



UN-SPIDER

October 2011 Updates

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UN-SPIDER News

1. UN-SPIDER and China cooperate on providing satellite images and maps of Thailand floods

Major floods are occurring during the 2011 monsoon season in Thailand, most severely in the Chao Phraya but also in the Mekong River basin. Beginning in late July and continuing for over two months, the floods have caused so far 506 deaths, affected over 2.3 million people, and caused damages estimated at up to 156.7 billion baht (5.1 billion USD). About six million hectares of land are inundated, over 300,000 hectares of which is farmland, in 58 provinces, from Chiang Mai in the North to parts of the capital city of Bangkok near the mouth of the Chao Phraya in the South. It has been described as "the worst flooding yet in terms of the amount of water and people affected". Seven major industrial areas have been inundated by as much as 3 meters (10 feet) of water. To support the ongoing disaster management activities NDRCC (National Disaster Reduction Center of China) with UN-SPIDER cooperation provided HJ-1 satellite imagery and maps to the Geo-Informatics and Space Technology Development Agency (GISTDA) of Thailand. GISTDA is also the national focal point (NFP) for UN-SPIDER in Thailand.

For further information >> contact [Shirish Ravan](#)

2. UN-SPIDER's RSO in Pakistan supported World Space Week Activities

World Space Week, the largest public space event on earth, is an annual event as declared by the United Nations General Assembly in 1999, and this year it was celebrated in over 55 nations from 4 to 10 October 2011. The theme for World Space Week 2011 was "50 Years of Human Spaceflight" honouring the first human spaceflight that took place on 12 April 1961, when Russian cosmonaut Yuri Gagarin made one orbit around the Earth aboard the Vostok 1 spacecraft. The Pakistan Space and Upper Atmosphere Research Commission (SUPARCO), which hosts the UN-SPIDER RSO in Pakistan, supported at the national level the World Space Week 2011 activities by holding seminars, exhibitions, shows and workshops for students and high-school teachers to increase the public awareness on space technology and its applications such as in disaster management, in Lahore, Islamabad, Karachi, Peshawar, Quetta and Gilgit.

For further information >> [SUPARCO](#)



3. UN-SPIDER's RSO in Algeria provides flood maps of the city of El Bayadh

On the 1st and 2nd of October 2011 heavy downpours hit the area of El Bayadh, 700 km SW of Algiers, leading to deadly flooding affecting the town of El Bayadh. The flooding impacted both population and property, with 13 dead, tens of injured, hundreds of destroyed houses, 5 collapsed bridges, at an estimated cost of 6 billion dinars (600 million Euros). Following the flooding in the city of El Bayadh in the afternoon of 1 October 2011, the Algerian Space Agency (ASAL), tasked coverage of the disaster area with satellite imagery from Algerian Alsat-2A and also triggered in coordination with the Directorate General of Civil Protection the International Charter. Subsequently, ASAL worked on the delineation of the flooded areas and on a preliminary assessment of the impact of flooding on homes and infrastructure.

For further information >> [ASAL](#)

4. UN-SPIDER contributes to the Humanitarian Partnership Workshop for the Asia-Pacific Region

As part of the UN-SPIDER Programme commitment to be present at all regional coordination meetings in Asia UN-SPIDER participated and contributed to the above workshop which was held in Shanghai, China from 12 to 13 October 2011. The event was hosted by the Ministry of Commerce, Government of the People's Republic of China with the support of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA). During her keynote address the Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator provided participants with a detailed overview of the latest developments in humanitarian issues at the global level, including the ongoing reform process being led by the heads of various agencies who are members of the Inter-Agency Standing Committee. She also shared her perspective on current opportunities and challenges in humanitarian response and preparedness in Asia and the Pacific. UN-SPIDER representative Mr. Shirish Ravan contributed as a panellist in Session 4, presenting on the topic "Disaster Management: Space Technology Initiatives, Challenges and Opportunities".

For further information >> contact [Shirish Ravan](#)

5. UNOOSA contributes to the United Nations Global Geospatial Information Management (GGIM)

The United Nations Economic and Social Council (ECOSOC) established the United Nations Committee of Experts on Global Geospatial Information Management (UNCE-GGIM) in July 2011 (ECOSOC resolution 2011/24) as the official UN consultative mechanism on GGIM. The main objectives of the UN Committee are to provide a forum for coordination and dialogue among Member States, and between Member States and relevant international organizations and to propose work-plans and guidelines with a view to promoting common principles, policies, methods, mechanisms and standards for the interoperability and interchangeability of geospatial data and services. The First High Level Forum on United Nations Global Geospatial Information Management - Global Challenges, Global Mechanism, Global Leadership was the main event that brought together between 24 and 26 October 2011 in Seoul, Republic of Korea, nearly 500 participants to discuss issues of global geospatial information. There were representatives from around 90 Member States including eight Ministers of State (Chile, Finland, India, Malaysia, Mongolia, Namibia, Niger and the Republic of Korea) and from all the relevant geospatial organisations. The Committee then convened its inaugural meeting on 26 October 2011 in the afternoon. The inaugural meeting brought together experts from Member States and observers from international organizations to adopt the Terms of Reference of the Committee, review the Rules of Procedure of the Committee, and discuss its contribution to the Rio+20 Conference as well as an inventory of critical issues to be addressed by the Committee.

