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Office for Outer Space Affairs
UN-SPIDER
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UN-SPIDER at a glance

New on the Knowledge Portal: Links and Resources

It is UN-SPIDER's mandate to enable all countries to access and use space-based information for disaster management and disaster risk reduction. The team has therefore launched a new section on the UN-SPIDER Knowledge Portal which contains a database on freely available, archived satellite imagery and derived products. The new section also hosts a database on available GIS and Remote Sensing software, both freely available and paid. Users can search both databases by relevant criteria, such as hazard, file type, resolution, cost, data format, etc. Since tools and data need to be complemented with methods to effectively use space-based information, "Links and Resources" also contains an overview of training opportunities, including academic training courses and web-based training courses.

Learn more: Knowledge Portal

Ban Ki-moon visited UN Bonn Campus

The Secretary General of the United Nations, Mr. Ban Ki-moon, visited the UN premises in Bonn, Germany, on 31 January 2014. The Secretary General met with high-level representatives of Bonn-based UN agencies, including the Directors of UNFCCC, UNCCD, UNV and the Head of the UN-SPIDER Bonn Office, and addressed the Bonn-based UN staff in a town hall meeting. He particularly highlighted three topics that are of high relevance to the organisations in Bonn, namely the achievement of the Millennium Development Goals by 2015, the on-going process concerning the elaboration of the Sustainable Development Goals, and the on-going process to reach a new global climate change agreement.

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News from our Regional Support Offices

Regional Support Offices elaborate Recommended Practices

UN-SPIDER's network of Regional Support Offices is currently developing recommended practices on the use of space-based information for disaster risk management and emergency response. The practices deal with a variety of topics such as droughts, floods, agricultural monitoring or land degradation. They include detailed information on the data and methodologies used as well as step-by-step instructions. Six practices have already been submitted by Regional Support Offices with others to follow. These practices will be discussed at the upcoming 5th UN-SPIDER RSO-Meeting on 13 and 14 February 2014 in Vienna, Austria, and will be disseminated through the UN-SPIDER Knowledge Portal once finalized.

Read more: Knowledge Portal

CATHALAC: Support to flood-stricken Eastern Caribbean islands

Between 24 and 25 December 2013, the eastern Caribbean islands of Dominica, Saint Lucia and Saint Vincent and the Grenadines were affected by torrential rain which triggered massive flooding and local landslides. In response, CATHALAC's Division of Applied Research and Development prepared an analysis of the events triggering the disaster. The analysis is based on satellite-derived estimates of rainfall, principally from NOAA's Satellite and Information Service (NESDIS), and climatology data from the WorldClim 1.4 database. The results of the analysis showed that a substantial quantity of rain fell over the eastern Caribbean in the 2-day period. It showed that for some areas, the amount of precipitation was over 1000 % of the average.

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Russia: New space monitoring station for emergency prevention and prediction

In January 2014, the Russian Ministry of Emergency Situations (EMERCOM), host to one of UN-SPIDER's Regional Support Offices, announced that it will set up a new space monitoring station for prevention and prediction of emergency situations in the Urals. The station will be established in the new Emergency Center in Sverdlovsk and will cover the northern part of the Arctic Zone, the Urals and Volga Region. With this new station, 95 percent of the country will be covered by such monitoring systems.

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IGAC: New Satellite image processing system

The UN-SPIDER Regional Support Office in Colombia, Instituto Geografico Agustin Codazzi (IGAC), has enhanced its capacities to create accurate maps and orthorectified baselines by acquiring a GeoImaging Accelerator (GXL) satellite and aerial processing system. "The speed, accuracy, and multi-sensor support of the system were determining factors in selecting PCI's GXL for our projects," said Jaime Duarte, Assistant Director of Cartography and Mapping at IGAC. "Creating mosaics of over 1,000,000 km2 is an enormous task that requires exceptional speed and automation."

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ADRC: Following up on DRR policy peer review project

The Asian Disaster Reduction Center (ADRC) followed up on its disaster risk reduction Policy Peer Review project from 2009. ADRC organized a workshop in Male, Maldives, where the Center presented findings from institutional surveys conducted prior to the workshop, related to disaster risk reduction. Furthermore, experts from Myanmar introduced to the participants the country's experience with reducing tsunami risk. ADRC presented good practices regarding improving Internally Displaced Population management. The main goal of the initial peer review project was to support mutual learning processes among Member States.

