



UNITED NATIONS  
Office for Outer Space Affairs

**ANNOUNCEMENT**  
**6<sup>TH</sup> Annual UN-SPIDER Conference in Beijing**

**United Nations International Conference on Space-based Technologies for  
Disaster Risk Reduction - "Understanding Disaster Risk"**

Organized by the  
**United Nations Office for Outer Space Affairs**  
and the  
**Ministry of Civil Affairs of the People's Republic of China**

**Venue: Beijing, China (Grand Gongda Jianguo Hotel)**  
**Dates: 19 to 21 September 2016**

The Office for Outer Space Affairs is pleased to announce the **"United Nations International Conference on Space-based Technologies for Disaster Risk Reduction – 'Understanding Disaster Risk'", from 19 to 21 September 2016.**

The conference is organised by the UN-SPIDER Beijing Office and follows five conferences held since 2011. Previous conferences covered the themes of "Best practices for risk reduction and rapid response mapping" in 2011, "Risk assessment in the context of global climate change" in 2012, "Disaster risk identification, assessment and monitoring" in 2013, "Multi-hazard disaster risk assessment" in 2014 and "A consolidating role in the implementation of the Sendai Framework on Disaster Risk Reduction 2015-2030" in 2015. These conferences offered a forum for disaster management communities and experts to strengthen their capabilities in using space-based information to identify, assess, monitor and respond to disaster risks and integrate space technology into long-term disaster risk management efforts.

***Rationale***

The Third United Nations World Conference for Disaster Risk Reduction ([www.wcdrr.org](http://www.wcdrr.org)) took place in March 2015 in Sendai, Japan. 187 States were officially represented in the conference and the "Sendai Framework for Disaster Risk Reduction 2015-2030" was adopted on March 18, 2015. Priority 1, "Understanding disaster risk" of the Sendai Framework states that *"policies and practices for disaster risk management should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Such knowledge can be leveraged for the purpose of pre-disaster risk assessment, for prevention and mitigation and for the development and implementation of appropriate preparedness and effective response to disasters."* Accordingly, UN-SPIDER aims at improving actions to reduce disaster risk through knowledge sharing and strengthening of institutions in the use of space technologies as its mandate is to enable developing countries to use all types of space-based information in the full cycle of disaster risk management. Recognizing the current challenges in the use of Earth observation technologies in understanding disaster risk, the Office for Outer Space Affairs and the Ministry of Civil Affairs of the People's Republic of China co-organise the International Conference on Space-based Technologies for Disaster Risk Reduction – "Understanding Disaster Risk".

The conference aims to provide a platform to communicate various means to be adopted by the Member States and supporting international/regional organisations in understanding disaster risk, especially based on the use of space-based technologies. This may include tools, technologies as well as peripheral issues such as data sharing, spatial data infrastructure, institutional coordination, etc.



Recommended practices and experiences in this context will be shared by the panellists and discussed by all participants.

Thus, the conference will be one more step in that long-term effort of the Office for Outer Space Affairs and UN-SPIDER building on the commitments to the Sendai Framework and the global development agenda. The conference will also support the efforts of the Office for Outer Space Affairs as the office is preparing for its new initiative UNISPACE+50. In 2018, UNISPACE+50 event will mark the 50th anniversary of the First United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE). A series of events leading to UNISPACE+50 will address challenges to humanity and sustainable development, the protection of the space environment, and securing the long-term sustainability of outer space activities.

### UNISPACE+50

The year 2018 will mark the 50th anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space - UNISPACE+50. The Committee on the Peaceful Uses of Outer Space (COPUOS) at its fifty-eighth session in June 2015 endorsed the plan of work for UNISPACE+50. UNISPACE+50 will review the contributions that the three UNISPACE conferences (UNISPACE I, held in 1968, UNISPACE II, held in 1982, and UNISPACE III, held in 1999) have made to global space governance. In line with the 2030 Agenda for Development and sustainable development goals, UNISPACE+50 aims to chart the future role of COPUOS, its subsidiary bodies and the United Nations Office of Outer Space Affairs, at a time of an evolving and more complex space agenda when more participants, both governmental and non-governmental, are increasingly involved in ventures to explore space and carry out space activities. The activities of the United Nations Programme on Space Applications are an integral part of the UNISPACE+50 thematic cycle and are aimed at contributing to outputs under the four pillars space economy, space society, space accessibility and space diplomacy. For additional information on UNISPACE+50 see <http://www.unoosa.org/oosa/en/ourwork/hlf/hlf.html>.

