Global Platform for Disaster Reduction
3rd Session, Geneva, Switzerland

Meeting of the SPIDER Global Thematic Partnership
"Integrated Use of Space Technologies for Disaster-Risk Reduction"

1. Introduction

Space-based applications have been used for a variety of purposes including monitoring the dynamics of tectonic plates associated with seismic hazard; tracking hurricanes and tropical storms; monitoring volcanic activity, coastal erosion, the exposition of communities to these and other hazards; and to assess impacts caused by disasters of various kinds. In the context of the Hyogo Framework, space-based applications find their way in two Key Priorities for Action:

- **Key Priority for Action 2** which targets monitoring of risks and enhancing early warning. In this context space-based applications contribute to the assessment of risks of various types, to detect changes in vulnerability and exposition, and in early warning systems particularly targeting meteorological and volcanic activity.
- **Key Priority for Action 5** which focuses on strengthening disaster preparedness for effective response at all levels. In this case space-based applications include satellite telecommunications particularly when all conventional communication networks fail, tracking the exposition of vulnerable communities as a way to improve warning schemes and to assist in the identification of evacuation routes to safe areas.

How is the Session linked to the lead theme or one of the three main topics of the Global Platform 2011?

Investing today for a safer tomorrow implies a thorough knowledge of existing risks and how such risks are changing in the geospatial dimension, not only due to climate change, but also due to social, economic, institutional, and political factors. Space-based applications allow earth scientists to gather inputs necessary to track changes in hazards due to anthropogenic factors and decision makers to become aware of how societies are exposing themselves to such hazards. However, despite the fact that there are now many opportunities to make use of space-based information, agencies working on disaster-risk reduction do not yet recognize and take advantage of such opportunities.

The **SPIDER Global Thematic Partnership** has been established by UN-SPIDER to provide guidance to **National Platforms for Disaster Reduction** on the use of space-based information for all tasks related to disaster-risk management.

Space-based applications allow risk-assessment experts to track changes in the exposition of communities to hazards, thereby offering an excellent platform to monitor increases in risks in urban and rural areas. Such information is essential to assess the value of assets at risk and thereby contributes to the understanding of the economics of disaster-risk reduction.

Furthermore and taking advantage of the unique view that space-based applications provide in the context of climate change, the proposed session will be used to discuss strategies to enhance the use of space-based information in adaptation to climate change.

Main objectives of these discussions

To bridge the gap between the space and disaster-risk reduction communities within the umbrella of the Global Platform for Disaster-Risk Reduction as a way to enhance the use of space-based information for disaster risk management and adaptation to climate change.

To bring together Members of the SPIDER Global Thematic Partnership and representatives of National Platforms for Disaster Reduction to discuss strategies to enhance the links between the Thematic Partnership and the National Platforms.

To showcase examples of space applications in the context of disaster-risk reduction, adaptation to climate change, and recovery.

Who is expected to participate in this session?

The session will be co-organized by UN-SPIDER, international agencies involved in disaster reduction activities, Space Agencies, International Organizations and institutions from the private sector focusing on remote sensing. The session will provide an overview regarding the use of space-based information for disaster-risk reduction. The session will also include a discussion segment, where representatives from National Platforms and other organizations attending the session will discuss how best to achieve the outcomes proposed by the SPIDER Global Thematic Partnership

What kind of concrete outcome is expected?

- The identification of strategies to guide efforts to be conducted by the SPIDER Global Thematic Partnership proposed by representatives of National Platforms for Disaster Reduction present participating the session, as well as representatives of a variety of agencies.
- Enhanced awareness on the usefulness of space-based applications in disaster-risk reduction and adaptation to climate change.
- Improved links between representatives of the space community and the disaster-risk management community.

2. Status of Progress

What is the current status and progress in this topic?