For further information >> see [GGIM](#)

6. UN-SPIDER training course on the use of radar images for flood response - CRECTEALC, Mexican Campus

In recent decades Mesoamerican countries have experienced more frequent and intense floods triggered by tropical storms and hurricanes, which have provoked extensive losses in many sectors of development. In the case of Mexico, losses associated with the 2010 floods reached extremely high levels similar to those



associated with the 1985 earthquake. In the case of Guatemala and El Salvador, hurricanes Mitch (1998), tropical storms Stan (2005) and Agatha (2010) and other hydro-meteorological events have highlighted the vulnerability of road infrastructures, housing, agriculture, health, and education. In order to support these countries in their response efforts in the case of floods and other natural phenomena, UN-SPIDER has often requested the activation of mechanisms such as the International Charter: Space and Major Disasters and SERVIR and has mobilized space agencies from Germany, China, Argentina and other countries. These space agencies have tasked their satellites and delivered imagery to civil protection and emergency management agencies in these countries for further processing. Recognizing the need to strengthen institutional capacities of government agencies on the use of satellite imagery, UN-SPIDER and the UN-affiliated Regional Training Center on Space Science and Technology for Latin America and the Caribbean (CRECTEALC) organized a training course between 24 and 28 October 2011 targeting staff from Mexico, Guatemala, El Salvador and Belize who support disaster response and risk management efforts using remote sensing techniques. The course responded to demands for training from representatives of civil protection agencies from these countries, and can be seen as an outcome of the VI Space Conference of the Americas which was held in Pachuca, Hidalgo, Mexico in November 2010, and from discussions held with representatives from CRECTEALC, UN-SPIDER, and from Mexico's National Center for Disaster Prevention (CENAPRED). The course was conducted in the Mexican Campus of CRECTEALC; which is hosted by Mexico's National Institute for Astrophysics, Optics, and Electronics (INAOE) in Tonantzintla, Puebla, Mexico and benefitted from the support provided by INAOE and the Governments of Austria and Spain.

For further information >> contact [Juan Carlos Villagran](#)

7. UN-SPIDER contributes to the 4th Pacific Humanitarian Team Annual Meeting, 17-21 October 2011, Suva, Fiji

The Pacific Humanitarian Team was established in 2008 as a regional coordination mechanism to facilitate wide collaboration in emergency preparedness and response in the Pacific. It builds upon the mandate provided to OCHA which is to ensure the coordination of the response needs and also the need to structure and implement the cluster approach during response activities. UN-SPIDER has aimed at participating in all disaster management meetings in the Pacific region since 2008, the preparedness ones, which are the Pacific Platform meetings co-organised by SOPAC and UN-ISDR, and the emergency response meetings, which are the ones led by OCHA. This has enabled the building of a working relationship with several Pacific NDMOs (National Disaster Management Organisations – including Fiji, Samoa, Kingdom of Tonga and Solomon Islands). UN-SPIDER with the support from the Government of Austria participated and contributed to the above meeting and will continue working in the region including participating in the UNDP-led Early Recovery Cluster Working Group and planning the upcoming Technical Advisory Mission to the Kingdom of Tonga in early 2012

For more information: contact [David Stevens](#)

8. Contractor (Junior Level) Editorial Support and Graphical Design – UN-SPIDER Bonn Office

UN-SPIDER is looking for a junior-level Contractor to support the final compilation, graphical design and publication of the next two UN-SPIDER Newsletters and the preparation and finalisation of a new UN-SPIDER Programme brochure. This is a temporary assignment due to the current leave of the staff previously assigned to the task. If you are interested please request additional info using the e-mail below. Deadline 30 November 2011.

For further information >> contact un-spider@unoosa.org



Community News

9. International Charter: Space and Major Disasters

With nine activations October was a very busy month for the International Charter. Help was provided in a variety of disaster types with floods making up the largest share. The first activation was for the flood in el-Bayadh, Algeria as reported above and the last for floods in Accra, Ghana at the request from OCHA.