### ***Expected Outcomes***

The conference will build upon the outcomes of 5<sup>th</sup> UN-SPIDER Conference (2015) in Beijing that are documented in the form of the paper submitted to the Scientific and Technical Subcommittee of the Committee for Peaceful Uses of Outer Space (COPUOS) in 2016. It elaborates the role of Earth observation in the implementation of the Sendai Framework on Disaster Risk Reduction 2015-2030 ([http://www.unoosa.org/res/oosadoc/data/documents/2016/aac\\_105/aac\\_1051102\\_0\\_html/AC105\\_1102E.pdf](http://www.unoosa.org/res/oosadoc/data/documents/2016/aac_105/aac_1051102_0_html/AC105_1102E.pdf)). While this paper provides general guidelines and recommendations on the role of Earth observation in supporting the Sendai Framework, the current conference should provide the recommendations on the Priority 1 of the Sendai Framework – Understanding disaster risk. The conference will result in a sustained contribution of the Office for Outer Space Affairs, through UN-SPIDER programme, in supporting the Sendai Framework and provide thoughts on the role of Earth observation in monitoring indicators against the global targets of the Sendai Framework, which is a current concern of countries. In a nutshell, the conference is expected to continue providing guidelines, technical knowledge and recommendations to Member States to implement the Sendai Framework. Besides this, the conference will also discuss a strategic work plan and its implementation, building on UN-SPIDER 10 years' achievements. The outcome document of the conference will be presented in subcommittees of COPUOS and feed into UNISPACE+50 initiative. It will also provide valuable inputs to the Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) planned from 2-5 November 2016 in New Delhi, India.



**Conference sessions:**

In this context, the conference will cover the following topics:

**Session 1: Building on UN-SPIDER 10 years' achievements**

2016 marks the 10th anniversary of UN-SPIDER which will be celebrated by the 10th Anniversary Conference in Vienna, Austria in June 2016. The conference will review on-going collaborations and to discuss possible activities for the following years through assessing outcomes and efforts of the past ten years. This effort will contribute to UNSPACE+50 initiative of the Office for Outer Space Affairs, particularly in helping to the definition of the thematic priorities of the initiative on “Strengthened space cooperation for global health”, “International cooperation towards low-emission and resilient societies” and “Capacity-building for the 21st Century”<sup>1</sup>.

This session will built upon outcomes of UN-SPIDER 10<sup>th</sup> Anniversary Conference and contribute towards preparations of UNISPACE+50 by addressing the issues related to building disaster resilient society. The session will summarize experiences and good practices developed by various countries/organisation, such as building space infrastructure (including geospatial systems/tools) for managing disaster risks and implementing the Sendai Framework. The session will also discuss the services and opportunities available through a wide range of the activities conducted by UN-SPIDER and partner organisations through technical advisory support, capacity building programmes, outreach programmes, support during disaster related emergencies and knowledge management.

**Session 2: Risk assessment and mapping using Earth Observation data**

Building resilient societies through better coordination and forging of global partnerships is one of the key challenges in the 21st century and an integral part of meeting the commitments, set by the three key UN global summits in 2015, the Sendai Framework for Disaster Risk reduction 2015-2030, the 2030 Agenda for Sustainable Development and the Climate Summit (COP 21). As development accelerates, many countries are increasingly prone to disaster risk. Risk mapping is the output of risk assessment which provides visual information needed by disaster managers and the community.

This session will discuss the applied research and development on the approaches, models, methodologies, tools, standards, service platforms, operational projects related to risk assessment and mapping. The issues related to the risk assessment and mapping, especially the experiences on how to improve the effectiveness of maps and efficiency of the mapping service, will also be discussed during this session. The session will address the role of the space-based information, advances in remote sensing data, information products, and software/tools used for risk assessment, data visualization and data dissemination. The session will help understand how the applications can indeed reduce the vulnerability of populations and infrastructure, which is the spirit of “International cooperation towards low-emission and resilient societies” of UNISPACE+50.

**Session 3: Access to data and information for risk assessment**

The Sendai Framework recognizes the value of space-based technology and Earth observation for disaster management and emergency response because they pave the way for building more resilient societies through effective disaster risk management. It includes specific references to the importance of using information gathered by space-based platforms for the purpose of pre-disaster risk assessment to contribute to the prevention, mitigation and appropriate preparedness for planning effective response to disasters. Risk information plays a critical role in disaster risk reduction. If adequate risk information is available beforehand, the disaster managers could develop better preparedness and disaster response plan to save lives and damage to the property.

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<sup>1</sup> <http://www.unoosa.org/oosa/en/ourwork/unispaceplus50/index.html>



The session will explore various types of space-based and geospatial information needed for risk assessment, access to such information, information available in public domain, ways to share information etc. The session will provide exposure to the range of satellite data available and its utility to generate products needed for risk assessment. As such, the session will contribute to “Capacity-building for the 21st Century” of UNISPACE+50 which aims, amongst other goals, at universal access to information.