The SPIDER Global Thematic Partnership was launched in 2009 with the German Aerospace Centre DLR, ADRC, GEO, and ESCAP. Since then efforts have been conducted by UN-SPIDER through regional and international workshops in various continents of the world to discuss how to engage space-based applications in disaster-risk reduction activities worldwide through such a Partnership.

In the American Hemisphere, where the Regional Platform Sessions have offered UN-SPIDER opportunities to host side events to discuss the role of such a thematic partnership, space agencies have presented examples on the use of space-based information for disaster-risk management, and geo-viewers to display this and other information as a means to improve situational awareness.

What are the critical factors and lessons learned related to this topic?

Space-based applications have found their way into emergency response activities through international and regional mechanisms such as the *SpaceAid Framework* operated by UN-SPIDER; the *International Charter: Space and Majour Disasters* which is operated by Space Agencies from a variety of countries; *Sentinel Asia* which is operated by Space Agencies from Asian countries; *SAFER* which is operated by a variety of agencies from Europe; and the *ITU Emergency Telecommunications Programme*.

However, despite the successes in the use of space-based information in disaster response and recovery, such information is not yet fully used in the context of risk management. The SPIDER Global Thematic Partnership wishes thus to use the 3rd Session of the Global Platform to continue its awareness campaign to promote the use of such information by National Platforms for Disaster Reduction.

In addition, and taking into consideration the need to contribute to local efforts targeting disaster-risk reduction, it is extremely important to identify and discuss strategies to ensure that space-based information reaches local communities and is used for such efforts targeting disaster-risk reduction.

3. Key points for discussion

Discussion points and/ or recommendations to trigger debate by the panel members and the audience:

- The role of National Platforms in promoting the use of all types of information, including space-based information, to increase the resilience of communities at risk.
- Enhancing access to and use of space-based information in disaster-risk management, early warning and recovery efforts.
- The use of space-based information as a strategy to enhance synergies between adaptation to climate change and disaster-risk reduction.

What are the outstanding issues and challenges to advance the topic up?

While space-based information is recognized as useful by technical staff in government institutions which have a role to play in disaster-risk reduction, decision makers are not yet fully aware of the potential that space-based information offers. The Global Platform offers an excellent opportunity to reach such decision makers and to make them aware of the usefulness of such type of applications and information.

What should the Platform consider as crucial activities and priorities for the next two years?

The Platform should promote synergies at all levels (international, regional, national, and local) on the use of all types of information, including space-based information, to assess risks and to identify measures to control and reduce such risks.

4. Additional information (if applicable)

What tools and guidance notes are available for other partners related to the topic?

Information on the **UN-SPIDER Programme**, its activities, networks, and related information can be found in the UN-SPIDER Knowledge Portal: www.un-spider.org.

Information on the **SPIDER Global Thematic Partnership** can be found in: http://www.un-spider.org/CoP/Global-Thematic-Partnership.

Information on activities conducted in the area of **disaster mitigation** under the umbrella of the Committee for Earth Observation Satellites **CEOS** is available in: http://www.eohandbook.com/eohb05/ceos/part2_1.html.

Information on the **Programme on Space Applications** coordinated by the Office for Outer Space Affairs of the United Nations is available in: http://www.unoosa.org/oosa/en/about_PSA.html.

Which documents, reviews, case studies, websites, etc. can be considered useful for partners to learn more about the subject and progress future action?

UN-SPIDER Newsletters and Updates can be accessed and downloaded in the following links: http://www.un-spider.org/newsletter and http://www.un-spider.org/updates.

The brochure containing information describing the Programme on Space Applications can be found in: http://www.unoosa.org/pdf/publications/psa-brochure.pdf.

A new booklet published by JBGIS and UNOOSA outlining uses of geo-information technologies to reduce the impact of natural or manmade disasters and risks entitled: "*Geoinformation for Disaster and Risk Management - Best Practices and Examples*" can be found in: http://www.un-spider.org/jbgis-unoosa-booklet.