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**Committee on the Peaceful  
Uses of Outer Space**  
**Scientific and Technical Subcommittee**  
**Forty-eighth session**  
Vienna, 7-18 February 2011  
Item 8 of the provisional agenda\*  
**Space-system-based disaster management support**

**United Nations Platform for Space-based Information for  
Disaster Management and Emergency Response  
(UN-SPIDER): proposed workplan for the  
biennium 2012-2013**

**Note by the Secretariat**

At its fiftieth session, the Committee on the Peaceful Uses of Outer Space agreed that progress reports on the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) and its future workplans should be considered by the Scientific and Technical Subcommittee under a regular agenda item on space-system-based disaster management support and that the agenda item should be included in the list of issues to be considered by its Working Group of the Whole. The annex to this document contains the proposed UN-SPIDER workplan for the biennium 2012-2013.

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\* A/AC.105/C.1/L.306.



## Annex

### **United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER): proposed workplan for the biennium 2012-2013**

The UN-SPIDER Programme was established by the General Assembly of the United Nations in its resolution 61/110 of 14 December 2006, to provide universal access to all countries and all relevant international and regional organizations to all types of space-based information and services relevant to disaster management to support the full disaster management cycle. The programme seeks greater understanding, acceptance and commitment by countries on ways of accessing and developing capacity to use all types of space-based information to support the full disaster management cycle.

**Mission Statement:** *Ensure that all countries and international and regional organisations have access to and develop the capacity to use all types of space-based information to support the full disaster management cycle.*

#### **A Gateway to Space-based Information for Disaster Management**

##### **1. Knowledge Management**

The acquisition, processing, and transfer of knowledge is a core activity of the UN-SPIDER programme. Since its establishment the programme has been working on the implementation of the Knowledge Portal which centralizes content material on space-based information and solutions which can support disaster-risk management and emergency response. Additionally, UN-SPIDER recognizes the need to provide the latest information on events and activities undertaken by the space and the disaster management communities, as well as on the activities conducted by UN-SPIDER and partners worldwide. The UN-SPIDER Regional Support Offices will have an increasing role in this activity ensuring on the one hand that information available at the national and regional level is incorporated into the Knowledge Portal and on the other hand ensuring that end users do indeed access the information available.

##### **Activity 1.1: Maintaining and Expanding content in the Knowledge Portal**

Having advanced with the implementation of the Knowledge Portal during the previous biennium, UN-SPIDER will continue to compile and incorporate relevant information and news, including those contributed by user communities. During the 2012-2013 biennium, increased efforts will be made to ensure that UN-SPIDER Regional Support Offices, centres of excellence and expert communities interact and share relevant knowledge through the knowledge portal. In addition, the Knowledge Portal will be used to compile and disseminate all relevant information related to the activities conducted by UN-SPIDER and its partners, including on-going and planned initiatives, case studies and best practices, archived data for disaster studies and capacity-building opportunities.

Emphasis will be placed on expanding and updating knowledge in the Space Application Guides and Technology Guides sections of the portal contributing to keeping end users informed on new technology and applications development.

In collaboration with relevant public and private sector partners, UN-SPIDER will ensure that the information included in the knowledge portal is geographically referenced and that information on experts and institutions of relevance to end users is made available in a controlled way through the knowledge portal for user input and consultation.

#### **Activity 1.2: Development of additional applications within the Knowledge Portal**

Recognizing the need to take advantage of emerging technological advances in information management, including geographic visualization and web-based technologies, UN-SPIDER will continue to improve the technical capabilities of the knowledge portal during the 2012-2013 biennium. In particular, applications will be further developed in order to ensure thematic navigation, geographic overview and intuitive visualization (including geo-visualization) of content with the support of the UN-SPIDER Regional Support Offices, other centres of excellence, academic partners as well as partners from the private sector.

There will be a need also to replace or upgrade several hardware components (server units, storage capacity) during the biennium.

#### **Activity 1.3: Information Sharing**

UN-SPIDER will continue complementing its information sharing efforts through the Knowledge Portal with printed and online publications including Newsletters and electronic Updates. The Programme also takes advantage of social media tools such as Facebook and Twitter to share information on activities conducted by UN-SPIDER and partners, and will continue doing so in 2012-2013.