#### **Session 4: National Spatial data infrastructure and data framework to support disaster management**

Though the technical advisory services offered by UN-SPIDER, it was noted that most of the national disaster management agencies seek to create a framework for sharing and assembling geospatial information to produce maps for use by the decision makers and responders, to support of their effort to reduce risk and the loss of life, property and economic prosperity. Such a system requires the standardized sharing of geospatial data across organizational boundaries so that the best possible information is presented to the decision makers in action considering the notion that good data result in good decisions and bad data result in bad decisions. The major difficulty in effective utilization of geospatial information is not because of lack of technology and technical capacity, but it is the lack of the standards in creating, maintaining and sharing these datasets.

This session will focus on latest trends and development in establishing national spatial data infrastructure, new methods, data framework and ways of integrating data available with multiple stakeholders. The session will highlight importance of data standards and data framework needed for any national disaster management agency and discuss the ways to get these standards in place.

#### **Session 5: Networking and engagement with the UN-SPIDER network**

With the support of member countries, Regional Support Offices and other partners, UN-SPIDER has built a wide network of governmental agencies, international/regional agencies, NGOs, scientific societies, private companies etc. As a part of technical advisory support service of the UN-SPIDER, several technical advisory missions, capacity building programmes and outreach activities have been carried out in Asia, the Pacific, Africa and Latin America.

This session will provide an insight into the activities supported by the UN-SPIDER in partnership with national disaster management agencies and discuss the ways and means of making these activities more effective and relevant to the needs of the member states. This session will aim at encouraging the engagement of Member States and partner organisations with the UN-SPIDER Programme.

#### ***Breakout sessions***

##### **Breakout session 1: Monitoring indicators against the global targets of the Sendai Framework for Disaster Risk Reduction 2015-30**

United Nations International Strategy for Disaster Reduction (UNISDR) and member countries are engaged in developing indicators to monitor global targets of the Sendai Framework. This working group will focus on contribution of Space technologies in this effort.

##### **Breakout session 2: Procedural guidelines for sharing space-based information during emergency response (reference to Priority 4 of the Sendai Framework for DRR)**

The working group will build on the outcomes of the series of workshop conducted for the ASEAN region to develop the procedural guidelines for sharing space-based information during emergency response. The procedural guidelines are now ready and there is need to discuss the lessons learnt from this initiative. This working group intends to provide guidance on how to replicate these guidelines for other regions and advance this effort for specific disasters by addressing issues such as prerequisite of data, data access, skills and capacity, emergency mapping products and product



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dissemination. Reference will be made to the outputs of the International Working Group on Standards for Emergency Mapping (IWG-SEM), currently chaired by UNOOSA (<http://un-spider.org/network/iwg-sem>).

### **Breakout session 3: Crowdsourcing for risk assessment and emergency response**

The objectives of this working group is to provide participants and stakeholders with successful cases where power of community was leveraged through crowdsourced mapping; address major issues for making community based tools more effective; and provide guidelines on how to involve communities to identify risks during normal situations, provide early warning and help in building resilience. This working group will discuss the advanced tools, technologies, methods and present case studies on the use of crowdsourcing mapping.

### ***Target Audience for the conference***

Disaster managers, policy makers, providers of space technology solutions/tools/applications from governments, academia, research, NGO and corporate sector.

**Number of expected participants:** 100

### **How to apply and application deadline**

Please register on line through following web link

<https://register.unoosa.org/civCRM/event/info?reset=1&id=68>

Please note that **the final deadline for registration is 10 July 2016**. Online registration is mandatory for all participants.

### ***Financial Support to the participants***

Due to funding constraints, the organisers will be able to offer support to a limited number of participants from Member States and organisations engaged in developing or intend to develop a partnership with the UN-SPIDER programme. The support will defray the cost of travel (round-trip ticket – most economic fare – between the airport of international departure in their country of residence and Beijing) and/or room and board expenses during the duration of the event.

### ***Point of Contact***

Ms. Yuan GAO ([yuan.gao@unoosa.org](mailto:yuan.gao@unoosa.org), Tel: +86 10 5281 1371)

If necessary, cc your mails to Mr. Shirish Ravan ([shirish.ravan@unoosa.org](mailto:shirish.ravan@unoosa.org))

### ***Training programme*** (22 to 27 September 2016)

The training programme “Space based technologies for flood and drought monitoring and risk assessment” will be organised for 25 participants of the conference with the support of the Asia Pacific Space Cooperation Organisation, National Disaster Reduction Centre of China and Beihang University. The participants interested in attending this training programme may please convey their interest to Ms. Jiayi SUN through a separate mail (Email: [sunjyast503@163.com](mailto:sunjyast503@163.com)).