.

Read more: [Knowledge Portal](#)

### **Detailed global climate change estimates released by NASA**

NASA has released a dataset displaying how temperatures and precipitations might change by the year 2100 taking into account various greenhouse gas emission scenarios. This 25-km high resolution data is of free access to the public and shows estimated maximum and minimum temperatures as well as precipitations on a daily basis and at a local and global scale from 1950 to 2100 under two different greenhouse gas emission scenarios: a "business as usual" scenario based on current trends and an "extreme case" with huge carbon dioxide increases. These simulations were carried out by the international Fifth Coupled Model Intercomparison Project.

Read more: [Knowledge Portal](#)





### **Geospatial information system for disaster management in Pacific Island countries**

A major regional geospatial information system and other innovative risk assessment tools are being developed to assist Pacific Island countries to undertake evidence-based decision making in development planning and finance as was announced during a four-day workshop from 9 to 12 June 2015 in Suva, Fiji with the participation of Pacific region government representatives and development partners.

Read more: [Knowledge Portal](#)

### **New research for satellite-based earthquake prediction**

The remote sensing laboratory at the Ariel University, Israel, is working in a new technology that could forecast earthquakes through satellite data. "We're trying to establish a huge platform that takes into account different remote sensing measurements. We're trying to combine all the data in order to try to predict, assess and mitigate natural effects related to natural hazards," said Dr. Yuval Reuveni, head of the university's remote sensing laboratory.

Read more: [Knowledge Portal](#)

### **New tools to enhance storm prediction in the Gulf of Mexico**

The foundation of the Gulf of Mexico Coastal Ocean Observing System (GCOOS) has provided new tools helping to predict storms and enhance ship navigation. Texas, Louisiana, Mississippi, Alabama and Florida will be covered with more accurate information thanks to the GPS Continuously Operating Reference Systems (CORS) and Physical Oceanographic Real-Time System (PORTS®) tools that are being implemented through local, state and federal partnerships.

Read more: [Knowledge Portal](#)

### **Agreement between Australia and Europe on Earth Observation research**

An agreement has been signed between the Australian CSIRO research institute and the European Space Agency (ESA) which will allow Australia to get access to European satellite data, while ESA would benefit from Australia's research expertise during joint projects on space technology and applications. ESA and Australia have been collaborating on Earth observation for many years, including the development of tools, calibration and validation activities and data exploitation connected to the ERS and Envisat missions. Moreover, ESA owns a facility in Western Australia

to track space missions.

Read more: [Knowledge Portal](#)

### **UK Environment Agency to make LiDAR data freely available**

The UK Environment Agency (EA) will make its LiDAR data sets freely available to all users from September 2015. Until now the EA's accurate elevation data covering approximately 60 per cent of England and Wales was only accessible to selected non-commercial entities. The LiDAR technique that is used for environmental and land-use modelling, flood monitoring, asset management and urban planning will be available from September this year to the general public. This will also enable app developers to apply this dataset for their own tools.

Read more: [Knowledge Portal](#)

### **India shares concept note for SAARC satellite**

India has prepared a concept note of the new SAARC satellite (tentatively called SAARC SAT) to the other members of the South Asian Association for Regional Cooperation (SAARC), in preparation of a special meeting this week. SAARC is an economic and geopolitical organisation of eight countries that are primarily located in South Asia or Indian subcontinent. The main areas of application for SAARC SAT include telemedicine, emergency communication in disaster situations, intergovernmental and business networks, online skill development and even television broadcasting.

Read more: [Knowledge Portal](#)

### **ESA's Sentinel 2A successfully launched and set in orbit**

Sentinel 2A, the new satellite developed by the European Space Agency (ESA) and Airbus, was successfully launched from the European Spaceport in Kourou (French Guiana) on 23 June 2015 at 01:52 GMT. It separated from the stage into flight 54 minutes after the launch, its solar panel has already been deployed but it will only begin its missions in three or four months. Sentinel 2A is the second satellite of the European Union's Copernicus programme, weights 1.1 tonnes and was developed with a budget of 7.500 million Euros, the highest for a civil Earth Observation satellite.

Read more: [Knowledge Portal](#)

### **IAG launches the Global Risk Map**

Insurance Australia Group (IAG) launched a new natural disaster management instrument at the Global Insurance





Forum in New York, the Global Risk Map. This interactive map shows the social and economic impact of cyclones, floods, earthquakes and related disasters during the past 115 years. It focuses on areas that are most susceptible to be affected by disasters, taking into account their social conditions and resilience as well as insurance information, which is the biggest novelty according to IAG.

