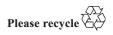14 February 2013

English only

**Committee on the Peaceful
Uses of Outer Space**
Scientific and Technical Subcommittee
Fiftieth session
Vienna, 11-12 February 2013
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 2014-2015

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V.13-80663 (E)

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United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER): proposed workplan for the biennium 2014-2015

1.   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.

2.   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.

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

3.   This document presents the activities to be designed and implemented in the 2014-2015 biennium by UN-SPIDER with the support of its networks of partners. After describing the resources as known at the time of drafting this report (Section 1) it describes how through the conduction of knowledge management efforts UN-SPIDER will promote the exchange and sharing of information and knowledge (Section 2), how advisory support will be provided to Member States (Section 3) and how UN-SPIDER will continue building connections and promoting exchanges between the various communities with responsibilities or roles in disaster risk reduction (DRR) and emergency response (ER) as a way to strengthen their capacities (Section 4).

1.   Resources for the implementation of the workplan 2014-2015

4.   The UN-SPIDER Team will be composed at the beginning of the 2014-2015 biennium of twelve professionals: one Senior Programme Officer, three Programme Officers, three Associate Programme Officers, two Experts on non-reimbursable loans, and two support staff. The Programme also benefits from the support of 3 to 5 interns at any given time. It is important to note that the posts of the three Associate Programme Officers are funded by various governments and that their respective current end dates do not reach the end of the 2014-2015 biennium. Additional supports from those governments and new ones will be important to maintain the staffing table at an adequate level. The Programme is implemented through the Space Application Sections of the Office, led by the United Nations Expert on Space Applications. The team is headquartered in Vienna, Austria with offices in Bonn, Germany and Beijing, China. Knowledge management and the portal service, and advisory services to Latin American and the Caribbean

are ensured from Bonn while the offices of Beijing and Vienna lead advisory services/missions and capacity-building to Africa, and Asia and the Pacific.

5.   The network of thirteen (as of 1 January 2013; 2 to 3 more expected at beginning of biennium) Regional Support Offices (RSO) will continue to support the implementation of the workplan by participating to technical advisory missions and other forms of advisory support, in capacity-building activities and by sharing their expertise and resources in disaster-risk management and emergency response efforts. The role of RSOs to act as regional hubs to implement the objectives of the Programme will be consolidated through an increase coordination and closer collaboration at the regional level. Additionally, the Programme will continue organizing one meeting a year bringing together representatives from all UN-SPIDER Regional Support Offices to plan the work carried out jointly.

6.   During the 2014-2015 biennium, UN-SPIDER will consolidate the network of National Focal Points (NFP) and will pursue its efforts to engage them in its activities. A NFP is a national institution nominated by the government of the respective country representing the disaster management and space application communities and its role is to work with UN-SPIDER as the first point of contact in a country in order to increase efficiency in cooperation. Success in this coordination was only partial in the previous periods and UN-SPIDER will increase its efforts in 2014-2015 to consolidate the network of NFP and, where possible, align the contact information with UNISDR and UNOCHA.

7.   UN-SPIDER will continue collaborating with the five Regional Centres affiliated to the United Nations for Space Science and Technology Education so that their respective resources and knowledge can benefit the expert teams in TAMs or so that they actively participate to training activities.

8.   Funding for the UN-SPIDER Programme will continue in 2014-2015 to come from both the regular budget of the United Nations and from extraordinary contributions from Member States. The Office has funding agreements covering all or part of the biennium with the Governments of Austria, China and Germany. The Office and UN-SPIDER will continue their efforts to ensure funding for the whole biennium through extension of the existing agreements and new ones. However, with expected reduction in regular budget for activities and human resources, a stronger support by Member States will be needed for a global coverage of the UN-SPIDER Programme and to ensure a comprehensive answer to the increasing demand for advisory support, capacity-building and for more access to data and information.

2.   Knowledge management

9.   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 (www.un-spider.org) 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.

10.   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 2014-2015 biennium.

11.   An internal evaluation of the UN-SPIDER Knowledge Portal was conducted between April and December 2012. The evaluation began with a thorough review of the Portal in term of its pages and the segments contained in each page with the aim of determining what modifications are needed in its structure and the format in which the content is presented. In addition, it included a statistical assessment of visits made to the Portal. Subsequently, the effectiveness, the relevance and the impact of the Portal were assessed with the aid of comments from stakeholders of the Disaster-Risk Reduction, the Emergency Response, the Space and the RSO communities.

