United Nations Platform for Space-based Information for Disaster Management and Emergency Response

## **UN-SPIDER**

# June 2012 Updates

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### **UN-SPIDER** at a glance

#### UNOOSA/UN-SPIDER Side event at Rio+20

Together with the Governments of Austria and Brazil, the United Nations Office for Outer Space Affairs (UNOOSA) organized a side-event at the United Nations Conference on Sustainable Development (Rio+20) on 19 June 2012 to discuss the contribution of space-based information and technologies to sustainable development. The focus was on space and its contributions that would lead to a convergence on the use of space-based technologies for sustainable development and assist in identifying the next actions that would embrace Rio+20 outcomes. The event consisted of contributions from 5 invited panellists, and covered the areas of food, water, health and disasters as well as geospatial information.

The session was chaired by Dr. Yasuchi Horikawa (Japan), Chairman of COPUOS 2012-2013 and moderated by Dr. Ade Abiodun (Nigeria). The Opening Statement was given by the President of the Brazilian Space Agency, Dr. José Raimundo Braga Coelho on behalf of H.E. Mr. Marco Raupp, Minister for Science, Technology and Innovation of Brazil. Panellists included Amb. Walther Lichem (Austria), Dr. Stephen Briggs (CEOS), Mr. Paul Larsen (World Food Programme), Dr. Mario Lanfri (Argentina) and Dr. Frederico de Angelis (Brazil).

Learn more: UNOOSA

### **UN-SPIDER** supports International Workshop on Drought

The workshop "Drought Monitoring, Assessing and Planning under Global Climate Change", held from 4 to 5 June 2012, was hosted by Beijing Normal University in collaboration with the National Drought Mitigation Center of the United States, the UN-SPIDER Beijing office and the International Center for Drought Risk Reduction. About 80 experts from 8 countries participated in the workshop. The event included seven sessions related to drought monitoring, drought assessment and drought mitigation and planning.

UN-SPIDER sponsored three experts from Sudan, Pakistan and the Regional Center for Mapping of Resources for Development (RCMRD) based in Kenya to participate in the workshop. Having carried out a Technical Advisory Mission to Sudan in 2011, UN-SPIDER has since supported experts from Sudan to participate in relevant workshops and plans to organize special training programmes. The participation of Pakistan and RCMRD was valuable since both host UN-SPIDER Regional Support Offices. This collaboration ensured that experts from developing countries and regions that constantly suffer from

drought could benefit from the knowledge and networking that the workshop offered in order to improve their drought monitoring programmes.

Learn more: UN-SPIDER Portal

### Call for experts for Technical Advisory Mission to Cape Verde closed

In the May 2012 Updates, UN-SPIDER called for experts for its Technical Advisory Mission from 30 July to 3 August to Cape Verde. UN-SPIDER received numerous interesting applications for this opportunity and is still in the process of reviewing them. We will disclose the decision to the selected participants as soon as possible. We would like to ask those experts whom UN-SPIDER unfortunately cannot invite this time to stay alert as many other possibilities to participate in UN-SPIDER missions will come up in the near future.

Technical Advisory Missions (TAMs) are conducted within the framework of UN-SPIDER's technical advisory support, one of the core activities of the programme. TAM experts meet with key disaster management authorities in the Government, UN agencies, regional and international organizations or initiatives and private entrepreneurs, make recommendations and develop guidelines to improve the use of space-based information in disaster-risk management and emergency response.

Learn more: markus.woltran@unoosa.org

### **UN-SPIDER Newsletter "Technical Advisory Support"** available

With the May 2012 issue of the UN-SPIDER Newsletter, we are introducing a new approach to UN-SPIDER Newsletters showcasing in each issue specific thematic areas within the framework of our activities.

The most recent issue portrays UN-SPIDER's technical advisory support activities. Have a look and find out about our technical advisory missions, capacity building activities and the facilitation of technical support in countries all over the world including Myanmar, Cameroon or India. This issue also features an interview with Kamel Tichouiti from our Algerian Regional Support Office on the mitigation of the locust infestations that Algeria and Libya have recently experienced.

Learn more: UN-SPIDER Portal







### **News from our Regional Support Offices**

### Károly Róbert College became member of OGC

The Hungarian Regional Support Office, Károly Róbert College, Gyöngyös became the first institution from Hungary having membership in OGC (Open Geospatial Consortium). HUNAGI (the Hungarian Association for Geo-Information) will provide assistance in dissemination and related joint actions. The membership became effective in May 2012.

