



Committee on the Peaceful Uses of Outer Space

Outreach activities carried out in 2009 in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response

Report of the Secretariat

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I. Introduction

1. In its resolution 61/110, the General Assembly decided to establish a programme within the United Nations 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.
2. In its resolution 62/217, the General Assembly endorsed the platform programme for the period 2007-2009 and the workplan for the biennium 2008-2009 (A/AC.105/894, annexes I and II). 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.¹
3. The present report includes information on outreach activities carried out in 2009 with regard to the workplan for the biennium 2008-2009.

II. Outreach activities: targets for 2009

4. As laid out in its workplan for the biennium 2008-2009 (under activity 4 on outreach activities) and in the framework and implementation plan for outreach activities in 2009, the following activities were to be implemented in the framework of UN-SPIDER:
 - (a) Ensure the participation of expert speakers in at least five relevant conferences and meetings aimed at promoting UN-SPIDER activities;
 - (b) Support at least three regional and international seminars and workshops by helping participants from developing countries meet their travelling costs;
 - (c) Organize at least three workshops, training courses, expert meetings or seminars;
 - (d) Organize at least one workshop, expert meeting or symposium for the benefit of the user community in Geneva.
5. The above-mentioned targets for 2009 were met. All the workshops, expert meetings, conferences and training courses mentioned in the programme were held. Information on all these events can be found at the UN-SPIDER website (<http://www.unspider.org>).
6. In addition, during 2009 the outreach strategy of UN-SPIDER was updated and finalized. The strategy includes detailed definitions of objectives, strategies and activities, as well as guidelines for monitoring and evaluating those activities. In

¹ *Official Records of the General Assembly, Sixty-second Session, Supplement No. 20 (A/62/20), paras. 140-160.*

accordance with the strategy, leaflets in Spanish and English, two newsletters and monthly updates were developed and established as part of its communication and advocacy efforts. Those communication products were distributed through the knowledge portal, the website and e-mails.

III. International and regional workshops and expert meetings held in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response

7. Outreach activities carried out in 2009 in the framework of UN-SPIDER have included the organization of two international workshops, one regional workshop and one expert meeting. The international workshops brought together experts and practitioners from the space and disaster management communities with the aim of enhancing horizontal coordination. The regional workshop was conducted to gather feedback for the generation of a regional action plan for Latin America and to strengthen vertical coordination. The expert meeting targeted Central Asia and its outcomes were used to shape the strategic framework of UN-SPIDER in the subregion.

8. In 2009, the following events were organized:

(a) United Nations international UN-SPIDER workshop on building capacities to reduce disasters, held in Vienna, from 2 to 4 June;

(b) UN-SPIDER regional workshop on space applications for disaster-risk management and emergency response in Latin America, held in Quito from 29 September to 2 October;

(c) Third international UN-SPIDER workshop, on disaster management and space technology: from concept to application, held in Bonn, Germany, from 21 to 23 October;

(d) UN-SPIDER expert meeting on managing disaster using space-based technology in Central Asia, held in Bishkek on 26 August.

9. For a description of each event and a summary of any recommendations and conclusions that resulted from them, see paragraphs 10-55 below. Detailed meeting notes, programmes, lists of participants and copies of the presentations for each of the workshops are available at the UN-SPIDER website (<http://www.unoosa.org/oosa/en/unspider/recentworkshops.html>).

A. United Nations international UN-SPIDER workshop on building capacities to reduce disasters

1. Programme and attendance

10. The United Nations international UN-SPIDER workshop on building capacities to reduce disasters was held in Vienna, from 2 to 4 June 2009. The workshop received support from the Government of Austria.

11. The workshop was organized to coincide with the fifty-second session of the Committee on the Peaceful Uses of Outer Space so that Member States representatives attending the session could also participate in the workshop.