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ICIMOD: Collaboration project for geospatial applications

The UN-SPIDER Regional Support Office in the Himalayan Region, ICIMOD, reached an agreement with the Asian Institute of Technology and Management to mainstream the development of geospatial applications. The main goal of this collaboration is to share relevant information and strengthen efforts to create more effective tools and applications for a National Geospatial Platform. Part of the project includes organizing several training and workshop events.

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Russia: Towards a space threat protection system

The Russian Ministry of Emergency Situations, a Regional Support Office of UN-SPIDER, and American scientists will consider cooperation in creating a system protecting people and social facilities against threats from outer space, such as near-earth objects. After the meteorite explosion over Russia last year the risk of these threats had became more obvious. A five-year road map of collaboration efforts between the Russian Ministry of Emergency Situations, SCO, APEC, ICDO, EU and G8 has already been established.

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News from our Community

World Economic Forum publishes Global Risks Report 2014

The World Economic Forum released its Global Risks Report 2014. The publication highlights the global risks that are interconnected and would have a systematic global impact. The study concentrates on the evolution and interdependence of risks as basics for better global risks management. Decision makers should be able to effectively mitigate the impacts of risks, which without the right assessment might cause devastation on many levels – human, social, economic and political. Climate change features among the five most likely and most impactful risks in the report. Water crises and extreme weather events such as floods, storms, or fires have been identified by the World Economic Forum community as two of the top 10 global risks.

Read more: Knowledge Portal

Gaofen-1: Chinese HD Satellite officially put in service

China's high definition Earth Observation satellite Gaofen-1 has been officially put in service on Monday, 30 December 2013, according to the Chinese State Administration of Science, Technology and Industry for National Defence (SASTIND).

The satellite will help with geographic and resources surveys, environment and climate change monitoring, precision agriculture, disaster relief and city planning. Gaofen-1 is the first of five or six Chinese satellites to be launched for high-definition Earth observation before 2016.

Read more: Knowledge Portal

UAE: First Arab-made satellite to be launched in 2017

In the last days of 2013, the United Arab Emirate's Vice President and Prime Minister, Sheikh Mohammed bin Rashid Al Maktoum, announced that the UAE will launch the first fully home-built and manufactured satellite in 2017. Khalifa Sat will be build under the responsibility of the Emirates Institution for Advanced Science and Technology (EIAST). EIAST has previously launched two satellites, DubaiSat 1 and DubaiSat 2, which marked national milestones as they were the first remote sensing satellites to be fully-owned by a UAE entity.

Read more: Knowledge Portal

Akademik Shokalskiy: Satellites helped trapped vessel in the Antarctic

High-resolution radar satellite data provided by the German Aerospace Center (DLR) helped to assess the conditions at the location and develop a rescue plan for the Russian research vessel Akademik Shokalskiy, which was trapped from 25 December 2013 to 5 January 2014 in thick Antarctic ice. The German researchers used up-to-date, high-resolution images from the Earth Observation satellite TerraSAR-X, which they analyzed in near-real time and provided to the rescue center. With satellite-based information about the thickness and properties of the ice surrounding the vessel, rescuers were able to establish a way to the trapped Akademik Shokalskiy.

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International Charter activated four times in January

The International Charter: Space and Major Disasters was activated four times in January 2014 to support disaster response efforts. On 1 January for the Tropical Cyclone Bejisa on Réunion islands; on 6 January for heavy floods in the United Kingdom; on 7 January for the eruption of Mount Sinabung in Indonesia and on 21 January in Huancavelica, Peru for torrential rain and subsequent land- and mudslides. The resulting satellite image products are freely available on the International Charter's website.

Read more: International Charter

ESA: Sentinel 1a to be launched in April

ESA is preparing to launch its Sentinel-1a satellite in April 2014. The satellite is the first of six planned Sentinel missions, which will carry a range of technologies, such as radar and multi-spectral imaging instruments for land, ocean and atmospheric monitoring. The first Sentinel will provide all-weather day-and-night imagery and will be also used to strengthen emergency response services. The second mission will follow in 2015. It will carry technology to observe mostly vegetation, soil and water cover. Sentinels 3, 4 and 5 will provide data on temperature and topography.

