UNITED NATIONS
Office for Outer Space Affairs

ANNOUNCEMENT
7TH Annual UN-SPIDER Conference in Beijing

United Nations International Conference on Space-based Technologies for Disaster Risk Reduction - "Building Resilience through Integrated Applications"

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: 23 to 25 October 2017

1. Introduction and Background

The Office for Outer Space Affairs is pleased to announce the **"United Nations International Conference on Space-based Technologies for Disaster Risk Reduction - "Building Resilience through Integrated Applications"**, to be held from 23 to 25 October 2017.

The conference is organised by the United Nations Office for Outer Space Affairs (UNOOSA) and the Ministry of Civil Affairs of the People's Republic of China and implemented under the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER), through its Beijing Office. It follows six 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, "A consolidating role in the implementation of the Sendai Framework on Disaster Risk Reduction 2015-2030" in 2015 and "Understanding disaster risks" in 2016. 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.

The workshop is prepared in collaboration with the China National Space Administration, the Asia Pacific Space Cooperation Organisation, the Regional Centre for Space Science and Technology Education for Asia and the Pacific, and the World Bank.

2. Workshop Objectives

Member States of the United Nations are engaged with and acting upon three important global frameworks namely, the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction 2015-2030 and the Paris Agreement stemming from the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change Conference of the Parties (COP21). To support Member States in these endeavours, the United Nations Office for Outer Space Affairs is preparing for UNISPACE+50, which will mark in 2018 the 50th anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer held in 1968 in Vienna.

In preparation for UNISPACE+50, the Committee on the Peaceful Uses of Outer Space (COPUOS) endorsed seven thematic priorities, of which thematic priority 6 focuses on 'International cooperation towards low-emission and resilient societies'. Thematic priority 6 is closely linked to UN-SPIDER, through which UNOOSA develops programmes to address the limited access developing countries have to specialized technologies that can be essential in the management of disasters and reducing

disaster risks, and promotes coordinated efforts within the United Nations, in order to accomplish the common disaster risk reduction (DRR), humanitarian and climate change goals.

One of the objectives of thematic priority 6 is to **improve integrated space applications approaches and the interoperability of space-based systems and ground/in situ systems**. The space-based solutions must be integrated in decision-making for planning or response to change. This integration must be supported by outreach activities increasing the awareness of decision makers on their benefits.

The conference aims to provide a platform to share experience and gather new ideas on integrating space applications in supporting efforts of disaster risk reduction. This may include tools, technologies as well as peripheral issues such as data sharing, spatial data infrastructure, institutional coordination, needed for achieving the targets of the Sendai Framework. Recommended practices and experiences in this context will be shared by the panellists and discussed by all participants. Thus, the conference will contribute to efforts of Member States and UN-SPIDER to implement the Sendai Framework and the 2030 Agenda for Sustainable Development.

The overall aim is to strengthen the role of space technologies to assist Member States in implementing the Sendai Framework which can be achieved by deeper engagement with the Member States through technical advisory support and other services aiming at institutional strengthening.

2018: UNISPACE+50 years of space cooperation and development

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 Sustainable 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 Office 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. More detailed information is available at the website of the Office for Outer Space Affairs:
http://www.unoosa.org/oosa/en/ourwork/unispaceplus50/index.html

3. Expected outcomes

The conference will build upon the outcomes of the 5th and 6th UN-SPIDER Conferences (2015 and 2016 respectively) in Beijing that are documented in the form of two parliamentary documents 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/oosa/oosadoc/data/documents/2016/aac.105/aac.1051102_0.html

http://www.unoosa.org/oosa/oosadoc/data/documents/2016/aac.105/aac.1051130_0.html

The conference is expected to provide thoughts, ideas and help formulate programmes to achieve the following:

a. Combined and complementary use of space-based technologies and in-situ information in disaster risk reduction applications; to increase the understanding of disaster risk and its drivers;

b. Improved partnerships in the efforts to integrate use of space technologies in single and multi-hazard early warning systems, including those focusing on climate-influenced disasters such as floods and droughts;

c. Development of integrated applications of Earth observation, global navigation satellite system and telecommunication constellations for disaster risk reduction and climate change monitoring and mitigation/adaptation, promoting integrated development where relevant; and

d. Contribution in preparation of UNISPACE+50 which will contribute to the global frameworks namely, the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction 2015-2030 and the Paris Agreement stemming from COP21.

The recommendations of the conference will be compiled in the form of the report which may be made available to the Scientific and Technical Subcommittee of COPUOS in 2018. These recommendations will also feed into the flagship event on the thematic priority 6: United Nations/Germany International Conference on International Cooperation Towards Low-Emission and Resilient Societies, 22-24 November 2017, Bonn, Germany.