12. The objectives of the workshop were:

(a) To present information on the most recent advances in space-based technologies for disaster management and emergency response;

(b) To review and finalize the draft version of the capacity-building strategy (A/AC.105/947);

(c) To provide continuity to activities being conducted in small island developing States in the framework of UN-SPIDER, particularly in the context of climate change and disaster-risk management.

13. At the workshop, participants learned about the most recent advances in space-based information and solutions for disaster management and relief work, and shared information about existing and planned projects, highlighting the need for an entity to coordinate efforts at the global level.

14. Plenary presentations and two panels were held, at which renowned experts expressed their views on key issues and discussed them with participants in an open manner. The plenary sessions were meant to stimulate the discussions to be held in working groups, which dealt with the following:

(a) Reviewing and finalizing the capacity-building strategy of UN-SPIDER;

(b) Ensuring continuity in the activities conducted in the framework of UN-SPIDER in small island developing States;

(c) Bridging the gap between the space and disaster management communities.

15. A total of 78 participants from the following 34 countries and territories attended the workshop: Austria, Bangladesh, Bhutan, Brazil, British Virgin Islands, Burkina Faso, Colombia, Fiji, France, Germany, India, Indonesia, Iran (Islamic Republic of), Italy, Jamaica, Japan, Maldives, Mexico, Morocco, Nepal, Netherlands, Nigeria, Pakistan, Philippines, Portugal, South Africa, Spain, Sri Lanka, Switzerland, Togo, Thailand, Tunisia, United Kingdom of Great Britain and Northern Ireland and United States of America. United Nations entities, regional training centres promoting the use of space-based technologies, national space agencies, national disaster management agencies, academic and research institutions, private sector entities and non-governmental organizations were also represented.

16. Funds from the United Nations regular budget and from the Ministry of Transport, Innovation and Technology of Austria were used to defray the air travel and daily subsistence allowance of 18 participants from developing countries.

17. The workshop benefitted from an exhibition coordinated by the Austrian Space Agency at which information on activities by Austrian companies and posters related to projects sponsored by the Austrian Research Promotion Agency was provided.

2. Observations and recommendations

18. One of the main goals of the workshop was to further develop the workplan of UN-SPIDER by building upon the work that had been done in previous workshops and to identify the way forward on various topics. In order to reach that goal, the workshop was divided into three thematic sessions.

19. Based on the draft version of the capacity-building strategy, the working group on reviewing and finalizing the capacity-building strategy of UN-SPIDER addressed four issues:

- (a) Development of content for curricula;
- (b) Consideration of elements and strategies to include in the curricula;
- (c) Identification of various approaches to learning;
- (d) Identification of approaches to strengthen institutions.

20. The participants in the working group recommended that an expert group be established to develop the curricula, which should be aligned with the mission of UN-SPIDER. With regard to the content of the curricula, the working group defined two strategies: the first was based on using already available material and the second on requesting UN-SPIDER regional support offices to provide feedback specific to their regions. Institutions with experience using a combination of learning approaches were identified and the way forward was outlined.

21. The working group on ensuring continuity in the activities conducted in the framework of UN-SPIDER in small island developing States addressed the following topics:

- (a) Current use of space-based solutions and information in the Pacific and in the Caribbean;
- (b) Current needs of States in the Pacific and in the Caribbean, and the role of space-based solutions and information;
- (c) Impact of global climate change in terms of the increase in natural disasters in the Pacific and in the Caribbean;
- (d) Regional framework for accessing and using geospatial information to support risk and disaster management in the Pacific.

22. It was recommended that UN-SPIDER strengthen links and partnerships with regional organizations working on those topics and that it assist States in advocating the use of space-based technologies and data for disaster management and risk reduction. In addition, UN-SPIDER should assist in obtaining support for training and capacity-building programmes, establishing or enhancing central repositories based on agreed spatial data standards and supporting the rapid provision of space-borne imagery for assessing the extent of damage caused by and the needs resulting from disasters (the inability to quickly provide such imagery having been considered a serious bottleneck).