Learn more: HUNAGI Newsblog

#### RCMRD: SDI-Africa Newsletter for June available

UN-SPIDER's Regional Support Office in Nairobi, Kenya - the Regional Centre for Mapping of Resources for Development (RCMRD) - regularly prepares a Spatial Data Infrastructure Newsletter for the African continent on behalf of the Global Spatial Data Infrastructure Association. Spatial Data Infrastructure - Africa (SDI-Africa) is a free, electronic newsletter for people interested in GIS, remote sensing, and data management in Africa.

Published monthly since May 2002, it provides useful information to strengthen SDI efforts and supports synchronization of regional activities. It touches issues such as humanitarian crises, natural disasters and international cooperation in relation to spatial data. It furthermore displays spatial data infrastructure implementation materials, events and trainings. Subscription to the SDI-Africa Newsletter can be done online.

Learn more: GSDI

### IGAC implements project on floods and landslides

The Colombian Agustin Codazzi Geographic Institute (IGAC) and the Regional Corporation of the State of Antioquia (CORANTIOQUIA) signed an agreement to develop the project "Estimation and elaboration of cartography of flood and landslide hazards in the CORANTIOQUIA jurisdiction, with the use of geospatial technologies". The project consists of three phases and aims to map the flood activity and landslide events in a specific area using optical and radar images.

The goal is to generate cartography on a scale of 1:25,000 based on the ITC methodology.

The project starts with the Cauca and Nechi rivers, mapping geomorphologic units to generate hazard maps and continues in the second and third phases in other zones according to the results of the first phase. The research area is part of the flood areas of the Magdalena River - the most important of the country. Floods in that area caused the declaration of a state of emergency last year. This is the first study of its kind in the country. IGAC wants to increase the use of geospatial technologies, especially those related to remote sensing for hazard and risk assessments and management.

Learn more: UN-SPIDER Portal

### ASAL: Space-based information to combat desertification

Africa is especially vulnerable to land degradation, drought and desertification. The Algeria Space Agency, which hosts one of UN-SPIDER's Regional Support Offices, supported a recent workshop on "Desertification and land degradation in Africa" in Alger. The workshop was organized jointly by the Algerian Ministry for Agriculture and Rural Development and the United Nations Convention to Combat Desertification (UNCCD). The workshop targeted African journalists and environment specialists.

ASAL contributed by pointing out the usefulness of space-based information to combat land degradation, desertification and drought. They presented a national vulnerability map using satellite imagery from 1996 and 2009 and explained how desertification can be tracked with the use of satellite imagery. This map had helped the National Forestry Agency as a decision making tool to put into action theirs efforts against desertification. ASAL also presented how tracking desertification helps to prepare counter-actions, to identify agricultural and steppe zones or to keep track of forest fires.

Learn more (french): ASAL

### **News from our Community**

### 55th session of COPUOS successfully concluded

The United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) held its 55th session in Vienna, Austria from 6 to 15 June 2012. The session was opened electing Yasushi Horikawa from Japan as Chair, Filipe Duarte Santos from Portugal as Vice-Chair and Piotr Wolanski from Poland as Second Vice-Chair. The 55th session continued discussions on ways and means of maintaining outer space for peaceful purposes, as well as on a variety of topics including spin-offs of space technology, space and society, space and water, space and climate change, and the use of space technology in the United Nations system. The session also addressed the reports of the Legal and Scientific and Technical Sub-Committees of COPUOS. The Action Team on Near-Earth Objects met on 11 and 12 June.

On 6 June, a special panel discussion was held to commemorate the fortieth anniversary of Landsat - the first Earth-observation satellite mission, providing many countries with remote sensing data since 1972. A dedicated exhibit on Landsat and the worldwide evolution of remote sensing was set up for the entire duration of COPUOS in the Rotunda of the venue of the session, the Vienna International Centre. UN-SPIDER took advantage of the session to meet

with representatives of the space community and with delegates from Member States.

Learn more: UNOOSA

### International Charter activated for floods in Canada

On Saturday 22 June 2012, the International Charter: Space and Major Disasters was activated by Public Safety Canada. Heavy rains had fallen in the Canadian Shuswap region in British Columbia, where more than 340 people were evacuated from their homes into the community of Sicamous area in Vancouver. Canadian officials declared a state of emergency, issuing a water-conservation notice to some 3,100 residents on Shuswap Lake. A do-not-use water order has also been issued for one water system.

Since the flooding, at least 1,240 British Columbians faced flood-evacuation alerts and 165 others were under evacuation orders. A low pressure system dropped 60 - 80 millimetres of rain overnight in the area, almost three times more than expected within a month for this region. Further flooding is expected over the next few weeks.

