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**Workplan of the Network of Regional Support Offices of the
United Nations Platform for Space-based Information for
Disaster Management and Emergency Response for 2014
and 2015****I. Background information**

1. In its resolution 61/110, the General Assembly agreed that the United Nations Platform for Space-based Information for Disaster Management and Emergency Response UN-SPIDER Programme should, when possible, work closely with regional and national centres of expertise in the use of space technology in disaster risk management to form a network of Regional Support Offices (RSOs) to implement the activities of the Programme in their respective regions and in a coordinated manner. This network was seen as an important source of knowledge and key to the success of the Programme.

2. The network of RSOs should be able to contribute to any of the specific activities included in the UN-SPIDER workplan by taking on the responsibility for funding and implementing a specific activity jointly and in coordination with UN-SPIDER. Such activities could include: hosting a regional workshop, promoting capacity-building activities in a region, contributing to missions in a region to support national disaster management, supporting national and regional vulnerability assessments, providing mapping support during emergencies, contributing to the systematic compilation of relevant information (including the development of country profiles and the compilation of specific geospatial databases), supporting awareness-raising campaigns and promoting the establishment of regional and national networks of experts.

3. Sixteen RSOs of UN-SPIDER are currently being hosted by the following ten national organizations: the Algerian Space Agency (ASAL, agreement signed in 2009), the Argentinean National Space Activities Commission (CONAE, 2012), the Agustín Codazzi Geographic Institute of Colombia (IGAC, 2012), Ministry of

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the Russian Federation for Civil Defense, Emergencies and Elimination of Consequences of Natural Disasters (EMERCOM, 2013), the Indonesian National Institute of Aeronautics and Space (LAPAN, 2013), the Iranian Space Agency (ISA, 2009), the Károly Róbert University of Hungary (2012), the National Space Research and Development Agency of Nigeria (NASDRA, 2009), the Pakistan Space and Upper Atmosphere Research Commission (SUPARCO, 2010), the Romanian Space Agency (ROSA, 2009) and the State Space Agency of Ukraine (NASU-SSAU, 2010). The following six regional organizations also host Regional Support Offices: the Asian Disaster Reduction Center (ADRC) based in Kobe, Japan (2009); the International Centre for Integrated Mountain Development (ICIMOD) based in Kathmandu, Nepal (2013); the Regional Center for Mapping of Resources for Development based in Nairobi, Kenya (RCMRD, 2010); the University of the West Indies based in St. Augustine, Trinidad and Tobago (UWI, 2010); and the Water Center for the Humid Tropics of Latin America and the Caribbean based in Panama City, Panama (CATHALAC, 2010).

II. The UN-SPIDER workplan for 2014 and 2015

4. The workplan of UN-SPIDER is implemented from a regular budget of the United Nations Secretariat and thanks to voluntary contributions from three Member States (Austria, China and Germany) and from in-kind contributions from sister United Nations agencies, international and regional organizations, as well as from the regional support offices.

5. The report “United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER): proposed workplan for the biennium 2014-2015” (A/AC.105/C.1/2013/CRP.6) is the framework for collaboration between specific RSOs or groups of RSOs with the UN-SPIDER Programme; it also offers opportunity for collaboration between RSOs themselves. The main areas of work of the Programme for 2014 and 2015 are knowledge management, advisory support, and the bridging of communities. Some of the activities elaborated in this workplan offer a potential for collaboration, including with the RSOs; they are listed below.

Knowledge management

6. Following the evaluation of the UN-SPIDER Knowledge Portal in 2012, a road map for development was prioritized. Regional Support Offices could support or contribute to the following areas:

- The incorporation of step-by-step methodologies to process satellite imagery for applications related to disaster-risk management and emergency response;
- The incorporation of links to websites and portals that host such imagery;
- Representing the information using dynamic maps;
- Providing examples regarding how space-based information has been used by institutions in charge of disaster risk reduction and emergency response operations;

- Disseminating content in other official United Nations languages, beginning with Spanish and French;
 - The updating and maintenance of a database of training opportunities;
 - Provide documents and resources to countries in which Technical Advisory Missions were conducted as a way to support these countries with the implementation of the mission recommendations; and
 - Add and update content on news and events from the stakeholder communities including publications and training opportunities as well as dedicated content provided on the individual Regional Support Office profile pages.
7. RSOs agreed at their third annual meeting in 2012 (A/AC.105/2012/CRP.18) to develop specific methods 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 develop step-by-step methods to be used to assess how land-use changes modify the spatial and temporal characteristics of flood, drought and forest fire hazards. This work is ongoing by some RSOs and others have proposed new publications (see Section IV below).

Advisory support and coordination for disaster risk reduction and emergency response

8. The advisory support is 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 is focusing on the following activities during the 2014-2015 biennium:

- Help end users strengthen their 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;
- 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 services and facilitate access by end users to their services;
- 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;
- 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;
- Increase the role of the UN-SPIDER Regional Support Offices in providing support to the countries that request international support; and

- 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.

Bridging communities and capacity-building

9. Capacity-building activities will include:
 - Promote the development of short-term courses to be delivered by RSOs from UN-SPIDER on remote sensing for disaster-risk reduction and emergency response; and
 - Support and contribute to the development and maintenance of the learning environment within the Knowledge Portal to host the curricula and corresponding content material.
10. Outreach activities include:
 - The organization of UN-SPIDER workshops, seminars and expert meetings in all regions;
 - Support to related meetings organized by partners and which are relevant to the UN-SPIDER mission;
 - Participation in relevant international policymaking and technical conferences, meetings and workshops through the provision of speakers and awareness-raising materials; and
 - 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.