As a follow-up to the landmark JBGIS/UNOOSA publication “Geoinformation for Disaster and Risk Management – Examples and Best Practices” other similar publications will be developed, including the already planned joint JBGIS/UNOOSA publication addressing the monetary and operational value of geoinformation in disaster management that is foreseen to be finalized in 2012.

### **A Bridge to Connect the Disaster Management and Space Communities**

#### **2. Support Humanitarian and Emergency Response**

Major natural and technological disasters which entail significant loss of life or property are expected to continue occurring in increasing frequency in the years to come. In continuation of the efforts of the previous biennium, UN-SPIDER will support humanitarian and emergency response efforts upon request of Member States (through National Focal Points) and UN Agencies focusing on ensuring improved access to and use of available resources and mechanisms.

Building on the lessons learned during the more than fifteen technical advisory missions to countries around the world, as well as the ten international and regional

workshops in four continents, UN-SPIDER finalised a gap analysis that helped design and implement the UN-SPIDER SpaceAid Framework. The framework was developed to meet the following needs:

(a) Ensure that all end-users can access and have the capacity to use all space-based information made available to support emergency events by existing mechanisms and initiatives. Importantly the end users have to be able to access and receive this support on a 24 hours a day/7 days a week basis. Additionally the space-based information has to be available to support early warning (monitoring), emergency response as well as early recovery;

(b) Provide information to existing mechanisms and initiatives on how they could improve and extend their support, as well as establishing new opportunities;

(c) Ensure that providers of space-based information and expertise know who to provide support to.

Building upon the work already carried out in 2010-2011, the programme will focus on the following activities during the 2012-2013 biennium:

(a) Continue ensuring that available opportunities, including those provided through the International Charter Space and Major Disasters, Sentinel Asia, the Regional Visualization and Monitoring System (SERVIR), GMES/SAFER and other similar mechanisms are more readily accessible and used by interested end-users. Agreements with additional private and public entities in order to enable an effective and universal reaction to end-user requirements will continue to be sought;

(b) Continue guiding the National Focal Points on how to take advantage of existing initiatives and on how to ensure the coordination and interaction among relevant national authorities, scientific institutions, organizations implementing and/or providing space-based solutions, humanitarian, environmental and civil protection actors and the space community;

(c) Continue operating the SpaceAid Framework ensuring that it remains a service capable of providing rapid information and support during disasters and emergencies on a 24/7 basis, specifically to support requests coming from National Focal Points (NFPs) and UN agencies;

(d) Continue working with all United Nations entities to ensure coordination of actions with regard to accessing and using space-based information for disaster-risk management and emergency response;

(e) continue using the UN-SPIDER Knowledge Portal as a hosting environment and dissemination tool to support SpaceAid, and;

(f) Ensure that the UN-SPIDER Regional Support Offices take a lead role in providing support to the countries that request international support.

### **3. Outreach Activities**

Outreach activities contribute to involving experts and practitioners from the disaster management and space communities, as well as institutional representatives from agencies devoted to these tasks, in UN-SPIDER activities and in similar activities organized by partners that promote the use of space-based information to support the full disaster management cycle.

As in the previous biennium, outreach activities include the following:

- (a) The organization of UN-SPIDER workshops, seminars and expert meetings in all regions;
- (b) Support to related meetings organised by partners and which are relevant to the UN-SPIDER mission;
- (c) Participation in relevant international policy-making and technical conferences, meetings and workshops through the provision of speakers and awareness raising materials;
- (d) support the participation of disaster management practitioners and experts in regional technical and international seminars and workshops organized by UN-SPIDER the UN-SPIDER Regional Support Offices and other partners.

### **3.1 Workshops and Expert Meetings**

During the 2012-2013 biennium, activities will include the organization of at least two international or regional workshops, expert meetings and/or seminars bringing together National Focal Points, experts from UN-SPIDER Regional Support Offices and other experts. These activities will contribute to bridging the gap between the disaster management and the space communities, and will promote the coordination of initiatives and strengthen the UN-SPIDER Regional Support Offices.