Learn more: International Charter







### TerraSAR-X: Five years in space

On 15 June 2007, the German TerraSAR-X radar satellite was launched from Russia's Baikonur Cosmodrome in Kazakhstan marking the beginning of a new era in German remote sensing. In its fifth year in space, TerraSAR-X has served its planned life-span, but is expected to continue functioning for several years. "TerraSAR-X has now been operating almost flawlessly for five years. The satellite's propellant consumption has been low, the solar arrays and radar instrument are in good condition, and all of the redundant systems are still available. We could not have hoped for more," states Michael Bartusch, TerraSAR-X mission Project Manager at the German Aerospace Center (DLR).

TerraSAR-X can survey Earth regardless of cloud coverage or weather conditions thanks to its on-board Synthetic Aperture Radar (SAR) system. It can provide imagery with resolutions of one meter allowing the provision of high quality data for science, disaster and risk management and commercial purposes - particularly concerning time-sequenced images. TerraSAR-X was constructed by Astrium on behalf of DLR and its data is distributed by the German division of Astrium Geo-Information Services, Infoterra GmbH.

Learn more: DLR

### **DLR supports establishment of IWG-SEM**

After the workshop the German Space Agency (DLR) has organized in September 2011, the Joint Research Centre (JCR) hosted a follow-up meeting in Ispra in April 2012, during which the International Working Group on Satellite Based Emergency Mapping (IWG-SEM) was officially established.

Over the last decade, the use of earth observation satellites has become more and more important to support disaster management and emergency relief, with an increasing number of players involved from governments, academia, industry, NGOs and internet communities. Taking into account this matter, IWEG-SEM was created with the following mission statement:

'Establish best practices between operational satellite-based emergency mapping programs to stimulate communication and collaboration to include definition of map product generation guidelines, coordination of expertise and capacities, building of training curriculum, participation in common exercises, and reviewing relevant technical standards and protocols and to work with the appropriate organizations to define professional standards for emergency mapping.'

Learn more: DLR/ZKI

#### China: Donation of BeiDou/COMPASS model

On the sidelines of the 55th session of the Committee on the Peaceful Uses of Outer Space (COPUOS), the People's Republic of China held a special ceremony on 8 June 2012 to donate a model of their BeiDou/COMPASS satellite to the permanent exhibit of the United Nations Office for Outer Space Affairs. The exhibit is on display at the Vienna International Centre. The Beidou/COMPASS satellites are part of a Chinese satellite navigation system. The first BeiDou system has been offering navigation services in China and the region since 2010. The second generation of the system, Compass/BeiDou-2, became operational in December 2011 and will eventually consist of 35 satellites.

Learn more: UN-SPIDER Portal

### Rio+20 agreement addresses disaster risk reduction

The United Nations Conference on Sustainable Development (UNCSD) - also known as Rio+20 – was held from 20 to 22 June 2012 in Rio de Janeiro, Brazil. World leaders, along with thousands of participants from governments, the private sector, NGOs and other groups came together to shape how we can reduce poverty, advance social equity and ensure environmental protection on an ever more crowded planet to get to the future we want.

The final agreement "The future we want" is available on the Rio+20 Website. It specifically addresses disaster risk reduction, one of seven topics that have been identified beforehand as needing urgent attention. The agreement states: "We call for disaster risk reduction and the building of resilience to disasters to be addressed with a renewed sense of urgency in the context of sustainable development and poverty eradication, and, as appropriate, to be integrated into policies, plans, programmes and budgets at all levels and considered within relevant future frameworks. We invite governments at all levels as well as relevant subregional, regional and international organizations to commit to adequate, timely and predictable resources for disaster risk reduction in order to enhance the resilience of cities and communities to disasters, according to their own circumstances and capacities."

Margareta Wahlström, Special Representative of the Secretary-General for Disaster Risk Reduction, deems Rio+20 to be a very important platform to raise awareness about global disaster risk reduction efforts, as she stated in an interview with the UN News Centre at the sidelines of the conference: "Our hope is that it will be recognized as a strong strategic issue, and that we need to mitigate for risks in order to be able to achieve all our positive development objectives."

Learn more: UNCSD

### **Upcoming events**

# Fifth International Summer School and Conference Applied Geoinformatics for Society and Environment (AGSE 2012)

The Fifth International Summer School and Conference Applied Geoinformatics for Society and Environment (AGSE 2012) is an interdisciplinary, international forum to share knowledge about the application of geoinformatics with focus on developing countries.

The conference will feature professional multifaceted training about current

topics in the fields of geoinformatics, photogrammetry and remote sensing as well as keynotes and workshops. Topics will be i.a. internet-based applications and open source solutions, advances in GIS science, spatial data infrastructures and land management, earth observation systems, natural resources management, disaster monitoring and risk management. AGSE 2012 will take place July 16 - 20, 2012, Universiti Teknologi Malaysia, Johor Bahru, Malaysia.

Learn more: Applied Geoinformatics

### **About UNOOSA/UN-SPIDER**

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 61/10 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.