III. Ongoing and scheduled joint activities for 2014 and 2015

11. Collaborations have been initiated from previous workplans and following previous RSO meetings. “Report on activities carried out in 2013 in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response” (A/AC.105/1057) provides the details on many of those collaborations in 2013; some are continuing in 2014. In general terms, many fall under the following:

- Improving the sharing of information on relevant planned activities so that coordination can be more effective and resources used more efficiently;
- More attention to be given to social networking;
- Consideration of the pooling satellite imagery and data resources with a view to sharing data across countries or regions;
- Preparation of an online guide to where and how to discover and access data that can be downloaded and shared with other regional support offices;
- Looking at means of using precipitation satellite data to provide information to those countries that do not have modern meteorology services or the required technology;

- Designing and implementing an evaluation method, including a definition of responsibilities and of mechanisms to measure the impacts of technical advisory support and technical advisory missions; and
- Aiming to implement the project on use of archived satellite imagery together with UN-SPIDER.

12. As mentioned in Section II, RSOs are preparing booklets on recommended practices. Specific topics are: “Considerations for effective use of space-based information to assess tsunami impact: lessons learned from the recent tsunami in Japan” (ADRC); “Considerations for effective use of space-based information to monitor massive flood disaster and its impact: lessons learned from Pakistan floods in 2010” (SUPARCO); and “Considerations for effective use of space-based information to assess drought at the national level: experiences from the Islamic Republic of Iran” (ISA). LAPAN proposed to deliver a booklet on the applications of remote sensing for forest fire and land fire monitoring.

13. RSOs are concretely contributing to the plan of activities of UN-SPIDER for 2014. This includes:

Technical Advisory Missions. Training programmes and workshops

- CATHALAC, CONAE and IGAC have released one expert each for the “Regional Expert Meeting/CEPREDENAC to Central America”, El Salvador, 31 March and 1 April 2014;
- CATHALAC, CONAE and IGAC have released one expert each for a three days technical advisory mission to El Salvador, 2 to 4 April 2014;
- CONAE has provided a virtual training course in 2014 to EIGEO as a follow-up to the 2013 mission to Dominican Republic (www.un-spider.org/news-and-events/news/dominican-republic-conae-strengthens-technical-capacities-eigeo);
- RCMRD has released one expert for a 5 days technical advisory mission to Kenya (3 to 7 March 2014) and for a 5 days technical advisory mission to Zambia (26 to 30 May 2014); RCMRD has also hosted a one day workshop in Kenya (6 March 2014);
- ICIMOD has released one expert for a 5 days Technical Advisory Mission (ICIMOD) to Bhutan, 2 to 6 June 2014;
- ICIMOD has released experts and funded participants to the “International training on flood forecast and hazard mapping”, Kathmandu, Nepal, 9 to 13 June 2014;
- LAPAN has released experts and funded participants to the “Regional workshop in ASEAN region”, Yogyakarta, Indonesia, 15 to 17 April 2014;
- EMERCOM has invited the UN-SPIDER Coordinator to the workshop “Introduction to management concepts in crisis situation for Commonwealth of Independent States (CIS), Moscow, Russian Federation, 25 and 26 March 2014; and
- ISA, RCMRD and SUPARCO were represented at the United Nations/Germany Expert Meeting on Space Technologies for flood and drought risk reduction, Bonn, 5 and 6 June 2014.

14. RSO representatives will also participate or support the following scheduled activities:

- Technical Advisory Mission to Mongolia, 11 to 15 August 2014;
- United Nations/China International Conference on Space-based Technologies for Disaster Management — “Multi-hazard Disaster Risk Assessment”, Beijing, China, 15 to 17 September; and
- Course in space-based applications for Disaster Risk Reduction, Beijing, China, 18 to 23 September 2014.

IV. Outcome of the Fifth Meeting of the Network of Regional Support Offices

15. RSOs agreed to contribute with content for the Space Application Matrix (SAM) of the Knowledge Portal. A scientific advisory board or network of scientific mentorship to review papers that are submitted for the SAM will be considered by the network. The network could also monitor particular areas of interest of the SAM to monitor recent publications.

16. RSOs agreed to develop and submit joint proposals for project funding. A proposal was submitted in spring 2014 to an European Union Horizon2020 RISE call which could help support scientific exchanges and collaboration between RSOs. It was also agreed to establish a section on joint project proposals in the UN-SPIDER online collaborative platform “Open Atrium”.

17. RSOs to liaise with UN-SPIDER to coordinate their activities in all countries where they are active and discuss regional coordination for TAM follow-up activities.

18. Regarding the preparation of new references for recommended practices, RCMRD agreed to review its draft practice on land degradation and focus on disaster risk management; ISA agreed to complete and share detailed step-by-step procedures for drought monitoring; IGAC, CONAE and NASRDA agreed to complete and update their practice on flood risk assessment; and NASU-SSAU will incorporate proposed changes to the practice on crop yield prediction.

19. Other RSOs not yet involved in the development of recommended practices offered to contribute: ASAL with its expertise on locust monitoring; CATHALAC in monitoring rainfall anomalies and monitoring of landslides; ISA in dust storm monitoring; LAPAN in tropical storms and forest fires; and SUPARCO in snow and ice monitoring for flood forecasts in combination with vulnerability analysis of dikes. DLR also offered to share their methodology for flood mapping as a recommended practice.

20. SUPARCO has offered to contribute in developing a mobile application to increase access to the UN-SPIDER Knowledge Portal.

21. The network will jointly develop a “working strategy for the UN-SPIDER Network of RSOs” which will raise its visibility and foster collaboration.