12.   Recognizing the value of the Portal serving as a gateway to space-based information on a 24/7 basis, containing both general and technical information, the stakeholders also made several recommendations for the improvement of the Portal which could be implemented in the short-, medium- and long-terms, including:

- The incorporation of step-by-step methodologies to process satellite imagery and to adapt methodologies developed and applied in some regions of the world to other regions of the world;

- The incorporation of links to websites and portals that host such imagery;

- Making it easier to discover the information contained in the Portal;

- Incorporating terminology used by the disaster-risk management community;

- Representing the information using dynamic maps;

- Relocating various sections of the Portal to improve their discovery;

- Providing examples regarding how space-based information has been used by institutions in charge of DRR and ER operations; and

- Disseminating content in other languages, beginning with Spanish and French given the fact that the programme has been requested to provide technical advisory support to several Member States where these are official languages.

13.   Based on the results of this internal evaluation UN-SPIDER will elaborate a Road Map that defines the framework of efforts to be implemented in the short, medium and long term as a way to enhance the effectiveness, the relevance and the impact of the Portal in contributing to promote the use of space-based information in all phases of the disaster management cycle.

14.   UN-SPIDER will continue complementing its awareness efforts through the Knowledge Portal with printed and online publications including Newsletters (http://un-spider.org/about/newsletter) and electronic Updates (http://un-spider.org/about/updates). The Programme also takes advantage of social media tools such as Google+, Facebook and Twitter to share information on activities conducted by UN-SPIDER and partners, and will continue doing so in 2014-2015.

15. RSOs agreed at their third annual meeting in 2012 (A/AC.105/2012/CRP.18) to develop specific publications on how to access and make use of archived imagery to carry out rapid mapping of affected areas in case of floods, droughts and forest fires; and to assess how land-use changes modify the spatial and temporal characteristics of flood, drought and forest fire hazards. Based on the first three publications on "Lessons Learned from specific disasters" by RSOs, in 2012 and 2013, RSOs will be invited to prepare and publish either in hardcopy or in electronic format on the knowledge portal with UN-SPIDER additional booklets.

3. Advisory support and coordination for disaster risk reduction and emergency response

16. In continuation of the efforts of the previous biennium, UN-SPIDER will continue to offer technical advisory support to strengthen disaster risk reduction and emergency response efforts by influencing the disaster management practices of the Member States with focus on use of space-based information and providing access to exiting opportunities. The advisory support will be offered to requesting Member States and United Nations agencies focusing on ensuring improved access to and use of available resources and mechanisms. Building upon the work already carried out in 2012-2013 and with renewed collaborative initiatives with United Nations sister agencies and the RSO network, the Programme will focus on the following activities during the 2014-2015 biennium:

(a) Help end-users build capacity to use all space-based information made available to support emergency events by existing mechanisms and initiatives to ensure that space-based information is available to support early warning (monitoring), emergency response as well as early recovery;

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

(c) Work closely with existing global and regional mechanisms such as the International Charter — Space and Major Disasters, Sentinel Asia or the European Commission Copernicus, to promote their programmes and facilitate access by end-users to their services;

(d) Aim at ensuring that providers of space-based information and expertise understand the requirements and specific conditions or constraints the end-users have in requesting, receiving and using support;

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

(f) Following the Knowledge Portal development roadmap (Section 2 above), continue the dissemination of relevant information produced from work on selected emergency and humanitarian response events, and;

(g) Increase the role of the UN-SPIDER Regional Support Offices in providing support to the countries that request international support.

17. Through the UN-SPIDER Programme, the Office for Outer Space Affairs will continue working with Member States that request support in accessing and using

space-based solutions for disaster-risk management and emergency response, which included:

(a)   Assessing national capacity and evaluating disaster and risk reduction activities, policies and plans with regard to the use of space-based technologies;

(b)   Assisting in the design of risk reduction and disaster risk management plans and policies with regard to the use of space-based technologies;

(c)   Developing and customizing guidelines to include space-based technologies into disaster risk reduction and emergency response;

(d)   Facilitating access of national institutions to space-based information to support disaster risk reduction and emergency response activities;

(e)   Identifying training needs and facilitating the implementation of capacity-building activities; and

(f)   Supporting the implementation of risk reduction and emergency response activities using space-based technologies.