4. Preliminary Program of the Conference

Day 1

Inauguration

Key note Session

This session will offer the views of the invited speakers.

Session 1: Policy and institutional arrangements for integrating 'space' in DRR decision making

While a growing number of disaster management organisations are using Earth observation images and geographic information systems (GIS) for disaster management, the challenge still lies in supporting these efforts with relevant policy and institutional partnerships that should integrate DRR in decision making. At national level, disaster management agencies work with multiple stakeholders to evaluate DRR information needs, get access to Earth observation and in-situ data, integrate data to derive products and disseminate such information. Similarly, partnerships are needed at regional and international levels since DRR issues go beyond geo-socio-political boundaries. It is important to ensure that information products are utilized in decision-making in combination with in-situ data. The session will focus on policy and institutional level integration for DRR decision-making.

Breakout groups

Three breakout groups will be created:

- Policy integration and institutional arrangements at national level for leveraging potential of 'space' in DRR decision making;
- 'Space' in regional and international institutions and frameworks contributing to DRR decision making; and
- Impact of UN-SPIDER Technical Advisory Missions on policy and institutions in promoting space in DRR.

Day 2

Session 2: Integration of space and in-situ data for disaster risk reduction

The elements of disaster risk such as hazard, exposure and vulnerability are assessed based on space and other data of heterogeneous nature. Such data is available from multiple sources and scattered at different locations. Along with the advancement in space technologies, the types and quantity of data gathered is increasing dramatically. In addition, space based information alone is not enough for disaster risk reduction. Integrating space data with in-situ data is an effective way for better utilization of the data for supporting risk reduction decision making. In addition, data acquisition from aerial platforms has also improved in terms of availability and affordability. The recent trends and approaches on data integration will be discussed in this session for promoting the data collection, processing, management and dissemination taking into account user needs.

Breakout groups

Three breakout groups will be created:

- Trends in access and availability of space and in-situ data
- Best practices in data integration for disaster risk reduction at national level
- Initiatives on data integration for disaster risk reduction at international level

Session 3: Technology integration for disaster risk assessment and emergency response

Risk assessment is one of the basic approaches to understanding risk. Various methodologies, models, tools have been developed for the risk assessment addressing single or multiple disasters. These methodologies are based on the characters of hazard and exposure at temporal and spatial scale and often do not use Earth observation data effectively. Developing uniform methods for risk assessment based on Earth observation data either at local, national, regional or global levels is a challenge, especially due to availability of data of various types (multispectral, hyperspectral, microwave, etc.) and at various resolutions. The session will address technology integration for risk assessment for promoting solution-driven innovations and identifying the gaps and challenges.

Breakout groups

Three breakout groups will be created:

- Advances in risk assessment methods
- Integrated risk assessment tools/systems
- Integrated emergency response tools/systems

Day 3

Session 4: Integrated applications of Earth observation, global navigation satellite system and telecommunication constellations for disaster risk reduction and climate change related extreme hazards

The session will focus on integrated applications of space technologies (Earth observation, navigation and telecommunication) that are needed to address the broader issues related to disaster risk reduction and climate change related extreme hazards. The experiences in dealing with climate variability and extreme events, irrespective of attribution to climate change, hold valuable lessons for reducing vulnerability and enhancing resilience for future climate-related adverse impacts. The Sendai Framework refers to importance of dealing with climate-related risks in the disaster risk reduction efforts. There is increasing focus on building resilience into investments and development. The integrated applications of various space technologies can address the gaps in knowledge to address these issues and its implications for sustainable development.

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

With the support of Member States, Regional Support Offices and other partners, UN-SPIDER has built a wide network of governmental agencies, international/regional agencies, NGOs, scientific societies and private companies. As a part of technical advisory support services of 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 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 Member States. This session will aim at encouraging the engagement of Member States and partner organisations with UN-SPIDER.

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 online through following link
https://register.unoosa.org/civicrm/event/info?reset=1&id=88

Please note that **the final deadline for registration is 28 August 2017**. 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 UN-SPIDER. 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

Technical matter: Ms. Jiayi SUN (jiayi.sun@unoosa.org, Tel: +86 10 5281 1373)
Logistic matter: Ms. Gao YUAN (gao.yuan@unoosa.org, Tel: +86 10 5281 1371)
If necessary, cc your mails to Mr. Shirish Ravan (shirish.ravan@unoosa.org)

Training programme (25 to 31 October 2017)

The training programme **"International Training Course on Integration of Multisource Earth Observation Data for Disaster Damage Assessment"** will be organised for 25 participants of the conference with the support of the Asia Pacific Space Cooperation Organisation, the National Disaster Reduction Centre of China and the Beihang University. The participants interested in attending this training programme may please convey their interest to Ms. Tong TANG through a separate mail (Email: tong.tang@unoosa.org).