For further information >> [International Charter: Space and Major Disasters](#)

10.Sentinel Asia

Sentinel Asia assisted in three floods this month by providing satellite imagery for change detection. First support was provided for floods in Cambodia. The second activation was also due to flooding in the Mekong River but this time to support Vietnam. Finally Sentinel Asia also offered imagery for the flash floods in Myanmar which caused massive damages to 2200 houses and a death toll of 132.

For further information >> [Sentinel Asia](#)

11.How space technology aids flood response

Space technology has become a critical tool in helping protect people from disasters in countries such as Thailand, Cambodia, Laos and Vietnam, where more than 6.5 million have been affected by recent flooding and at least 500 have died. The images the satellites snap and transmit back to Earth are analyzed to pinpoint and predict flooding - information that can be used to direct resources and issue evacuation orders. In the event of a natural or man-made disaster, countries that lack sophisticated satellite capability can activate the International Charter for example, which gives them access to national and commercial satellite products free of charge. Since the Charter was established in 2001, it has been activated most often for floods – a total of 136 times.

For further information >> [IRIN – humanitarian news and analysis](#)

12.Satellite images reveal extent of Rena oil leak

Satellite images captured by DLR, the German Aerospace Centre, using the TerraSAR satellite show the likely spread of oil from the cargo ship Rena, which by then still remained stuck on the Astrolabe Reef off the coast of Tauranga. The ship has spilled more than 350 tonnes of oil since it struck the reef on 5 October 2011 and was expected to leak more due to the predicted rough weather. The satellite image was provided to Maritime New Zealand by DLR after it was requested by Venture Southland, which has been advocating for receivers of such images to be based at Awarua.

For further information >> [The Southland Times](#)

13.A Look Back at a Decade of Fires – History of space-based fire-monitoring

For more than a decade, instruments on Terra and Aqua, two of NASA's flagship Earth-observing satellites, have scanned the surface of our planet for fires four times a day. The instruments, both Moderate Resolution Imaging Spectroradiometers (MODIS), have revolutionized what scientists know about fires' role in land cover change, ecosystem processes, and the global carbon cycle by allowing researchers to map the characteristics and global distribution of fires with remarkable detail. The two instruments have detected more than 40 million actively burning fires and observed nearly 10 billion acres of charred land during tens of thousands of orbits. NASA takes an in-depth-look into the history of satellite-based fire-monitoring including imagery and videos.

For further information >> [NASA](#)



14. Thailand: Satellite Data Centre for disaster management

The Geo-Informatics and Space Technology Development Agency (GISTDA) and the Ministry of Science and Technology (MOST) have teamed up to establish a Geo-Informatics Operation System and Satellite Data Centre as a response to the problems posed by Thailand's worst flooding in decades. The data centre will make use of modern Geo-Informatics technology in order for concerned government authorities to make well-informed decisions during times of natural calamities. The data centre will make use of high resolution satellite imagery such as RADARSAT, which has the capability to penetrate clouds and haze, and optical satellite data sensors such as THEOS, IKONOS, Quickbird, WorldView, and Geoeye, which will be used to evaluate the damaged agricultural and household areas.

For further information >> [futureGOV Asia Pacific](#)

15. Satellites help combat desertification and monitor degrading lands

In the context of the 10th Conference of the Parties to the UNCCD (UN Convention to Combat Desertification) ESA organised a side event on the monitoring and assessing of land degradation using satellite data. Remote Sensing from space is a powerful and cost-effective way of regularly monitoring the effect of programmes that combat desertification over large or hard-to-reach areas. The ESA-initiated DesertWatch project is developing a user-friendly information system based on Earth Observation technology to support national and local authorities in responding to the reporting obligations of the UNCCD in monitoring land degradation trends over time. In their findings presented at the conference, DesertWatch indicated that nearly half of the land in the south-eastern African country of Mozambique is degraded.

For further information >> [ESA](#)

16. Small but agile Proba-1 reaches 10 Years in Orbit

A good photographer needs agility. So it is with ESA microsatellite Proba-1, which turns in space to capture terrestrial targets. Celebrating its tenth birthday this week, Proba-1's unique images are used by hundreds of scientific teams worldwide. "Proba-1 remains the most agile and stable satellite platform in its range," explains Frank Preud'homme of QinetiQ Space Belgium, the company that built Proba-1 for ESA. The satellite's platform and payload work as one: spinning reaction wheels guided by a "star tracker" roll it up to 25° side to side and 55° along its path. This helps Proba-1 compensate for its 7.5 km/s speed, like a photographer panning to snap a moving target. More than 500 images have been delivered for the International Charter 'Space and Major Disasters' also.