### **3.2 Support to workshops and other events organized by Partners**

The programme will in 2012-2013 ensure that it:

- (a) Provides support to at least two regional and international seminars and workshops organized by partners in the form of travel support for participants from developing countries;
- (b) Ensures participation, over the biennium, of expert speakers in at least four relevant conferences and meetings promoting UN-SPIDER activities.

The target audience in the case of outreach activities includes agencies devoted to disaster management and space applications, academic and research centres, NGOs, as well as private technology companies.

The expected outcomes from outreach activities include a larger demand for capacity-building activities; and the establishment of more formal links between space agencies, disaster management and emergency response agencies.

## **A Facilitator of Capacity-Building and Institutional Strengthening**

### **4. Capacity-Building**

Capacity-building and the strengthening of institutional arrangements at all levels is key to increasing the ability of organizations and individuals to effectively access and make use of space based services for disaster preparedness, response and recovery. In 2012-2013 UN-SPIDER will continue implementing the activities as described in the Capacity-Building Strategy (A/AC.105/947), including:

- (a) The development and maintenance of a database of training opportunities;

(b) Working with partners in the development and dissemination of training curricula;

(c) The development and maintenance of e-learning opportunities that take into consideration the kind of facilities that exist within the United Nations and elsewhere; and

(d) The facilitation of the realization of short and long-term training in the centres of excellence, including training that will benefit the humanitarian and emergency response community.

The strategy emphasises the need to work with the established Regional Centres for Space Science and Technology Education affiliated to the United Nations, the network of UN-SPIDER Regional Support Offices, as well as other national and regional centres of excellence in the training of the end users and in the strengthening of national institutions.

The target audience will include practitioners from the disaster management and space communities working in government agencies and staff from academia and research centres devoted to exploring means to bridge the two communities through the development of methods and tools.

#### **4.1 Catalogue of training opportunities**

During the 2012-2013 biennium, the programme will continue updating and publishing the three databases on training opportunities focusing respectively on short-term courses, web-based training programmes, and academic programmes leading to an academic degree.

#### **4.2 Development and implementation of an e-learning environment**

During the current 2010-2011 biennium, the programme is elaborating two curricula: a curriculum targeting the use of space-based information for emergency response and a curriculum targeting the use of space-based information for disaster-risk management.

Expected outcomes for the 2012-2013 biennium include the elaboration of content material focusing on the use of space-based information for disaster-risk management and emergency response; the establishment of cooperation agreements with Regional Centres of Excellence and other training centres targeting their active role in training, thus fulfilling the role of UN-SPIDER as a facilitator of capacity-building; and the facilitation of the realization of training programmes.

#### **4.3 Support training efforts organized by Partners**

UN-SPIDER will further support training events organized by Partners such as the Regional Centres on Space Science and Technology Education which are affiliated to the United Nations and the UN-SPIDER Regional Support Offices. The support provided to these partners will be linked to the technical advisory support provided by UN-SPIDER to governments which have specifically requested technical assistance on the use of space-based information to support all phases of the disaster management cycle.

The expected outcome from capacity-building activities include the institutionalization regarding the use of space-based information in those countries which have formally requested technical assistance from the UN-SPIDER programme.

## 5. Networks of Experts

In order to facilitate the work carried out by the programme and build upon the potential of resources and expertise available worldwide the programme strives to consolidate a number of networks which by bringing together groups of experts will ensure a closer coordination of actions and activities for the benefit of all countries in the world. There are basically three networks that the programme implements and strengthen: the network of UN-SPIDER Regional Support Offices, the network of National Focal Points, and finally other specific Networks of Experts.