Read more: Knowledge Portal

NASA prepares for a big year in Earth Science

NASA is preparing to launch five Earth Science missions in 2014 to enhance its Earth observation activities. Three of these are new satellite missions which will provide information on natural hazards and climate change preparedness. The other two launches will carry instruments to the International Space Station, to be used by the global community. The first satellite is a product of the collaborative work with the Japanese Aerospace Exploration Agency. The Global Precipitation Measurement (GPM) Core Observatory will deliver information on snow- and rainfall mainly, which will improve the weather forecasting, but also the knowledge of Earth's water resources. The second satellite will take off in July and will make precise measurements of the levels of carbon dioxide in the atmosphere. The third satellite is set to launch in November and will be mostly used for agricultural purposes. The instruments which will be sent to the ISS will measure ocean winds, clouds and aerosol, the small particles in the atmosphere.

Read more: Knowledge Portal

NASA maps global temperature anomalies in US and Europe

NASA satellite data shows the recent weather divergences in North America and Europe. At the beginning of 2014, the temperatures in the northern hemisphere showed how the atmosphere can produce two contrasting weather extremes at the same time. While in northern America the temperatures fell way below zero, most of Europe enjoyed temperatures of +10 degrees Celsius. The data acquired by the Moderate Resolution Imaging Spectroradiometer (MODIS) on NASA's satellite Terra shows how cold or warm it was in both regions in comparison to the last ten years.

Read more: Knowledge Portal

Brazil: Satellite measures record rain floods

NASA's tropical rainfall Measuring Mission (TRMM) satellite detected record rainfall in December 2013 in Brazil. Some cities received more than 400 percent above average monthly rainfall. These numbers are extreme but they go along with a pattern that satellite data had indicated in the last decade for Brazil during the southern hemisphere summer. The extreme weather this year took the lives of 45 people and some 70,000 were evacuated. The infrastructure damages are expected to reach about US$227 million.

Read more: Knowledge Portal

GlobTemperature project: One-stop shop for surface temperature data

The European Space Agency (ESA) has launched a new project to provide scientists with a one-stop shop for land, lake and ice temperature data - measured by satellites. The GlobTemperature project was launched under the Data User Element Programme and will merge surface temperature data from a variety of satellites into a common format which will be made available in a single online archive.

Read more: Knowledge Portal

Upcoming events

1-4 April 2014, Rabat, Morocco: 3rd International Conference on the Use of Space Technology for Water Management

The United Nations Office for Outer Space Affairs (OOSA), the Government of Morocco, European Space Agency (ESA) and the Prince Sultan bin Abdulaziz International Prize for Water (PSIPW) are jointly co-organizing the 3rd International Conference on the Use of Space Technology for Water Management to promote the application of space technology for the benefits of the developing countries. The Conference will be held in Rabat, Morocco, from 1 to 4 April 2014, and it will be hosted by the Royal Center for Remote Sensing (CRTS) on behalf of the Government of Morocco. The participants will discuss how space technology can contribute to better management of water resources, including combating desertification, ensuring access to safe drinking water and managing water-related emergencies in developing countries.

Read more: UNOOSA

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

This workshop is jointly organized by AHA Centre, LAPAN, UN-SPIDER and ESCAP with the contribution of UNOSAT. It aims at preparing a standard operating procedure (SOP) for the use of space based information during emergency response. The key objectives for the workshop are, among others, to identify requirements and criteria to respond to major disasters by taking effective advantage of international mechanisms that provide space-based information during emergencies and to strengthen preparedness for effective emergency response by identifying gaps, capacity building needs, database needs, financial needs, mapping procedures, or institutional coordination. A limited number of participants from the ASEAN member countries will be supported financially to participate in the workshop.

Read more: Knowledge Portal

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

The goal of the GEO-UA 2014 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 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

5-6 June 2014, Bonn, Germany: UN-SPIDER Expert Meeting on Space Technologies for Drought and Flood

Save the date: On 5 to 6 June 2014, UN-SPIDER and its partners will organize an Expert Meeting on Space Technologies for Drought and Flood in Bonn, Germany. More details on the meeting and information on how to apply will become available on the UN-SPIDER Knowledge Portal soon.

Read more: Knowledge Portal