23. With regard to the SPIDER Global Thematic Partnership, the working group on bridging the gap between the space and disaster management communities recommended, *inter alia*, that:

(a) Awareness should be raised about national and international policies regarding space-based technologies;

(b) Help should be given to streamline policies aimed at promoting the interoperability of systems and the cataloguing of data;

(c) The work of implementing partner agencies should be promoted and coordinated, the United Nations framework to meet the needs for reducing the risk of disasters should be promoted, guidelines for national focal points should be identified and countries should be provided with guidance on the use of space-based information.

24. Participants identified a number of opportunities provided through SpaceAid, a framework for, inter alia, facilitating fast and efficient access to and use of space-based information in emergencies and humanitarian responses, such as an image bank and facilitated access to existing initiatives. The working group agreed that some filters needed to be applied to access the service and commented on the type of information and support that should be provided through SpaceAid.

B. UN-SPIDER regional workshop on space-based applications for disaster-risk management and emergency response in Latin America

1. Programme and attendance

25. The UN-SPIDER regional workshop on space-based applications for disaster-risk management and emergency response in Latin America was held in Quito from 29 September to 2 October 2009. The workshop was organized jointly by representatives of the Government of Ecuador (from the Technical Secretariat for Risk Management, the Ministry of Foreign Affairs, Trade and Integration, the Air Force and the Center for Integral Surveys of Natural Resources using Remote Sensing), the pro tempore secretariat of the Fifth Space Conference of the Americas and the National Institute of Aerospace Technology of Spain, as well as the United Nations Environmental Programme and the Office for Outer Space Affairs.

26. Taking into consideration the framework of UN-SPIDER, the objectives of the workshop were:

(a) To continue efforts to link UN-SPIDER with the goal of establishing a network of providers and users in Latin America;

(b) To identify ways to bridge the gap between the space community and the risk reduction and disaster response community;

(c) To identify ways and mechanisms that would enable the Office for Outer Space Affairs, through UN-SPIDER, to support countries in the region, starting in Ecuador;

(d) To obtain consensus on capacity-building strategies in Latin America on the issue of space-based applications for risk management and disaster response.

27. It was expected that workshop participants would identify elements helpful in elaborating an action plan for harmonizing relations between institutions, for building capacity in the region and for receiving guidance on the use of space-based

applications in the event of natural disasters and environmental threats in Latin America, using Ecuador as an example.

28. A panel discussion was held, in the course of which representatives from space agencies commented on the use of space-based information for a variety of purposes. In addition, 21 presentations were given in the plenary, covering four main topics:

- (a) Recent advances in space-based applications for risk assessment and disaster response in Europe and Latin America;
- (b) The use of space-based technologies in early warning;
- (c) Mechanisms for information dissemination and capacity-building in the region;
- (d) Harmonization of institutional initiatives.

29. In smaller sessions, participants discussed ways to do the following:

- (a) Make efforts to improve the technical advice to be provided by the Office for Outer Space Affairs, through UN-SPIDER, at the national and regional levels;
- (b) Develop an action plan for Latin America;
- (c) Implement a subprogramme of the SPIDER Global Thematic Partnership for Latin America and the Caribbean.

30. The following four aspects were identified as being relevant in planning activities to be carried out by the Office for Outer Space Affairs, through UN-SPIDER and a subprogramme of the SPIDER Global Thematic Partnership for Latin America and the Caribbean:

(a) Policies to institutionalize access to and use of space-based information to support responses at all phases of disasters and to ensure that a critical mass of professionals has been established and is sustained through training and strengthening institutions;

