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Establishment of a fund for the SpaceAid Framework

Note by the Secretariat

The present note by the Secretariat outlines the actions taken by the Secretariat in the establishment of a fund for the SpaceAid Framework as requested by the Working Group of the Whole of the Scientific and Technical Subcommittee at its forty-seventh session (A/AC.105/958, annex I, para.12).

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Establishment of a fund for the SpaceAid Framework

I. Understanding the SpaceAid Framework

1. When an emergency happens there is an urgent need to assess impacts and needs as soon as possible. Space-based technologies provide innovative ways to generate information to support this need. Earth observation and meteorological satellites continuously image the earth and if tasked to acquire imagery over disaster areas these satellite-based sensors can rapidly help evaluate the extent of the impact caused by the disaster, thereby ensuring rescue efforts are sent to the right place. Global navigation satellite systems support response teams by helping them reach the disaster area (navigation) and also by providing the means of registering on a map the location of anything the response team needs to locate geographically. Finally satellite communication provides a valuable alternative to land-based communications.

2. There are a number of available mechanisms and initiatives that help countries receive relevant information and access space-based technologies to support response efforts, such as the International Charter Space and Major Disasters, Sentinel Asia and Télécoms Sans Frontières. In 2009 the UN-SPIDER Programme initiated the SpaceAid Framework to help countries as well as international and regional organisations benefit from these mechanisms, specifically to:

- a) Ensure that all end users are able to access these mechanisms and initiatives, on a 24 hours a day/7 days a week basis, and that they also have the capacity to use all space-based information made available to support emergency events;
- b) Provide guidance to the existing mechanisms and initiatives on the specific requirements of the end users and also on how they could improve and extend their support;
- c) Establish additional opportunities beyond what is currently available within the existing mechanisms, and;
- d) Provide information to those interested in providing support (space-based information and expertise) on how they could channel their support and to whom.

3. The UN-SPIDER Programme is uniquely positioned to implement and promote this framework:

- a) The Programme has been specifically mandated by the United Nations General Assembly to ensure that all countries are able to access space-based information to support emergency response. To this end, since 2007 the Programme has built working relationships with national and regional space agencies, international mechanisms, and technical organizations capable of generating such type of information;
- b) The Programme derives strength from a network of UN-SPIDER Regional Support Offices which ensures that end users can access expertise regionally. In its resolution 61/110, the United Nations General Assembly agreed that

- UN-SPIDER should work closely with regional and national centres of expertise in the use of space technology in disaster management to form a network of regional support offices for implementing the activities of UN-SPIDER in their respective regions in a coordinated manner;
- c) Currently, the Office for Outer Space Affairs has signed cooperation agreements with Algeria, Iran (Islamic Republic of), Nigeria, Pakistan, Romania, Ukraine, the Asian Disaster Reduction Center and the Water Center for the Humid Tropics of Latin America and the Caribbean (CATHALAC), formalising the establishment of Regional Support Offices;
 - d) The Programme has established a network of UN-SPIDER 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 national focal points is to work with UN-SPIDER as well as with UN-SPIDER Regional Support Offices to strengthen national disaster management planning and policies and implement specific national activities that incorporate space-based technology solutions in support of disaster management;
 - e) Currently the following countries have nominated a National Focal Point: Austria, Belarus, Belize, Bolivia, Bosnia and Herzegovina, Burkina Faso, Burundi, Côte d'Ivoire, China, Croatia, Egypt, El Salvador, India, Iraq, Jamaica, Kenya, Republic of Korea, Lebanon, Malawi, Malta, Mauritania, Mauritius, Morocco, Myanmar, New Zealand, Nigeria, Philippines, Qatar, Senegal, Singapore, Spain, Syrian Arab Republic, Tajikistan, Tanzania (United Republic of), Thailand, Trinidad and Tobago, Tunisia, Turkey, Ukraine, United Arab Emirates and Venezuela;
 - f) The UN-SPIDER Knowledge Portal - The knowledge portal is central to all activities of the UN-SPIDER Programme as in essence it provides the hosting environment and dissemination tool for all these activities and the resulting outputs and products. Specifically to support SpaceAid a separate webpage is created for every event and the following information included: information on the event, available value-added products, available pre- and post disaster images, UN-SPIDER contact points, including Regional Support Office, information on sensor tasking, available geospatial data sets, vector data of impacted areas, and other space-based information and technologies, and;
 - g) The UN-SPIDER Programme supports countries directly by carrying out technical advisory missions to countries that request such support.

II. The Mandate

4. The work of the United Nations Office for Outer Space Affairs in relation to disaster management and emergency response is driven by resolution 61/110 which established the United Nations Platform for Space-based Information for Disaster Management and Emergency Response, known as UN-SPIDER. The accomplishment sought by the programme of work being implemented by UN-SPIDER is 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. UN-SPIDER has been established through this resolution to act as a gateway to space information for disaster management support, to serve as a bridge to connect the disaster management and space communities, and to act as a facilitator of capacity-building and institutional strengthening, in particular for developing countries.

5. Furthermore the United Nations General Assembly Resolution on the “International cooperation on humanitarian assistance in the field of natural disasters, from relief to development” (A/RES/64/251) specifically stated that the further use of space-based and ground-based remote sensing technologies, as provided by UN-SPIDER, should be encouraged and additionally recognised that Member States should provide all necessary support, including financial support for UN-SPIDER to carry out its work.