18.   Technical Advisory Support (TAS) is one of the prime activities of the UN-SPIDER Programme at the national level and aims at providing Member States with the support listed in the previous paragraph. It can include: (a) Technical Advisory Missions (TAMs) involving experts from space and disaster management agencies from other countries as well as from relevant international and regional organisations and institutions; (b) technical advice to national institutions by means of meetings, teleconferences, videoconferences etc.; (c) facilitating direct cooperation between national institutions and providers of space-based information and solutions; and (d) facilitating access to satellite images during emergencies. The advisory support provided covers data access and policy, information management, national spatial data infrastructure, and inter-institutional coordination.

19.   The output of each mission is a formal report with a summary of the findings, recommendations, follow-up actions and suggestions on guidelines and policies on disaster risk management issues, always from the perspective of the use of space-based information in all the stages of disaster management cycle. UN-SPIDER in 2014-2015 will encourage countries recipient of TAM over the last few years to re-visit the recommendations of the experts and coordinate with the Programme for their implementation through follow-up activities. Oftentimes, these recommendations propose specific trainings on relevant issues to the countries that target individuals in authorities with responsibilities in the use of space-based information. Examples of follow-up activities realized in 2012 and 2013 will be promoted with the Member States to increase awareness on the need for implementation of a TAM recommendations. The impact of TAMs will thus be increased in countries visited and gains in cost-effectiveness could be obtained, thus reducing the pressure on UN-SPIDER budgetary resources.

20.   Following the trends of the last biennium and considering the limited resources available, the Programme aims to continue providing advisory support to the 25 Member States which were targeted in the last biennium, and increase the number of Member States receiving such support from 25 to 27 during this biennium.

21. During the 2014-2015 biennium, UN-SPIDER will also conduct the following activities:

(a) Provide technical advisory support to those countries which request such support from the UN-SPIDER Programme, following-up with the implementation of the recommendations put forward during the technical advisory missions;

(b) Develop guidelines on how to incorporate space-based technology into disaster risk management and emergency response at the national level, including suggestions of specific contributions to national and local policies; and

(c) 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.

22. UN-SPIDER will continue inviting Regional Support Offices, United Nations affiliated Regional Centre for Space Science and Technology Education, partner institutions as well as the secretariat of ISDR, OCHA and UNDP country offices in participating in these activities.

4. Bridging communities and capacity-building

Capacity-building

23. 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-risk management, preparedness, response and recovery. In 2014-2015 UN-SPIDER will continue implementing the activities as described in the Capacity-Building Strategy (A/AC.105/947), including:

(a) The updating and maintenance of a database of training opportunities;

(b) Working with partners, including the UN-SPIDER Regional Support Offices in the development of training curricula and the corresponding content material;

(c) Promote the development of short-term courses to be delivered by RSOs from UN-SPIDER on Remote Sensing for Emergency Response. For example, trainings will be organized in collaboration with RSO and other networks of UN-SPIDER and in collaboration with interested partners from academia, the private sector and other United Nations entities. Examples of similar activities in the previous biennium where providers of data, software or services participated actively will be promoted as much as possible; and

(d) The development and maintenance of the learning environment within the Knowledge Portal to host the curricula and corresponding content material.

24. The target audience will include practitioners from the disaster-risk reduction, emergency 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.

Outreach activities

25. Outreach activities contribute to involving experts and practitioners from the disaster management and space communities 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. They also allow for a broader reach of the knowledge management activities of the Programme and a larger access and use of the UN-SPIDER Knowledge Portal.

26. As in the previous biennium, outreach activities will include the following:

(a) The organization of UN-SPIDER workshops, seminars and expert meetings in all regions;

(b) Support to related meetings organized by partners and which are relevant to the UN-SPIDER mission;

(c) Participation in relevant international policymaking 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 Regional Support Offices and other partners.

Workshops and expert meetings

27. During the 2014-2015 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.

28. Furthermore the Programme will in 2014-2015 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.

29. 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.

30. 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.

31. 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.

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

33. Through knowledge management (including the promotion of data/information exchange and sharing), advisory support and capacity-building, UN-SPIDER will aim for an increased access and improved use of space-based geospatial information, satellite telecommunication and global navigations satellite systems as prioritized in the work of UNOOSA and put in evidence in the Rio+20 Declaration. This will guide and help prioritize the collaborations UN-SPIDER will put in place during the biennium 2014-2015 for the implementation of this work programme.

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