The SPIDER Global Thematic Partnership active in the 3rd Global Platform Session

The SPIDER Global Thematic Partnership (SPIDER GTP) which was launched in 2009 was again present in the 3rd Session of the Global Platform, which was organized and conducted by the United Nations International Strategy for Disaster Reduction (ISDR) from 9 to 13 May 2011 on the premises of the Geneva International Convention Center.

This session of the Global Platform brought together more than 2600 representatives from a variety of agencies from national governments, regional and international organizations, academia, NGOs, and from the private sector. Taking advantage of the format of the event which included several side sessions, the SPIDER GTP brought together high ranking authorities and experts from the Asian Disaster Reduction Center (ADRC), the International Society of Photogrammetry and Remote Sensing (ISPRS), the Joint Board of Geospatial Information Societies (JBGIS), the German Aerospace Center (DLR), and Esri in a side event titled: "*Integrated Use of Space Technologies for Disaster-Risk Reduction*". This side event took place on 12 May and attracted a wide range of participants.

The session was moderated by Juan Carlos Villagran de Leon of UN-SPIDER, who is coordinating the SPIDER GTP. He introduced the basic notions of the SPIDER GTP and presented an example of a case study conducted with four partners in Guatemala focusing on the use of the 3D-UDOP geo-viewer to assist institutions in Guatemala in visualizing seismic risk and scenarios of impacts of earthquakes. This case study was carried out by Thermopylae S+T of the United States, Guatemala's National Coordinating Agency for Disaster Reduction CONRED, Mariano Galvez University and the Center for Natural Disaster Research and Mitigation (CIMDEN) from Guatemala.

Mr. Villagran de Leon started the segment of the session dedicated to plenary presentations commenting that the SPIDER GTP has been established by UN-SPIDER to foster international cooperation among members of the partnership and 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 earth scientists to gather inputs necessary to track changes in hazards due to anthropogenic factors and space-based information allows 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 access and use space-based information, national platforms for disaster-risk reduction do not yet recognize and take advantage of such opportunities.

Mr. Guenter Strunz of the German Aerospace Center DLR made a presentation titled "Satellite-based Crisis Information - Contributions to Emergency Response and Disaster Management" in which he focused on the use of space-based information for emergency response, describing the Crisis Information Center ZKI which DLR operates to support emergency response activities in Germany and globally. Mr. Strunz also included in his presentation general aspects concerning the International Charter Space and Major Disasters, which also supports emergency response activities globally through the provision of space-based information.

Mr. Atsushi Koresawa, Executive Director of the Asian Disaster Reduction Center ADRC, started his presentation commenting on the ADRC network which already includes 29 countries in Asia. He presented Sentinel Asia, which is a is a voluntary initiative linking space agencies and disaster management agencies, applying remote sensing and Web-GIS technologies to assist disaster management agencies in the Asia-Pacific region. Mr. Koresawa then presented information on courses which are being offered by ADRC and training manuals which have already been translated to 8 languages to facilitate their use in many countries of the region. Mr. Koresawa completed his

presentation with information concerning emergency response activities and research being conducted by ADRC on the impacts of the great Eastern Japan Earthquake.

Mr. Orhan Altan, President of the International Society of Photogrammetry and Remote Sensing ISPRS, introduced the booklet which was edited and published by the Joint Board of Geospatial Information Societies JBGIS and the Office for Outer Space Affairs UNOOSA in 2010. The booklet entitled "Geoinformation for Disaster and Risk Management - Examples and Best Practices" includes a variety of examples of applications of geo-spatial information targeting disaster-risk management and emergency response. Mr. Altan then went on to comment on the VALID project, which will highlight the value of geo-information for Disaster and Risk Management through a benefit analysis and a stakeholder assessment.

Representing the private sector, Mr. Emanuele Gennai of Esri made a presentation focusing on Geographical Information Systems as tools for effective, timely, and efficient collaboration, problem solving, and decision-making. In his presentation, Mr. Gennai highlighted the use of GIS tools to visualize the impacts of global climate change in different regions of the world, to manage natural disasters, and of the contributions made by Esri to communities which are addressing these issues, including the Esri Nonprofit Organization Programme. Esri complemented its presence in this session through a brief presentation made by Jack Dangermond, CEO of Esri. Mr. Dangermond highlighted the new efforts of Esri to use cloud-based computing to enhance the application of geo-spatial tools in a variety of sectors combining base maps, satellite imagery, and cloud-based analysis tools for temporal and spatial analysis of dynamic issues such as land-use changes in North America, snow retreat in Mount Kilimanjaro and other interesting examples.

Upon completion of these presentations, Mr. Villagran de Leon opened the floor to questions and to comments from the audience. Participants were able to raise questions concerning the application of geo-spatial technologies to address drought in Africa. Mr. Strunz from DLR replied that the Charter is now considering widening the scope of its activities to include drought. Mr. Gennai of Esri commented that Esri could supply NGOs with applications that allow such NGOs and other agencies to build up and combine layers of data to identify potential ways to respond to the challenges which emerge in areas exposed to droughts. Mr. Piero Boccardo of ITHACA and member of ISPRS commented that the World Food Programme is being supported by ITHACA to address these issues of drought in particular through the use of geo-spatial techniques. Other participants raised questions concerning the applicability of such tools and space-based information in the case of floods. Mr. Koresawa from ADRC highlighted the products that the International Center for Water Hazard and Risk Management ICHARM is developing to assist institutions on the particular issue of floods. Mr. Villagran commented on current projects in Namibia with NASA, DLR, and other partners, which target explicitly the use of space-based information for floods. Other participants highlighted the need to ensure that space-based information generated by international initiatives such as the Charter and Sentinel Asia should also contemplate ways of ensuring that this information can trickle down to local communities, which at the end are the main beneficiaries.

Key messages stemming from this session include:

- There is a need for national platforms for disaster reduction to become aware of opportunities that regional and international agencies are providing to facilitate access to and use of space-based and geo-spatial information.
- There is a need for decision makers and members of National Platforms for Disaster Reduction to become aware of the usefulness of geo-spatial and space-based information. Such information can

contribute to the assessment of hazards and vulnerabilities, and is extremely useful to track changes in exposition and risk due to social, economic, political, and natural factors.

- Technical partnerships and platforms such as the SPIDER-Thematic Partnership could benefit from the support of UN-ISDR for improving synergies with national platforms.
- There is a need to bridge the gap between regional and international initiatives such as the Charter and Sentinel Asia which generate and provide information and local communities which are at risk. The aim should be to enhance the use of geo-spatial and space-based information generated by these agencies at the local level. National platforms should become efficient intermediaries to bridge this gap.
- Private sector enterprises such as Esri are developing innovative tools and methods to process and to visualize information. These tools can assist national platforms to visualize hidden issues such as vulnerability.

In conclusion, the session allowed participants to become aware of recent examples concerning the application of space-based information to support emergency relief efforts in Japan and in other countries which have experienced disasters. In addition, the session allowed participants to become aware of the wide range of applications of geo-spatial information in a variety of sectors of development including environmental management. The session allowed participants to become aware of ongoing efforts by regional and international agencies and by the private sector to promote the use of such information, including efforts by ISPRS, JBGIS, and UN-SPIDER to provide proof regarding the cost/benefit ratio when using such type of information.