III. Implementing the SpaceAid Framework

6. UN-SPIDER staff together with the UN-SPIDER Regional Support Offices are working together in implementing the SpaceAid Framework. The Framework aims at:

- a) Ensuring 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) Providing guidance to existing mechanisms and initiatives on how they could improve and extend their support, as well as establishing new opportunities;
- c) Ensuring that providers of space-based information and expertise know who to provide support to.

7. The SpaceAid Framework is built on four cornerstones:

- a) Existing mechanisms and additional opportunities with which UN-SPIDER establishes cooperation agreements and arrangements to access and make available to end users space-based information and value added products as well as other space-based solutions and technologies;
- b) An operational 24 hours a day/7 days a week emergency hotline which can be accessed through telephone, e-mail or fax to which end users can use to send request for support. Additionally there is the need to ensure that all relevant information is made immediately available to the end users as well as to those interested in providing support;
- c) Partnerships, in addition to ones established with the UN-SPIDER Regional Support Offices, with leading centres of excellence (national and regional) as well as academic institutions, non-government organisations and private companies willing to provide support to analyse the space-based information and provide scientific and technical expertise to end users, and;
- d) The SpaceAid Fund which would enable the framework to provide support beyond what is currently possible and also to ensure rapid and direct

acquisition of satellite imagery as well as other space-based technologies to support emergency and humanitarian response in cases when existing mechanisms could not provide the full extent of what is required, such as when users need to receive imagery from specific sensors or when there is a need to have multi-agency licenses, as well as for humanitarian response, early recovery and reconstruction.

Existing mechanisms and initiatives

8. The UN-SPIDER Programme already has in place agreements and arrangements with several of the global and regional initiatives including the International Charter Space and Major Disasters (UNOOSA has been a cooperating body to the Charter since 2003), Sentinel Asia (UNOOSA is a member of the Joint Project Team) and the GMES Project “Services and Applications for Emergency Response” (SAFER). Additionally, UN-SPIDER ensures cooperation with another relevant GMES Project “GMES services for Management of Operations, Situation Awareness and Intelligence for regional Crises” (G-MOSAIC) and works closely in promoting and leveraging upon the opportunities provided by the regional SERVIR projects.

9. SERVIR is a regional visualization and monitoring system that integrates Earth observations and forecast models together with in situ data and knowledge for timely decision-making to benefit society, particularly to support disaster management. SERVIR is being implemented regionally, in Latin America and the Caribbean by Center for the Humid Tropics of Latin America and the Caribbean (CATHALAC), which is a UN-SPIDER Regional Support Office and in Eastern Africa by the Regional Center for Mapping of Resources for Development (RCMRD), which will be signing a Cooperation Agreement with UNOOSA to become a UN-SPIDER Regional Support Office.

10. The UN-SPIDER Programme works closely with the above projects and initiatives, promoting them with end users and ensuring that these end users establish direct working relationships with such mechanisms. Additionally, the UN-SPIDER Programme provides guidance to these projects on how they could improve and extend their support to meet the need of the end users.

Building additional opportunities and partnerships

11. In providing support to countries the UN-SPIDER Programme takes advantage of additional opportunities governments, non-governmental organisations and the private sector are making available and also ensures the involvement of leading centres of excellence to support the analysis of the space-based data being made available.

12. China has offered direct access to its satellites HJ-1A and HJ-1B and has already provided imagery to support several emergencies including the recent devastating floods that impacted Guatemala. Additionally, the UN-SPIDER Programme has worked closely with several providers of space-based imagery including NASA, DLR, RapidEye, Scanex, Digital Globe and GeoEye, facilitating the access of data made freely available by these providers to the end users.

13. In providing support to countries the UN-SPIDER Programme aims at involving the Regional Support Offices and other centres of excellence that are in a

position to support the analysis of the data and in the production of the maps and value-added products.

Support provided in 2009 and 2010

14. In 2009 the SpaceAid Framework supported a total of 20 events globally (Afghanistan, Bangladesh, Burkina Faso, El Salvador, Fiji, Guatemala, Indonesia, Iran (Islamic Republic of), Italy, Lao PDR, Morocco, Namibia, the Philippines, Samoa, Senegal, Tajikistan and Vietnam). In the first 5 months of 2010 a total of 19 emergency events have already been supported including the two devastating earthquakes that hit Haiti and Chile (Chile, China, Cook Islands, Gaza oPt, Guatemala, Haiti, Kazakhstan, Kenya, Madagascar, Pakistan, Solomon Islands, Sri Lanka, Tajikistan, Tonga, Turkey, Uganda and Ukraine).

15. The evident increase in the number of events supported by the SpaceAid Framework is due to the implementation of standard operating procedures which contributed to the streamlining and optimisation of the support provided, the establishment of additional agreements and arrangements with existing mechanisms and opportunities, and the increasing expansion of the network of UN-SPIDER Regional Support Offices which brings in additional expertise and resources.

IV. Establishment of the SpaceAid Fund

16. In order to be able to receive funds that will support the aims of the SpaceAid Framework, particularly to ensure rapid and direct acquisition of satellite imagery as well as other space-based technologies to support emergency and humanitarian response in cases when existing mechanisms could not provide the full extent of what is needed, the Office for Outer Space Affairs will set up a specific account within the existing “Trust Fund in Support of United Nations Space Applications Programme”. The Office for Outer Space Affairs will inform Member States of the establishment of the SpaceAid Fund and invite them to contribute to the Fund.

V. Reporting on the progress of the SpaceAid Framework and the use of the SpaceAid Fund

17. At its fiftieth session, the Committee on the Peaceful Uses of Outer Space agreed that progress reports on 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. UNOOSA will in these annual reports present for consideration the progress made within the SpaceAid Framework.