Read more: [Knowledge Portal](#)

### **Deimos-2 satellite's first anniversary**

Deimos-2, Spain's first Very High Resolution Earth Observation satellite launched on the 24th of June 2014, celebrates its first successful year in orbit. It has travelled more than 230 million km and recorded 18,000 images, covering an area of 3.2 million square km. Its imagery can be applied to several activities, mainly to agricultural and

environmental monitoring, water administration and disaster risk reduction and emergency response.

Read more: [Knowledge Portal](#)

### **International Charter activated once in June 2015**

The International Charter: Space and Major Disasters was activated on 11 June 2015 at 21:37:56 (UTC+02:00) due to major floods in northern Brazil. The mechanism was triggered by the Brazilian Disaster and Risk Management National Centre – CENAD, once the situation became unsustainable in the Amazonas state. The Solimoes River, one of the two main branches of the Amazon River in northern Brazil, overflowed in early June as a result of constant heavy rains since April.

Read more: [International Charter](#)

## Upcoming events

### **6-10 July 2015, Budapest, Hungary: Making Information Talk and Technologies Work**

This course aims at bridging the gap between environmental / public policy professionals and cutting-edge technologies and their practical application by bringing ICT developers and experts (e.g. the United Nations Office for Outer Space Affairs and Esri) into the classroom and arranging their direct communication with decision making groups, making data and emerging technologies more accessible, usable, and relevant for decision-making. An UNOOSA representative will be conducting an additional day-long workshop on remote sensing applications in environmental monitoring and natural resource management, as well as presenting the role of UN-SPIDER and its Knowledge Portal. OOSA/PSA will also support the course through funding. This is being carried out as a preparatory activity for the Eye on Earth Summit 2015 and is conducted as a part of the ISEPEI Project.

Read more: [Knowledge Portal](#)

### **13-17 July 2015, Budapest, Hungary: Innovations in Disaster Risk Management**

This course aims at bridging the gap between decision- and policy-makers and ICTs in the realm of disaster management and risk recovery. Building upon existing UNDP experience in disaster management, innovations and the latest ICT advances in these topics will be covered with the aim of building the capacity to manager disaster risks and more effectively

responding when disasters hit. An UNOOSA representative will be presenting the role of UN-SPIDER and its Knowledge Portal. OOSA/PSA will also support the course through funding. This is part of the Bridging ICTs and the Environment workshops carried out through the CEU Summer University within the Eye on Environmental Education Special Initiative in preparation for the Eye on Earth Summit 2015.

Read more: [Knowledge Portal](#)

### **1-4 September 2015, Cape Town, South Africa: United Nations/South Africa Symposium on Basic Space Technology "Small Satellite Missions for Scientific and Technological Advancement"**

The Symposium will focus on capacity building in basic space technology development, in particular the development and use of small satellites (<150 kg) for scientific and technological advancement. It will also discuss relevant legal and regulatory issues, including national and international space law, frequency allocation and space debris mitigation measures for the long-term sustainability of outer space activities. The objectives of the UN/South Africa Symposium include, inter alia, the review the status of capacity building in basic space technology for small satellites including lessons learned from the past and on-going development activities with a focus on regional and international collaboration opportunities, in particular for countries in Africa and examine issues relevant to the implementation of small satellite programmes, such





as organizational capacity building, development and testing infrastructure and launch opportunities.

Read more: [UNOOSA](#)

**Apply now! 14-16 September 2015, Beijing, China: United Nations International Conference on Space-based Technologies for Disaster Management - “A consolidating role in the implementation of the Sendai Framework on Disaster Risk Reduction: 2015-2030”**

The conference focuses on the consolidating role of Earth observation technologies in the implementation of the “Sendai Framework on Disaster Risk Reduction: 2015-2030”. Efforts need to be taken to promote use of space-based information to help assess potential risks and hazards before disaster occur and contribute to risk-based developmental planning. The conference will synthesize experiences and lessons learnt by the experts and end users involved in using Earth observation in all stages of disaster management. The aim of the conference is to produce an outcome document with guidelines to Member States to integrate Earth observation and geospatial technologies in implementing the Sendai Framework for Disaster Risk Reduction. The Conference is now open for applications. The final deadline for registration is 19 July 2015. Online registration is mandatory for all participants.

Read more: [Knowledge Portal](#)