For further information >> [ESA](#)

17. Climate researchers warn of data crisis

Climate scientists warn that critical gaps in climate data could open up after the current generation of Earth-observation satellites comes to the end of its life, with the next generation nowhere near ready to take over. The problem is exacerbated by the lack of an adequate replacement for a pair of Earth-observation satellites, the Orbiting Carbon Observatory and Glory, which failed on launch in the past two years. Earth-observation programmes will fail to provide the data continuity required for climate science unless they are more adequately managed and supported, Kevin Trenberth, a senior researcher at the US National Center for Atmospheric Sciences in Boulder, Colorado, told the World Climate Research Programme conference in Denver, Colorado, this week. "We cannot manage what we can't measure," he says.

For further information >> [Nature](#)



Upcoming UN-SPIDER Outreach Activities

Information on upcoming UN-SPIDER events as well as other relevant meetings can be obtained from the “Events Section” of the UN-SPIDER Knowledge Portal:

www.un-spider.org/events

Upcoming UN-SPIDER events

Second UN-SPIDER International Expert Meeting: Crowdsourcing Mapping for Preparedness and Emergency Response, Geneva, 16 November 2011

In July 2011 the UN-SPIDER Programme successfully conducted the First International Expert Meeting on “Crowdsourcing Mapping for Preparedness and Emergency Response”. The second activity of this project will be this Expert Meeting to be held in Geneva, back-to-back with the [International Conference on Crisis Mapping \(ICCM 2011\)](#). There are no more spots available to attend but if you are interested in contributing to the discussion on this topic, please consider joining the [Google Group on Space-based Information for Crowdsourcing Mapping](#).

United Nations International Conference on Space-based Technologies for Disaster Risk Management “Best Practices for Risk Reduction and Rapid Response Mapping”, Beijing, 22 - 25 November 2011

One year after the successful opening of the UN-SPIDER office in Beijing in November 2010, the first “United Nations International Conference on Space-based Technologies for Disaster Risk Management” will be hosted at the new location. The conference will bring together 120 participants including disaster managers, policy makers, and providers of space technology solutions, tools and applications from Government, NGOs, Academia and the corporate sector. The focus of the conference will be to share and discuss “Best Practices for Risk Reduction and Rapid Response Mapping”. Please note that the registration is now closed.

For more information: [UN International Conference in Beijing](#)

UN-SPIDER International Expert Meeting – Ensuring Access to Existing Opportunities, Vienna, 8 – 9 February 2012

In February every year the Scientific and Technical Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space meet for a full two weeks in Vienna. We take advantage of this gathering of experts and policy makers to bring for their annual meeting the representatives of all UN-SPIDER Regional Support Offices. This year the 3rd Annual UN-SPIDER RSO Meeting will be held on 6- 7 February 2012. In 2011 we took advantage of the UN-SPIDER RSO meeting and organised a one-day meeting with all the existing mechanisms that make space-based information available for emergency response. In 2012 we will be organising a follow-up meeting to the 2011 meeting focusing on the opportunities available for the full disaster management cycle (early warning, preparedness, response, early recovery, prevention and mitigation). If your company, institution, agency, has an opportunity it needs to promote globally with the support of UN-SPIDER then do consider joining us for this 2-day meeting. This will be a closed meeting by invitation only.

For more information: contact [David Stevens](#)



Upcoming events supported by UN-SPIDER

“APSCO Training Course on Environment and Disaster Monitoring Through Space Technology” Dhaka, Bangladesh, 22 November to 1 December 2011

As a direct outcome of the Technical Advisory Mission (TAM) UN-SPIDER organised to Bangladesh earlier this year the Asia Pacific Space Cooperation Organisation (APSCO) is organising this training course with the support of the UN-SPIDER Programme.

For further information: [APSCO](#)

UN-SPIDER mailing list migration

We are pleased to announce the successful migration of the UN-SPIDER mailing list to our Bonn-based web server. If you already signed up on the UN-SPIDER Knowledge Portal, it is now easy for you to opt-in / opt-out to/from the mailing list. Just visit your profile on the Portal and find a new tab on the top called “Mailing Lists Subscriptions”.

Please find a detailed explanation here: <http://www.un-spider.org/howto-manage-subscriptions>

If you did not sign up yet on the UN-SPIDER Knowledge Portal, we would like to invite you to do so. Please visit <http://www.un-spider.org/user/register> and fill in your information. On the same form you can directly choose to receive messages from the UN-SPIDER mailing list. In any case, you can continue using the interface of the mailing list at <http://mail.un-spider.org>

When directing messages to the mailing list, please use unspider@mail.un-spider.org and be sure to add this address to the white list of your e-mail account(s). The old address unspider@ungiqw.org is phased out - messages to this e-mail address will be rejected. In case of any problems with the mailing list, please direct a message to mailman@mail.un-spider.org

*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 61/110 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.*