### 5.1 Network of UN-SPIDER Regional Support Offices

The UN-SPIDER Regional Support Offices have been established to support UN-SPIDER's technical advisory missions, capacity-building and emergency response efforts; and to act as regional hubs to implement the objectives of the Programme. By the end of 2010, UN-SPIDER signed agreements with 10 institutions to engage them as Regional Support Offices:

(a) **Asia and the Pacific:** the Asian Disaster Reduction Centre based in Japan; the Iranian Space Agency; and the Pakistan Space & Upper Atmosphere Research Commission;

(b) **Africa:** the Algerian Space Agency; the National Space Research and Development Agency in Nigeria and the Regional Centre for Mapping Resources and Development based in Kenya;

(c) **Latin America and the Caribbean:** the Water Centre for the Humid Tropics of Latin America and the Caribbean based in Panama and the University the West Indies based in Trinidad and Tobago;

(d) **Europe:** the Romanian Space Agency and the National Space Agency of Ukraine.

During the 2012-2013 biennium, UN-SPIDER will continue strengthening the network of regional support offices engaging RSO experts in the work of the programme, including workshops, technical advisory missions, and capacity-building efforts.

Additionally, the programme will continue organising at least one meeting a year bringing together representatives from all UN-SPIDER Regional Support Offices to plan together the work carried out jointly.

### 5.2 Network of National Focal Points

A national focal point is a national institution nominated by the Government of the respective country representing the disaster management and space application communities. The role of the national focal point is to work with UN-SPIDER staff to strengthen national disaster management planning and policies and to implement

specific national activities that incorporate space-based technology solutions in support of disaster risk management.

The main purpose behind the establishment of National Focal Points has been for UN-SPIDER to be able to cooperate with a single point of contact in a country in order to increase efficiency in cooperation. By the end of 2010, UN-SPIDER had received nominations for National focal points from 48 Member States. During the 2012-2013 biennium, UN-SPIDER will consolidate this network of national focal points and will engage them in various workshops and expert meetings at the regional level, aiming at strengthening their respective work at the national level.

### **5.3 Networks of Experts**

UN-SPIDER aims at fostering and supporting expert communities of any kind, as far as their issues are related to the intersection of disaster management and space-based information.

UN-SPIDER so far has provided support to existing networks of experts and also contributed to the establishment of new ones, bringing together the space-based technology and disaster management communities. In particular, the SPIDER Global Thematic Partnership which was launched by UN-SPIDER in 2009 under the umbrella of ISDR as a technical platform to promote advances regarding the use of space-based information by National Platforms for Disaster Reduction which are foreseen by ISDR to promote disaster reduction through inter-institutional, inter-sectoral efforts.

During the 2012-2013 biennium UN-SPIDER will conduct efforts to formalize the establishment of these networks of experts, in particular the SPIDER Global Thematic Partnership and similar partnerships at the regional level. As part of the support provided to these networks, the Knowledge Portal will be improved to incorporate specific segments benefitting these groups. Such segments will allow these networks of experts to display relevant documentation and to conduct dedicated chats on their topics of interest.

## **6. Support at the national level**

The UN-SPIDER programme, in close coordination with the UN-SPIDER Regional Support Offices, will continue to respond to requests from Member States regarding the provision of technical advisory support, including carrying out technical advisory missions. This will contribute to ensuring that countries receive systematic and continuous technical advisory assistance for using space-based solutions in disaster management plans and policies and in the implementation of risk reduction activities. Such technical advisory support will include:

- (a) Assessing national capacity and evaluating disaster risk reduction activities, policies and plans with regard to the use of space-based technology;
- (b) Facilitating access of national institutions to space-based information and expertise for disaster risk reduction and emergency response;
- (c) Developing and customizing guidelines and templates to incorporate space-based information into disaster risk and emergency response management;



(d) Identifying training needs and facilitate the implementation of capacity-building activities.

During the 2012-2013 biennium, UN-SPIDER will conduct the following activities:

(a) Continue providing technical advisory support to those countries which have already elevated such requests to UN-SPIDER;

(b) Develop guidelines regarding how to incorporate space-based technology into disaster risk management and emergency response at the national level;

(c) Develop a template of a national disaster management policy that takes into consideration space-based technology;

(d) Strengthen the technical advisory support at the regional level through the organization of regional expert meetings, aiming at building upon the work initiated in the countries that have already hosted a technical advisory mission.

This activity will be carried out in close cooperation with the UN-SPIDER Regional Support Offices, partner institutions as well as with the work carried out by the secretariat of ISDR and by UNDP country offices.

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