(b) Harmonization of efforts with other international organizations (International Strategy for Disaster Reduction (ISDR), Office for the Coordination of Humanitarian Affairs, United Nations Environment Programme, International Center for “El Niño” Research (CIIFEN) etc.), regional entities (Organization of American States, Andean Committee for Disaster Prevention and Relief (CAPRADE), Coordination Center for the Prevention of Natural Disasters in Central America (CEPREDENAC), Mesoamerican Regional Visualization and Monitoring System (SERVIR) of the Water Center for the Humid Tropics of Latin America and the Caribbean (CATHALAC) etc.) and national institutions (civil protection entities, national space agencies etc);

(c) Sustainability of human, infrastructural and financial resources at the international, regional and national levels;

(d) Capacity-building through a network of regional centres (Regional Center for Education in Space Science and Technology for Latin America and the Caribbean (RECTEALC), Mario Gulich Institute for Higher Space Studies, SERVIR-CATHALAC) and national institutions (universities, national training centres).

31. The workshop brought together over 60 representatives from various institutions in the following 17 European and Latin American countries: Argentina, Austria, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Germany, Guatemala, Mexico, Peru, Spain, Uruguay and Venezuela (Bolivarian Republic of). Several United Nations entities, regional institutions responsible for capacity-building in the use of space-based technologies and for disaster risk reduction, national disaster management and civil defence agencies, national space agencies, academic and research institutions and private sector entities as well as non-governmental organizations were also represented.

32. The Government of Spain and the Government of Ecuador provided funds to defray the travel expenses of 27 participants, 22 of whom came from developing countries in Latin America and the Caribbean.

2. Observations, recommendations and results

33. The working group on policies to institutionalize access to and use of space-based information recommended that account be taken of existing regional and national initiatives, such as the Andean Strategy for Disaster Prevention and Response and the CEPREDENAC Regional Disaster Reduction Plan 2006-2015, and that special policies be promoted to encourage the use of space-based information to support the entire disaster management cycle and address concerns linked to access to telecommunications and sustainability.

34. During the session on harmonization of efforts, the working group recommended that UN-SPIDER efforts be harmonized with those of other international organizations in the United Nations System, of the space community and of regional bodies so as to institutionalize the use of space-based information. Similarly, UN-SPIDER should harmonize its efforts with those of capacity-building centres at the national, regional and global levels so as to establish a critical mass of experts to conduct tasks aimed at increasing access to and use of space-based information in support of disaster reduction and emergency response.

35. In order to ensure the sustainability of efforts, the necessary human, financial and infrastructural resources must be provided to ensure that the critical mass of experts and professionals, once established, can function on a permanent basis. Participants in the respective discussion sessions identified several strategies, including the tailoring results obtained from space-based information so that the needs of national platforms for disaster reduction are met and linking efforts to other important aspects, such as climate change, food security and human security, that would contribute to sustainable development. Participants recommended that efforts be made to demonstrate the benefits of using space-based information, of involving the productive sector and of seizing opportunities for achieving sustainability at different levels (for example, at the local, provincial, national, regional and global levels).

36. In the session on training the working group recommended that national, regional and global training programmes take advantage of various learning formats, including online learning, and that links be made with institutions involved in science and technology policies and innovation.

37. One of the goals of the workshop was to discuss and receive recommendations for the implementation of a regional network in the context of the SPIDER Global

Thematic Partnership, launched at the second session of the Global Platform for Disaster Risk Reduction, which was held in Geneva from 16 to 19 June 2009. A number of recommendations were made on how best to establish such a partnership and what its functions should be. Among the specific activities outlined were the following: to analyse regional and international policies, strategies and practices with the aim of adjusting and adapting to them; to assess, from a cost-benefit perspective, the use of space-based information; to consider establishing a monitoring system on technologies and methodologies; to develop mechanisms for coordination; and to make efforts enabling different agencies within countries in the region to share information.

38. The workshop in Ecuador has enabled the Office for Outer Space Affairs, through UN-SPIDER, to do the following:

- (a) To continue its outreach activities with the goal of establishing a network of operators and users in Latin America;
- (b) To identify ways to bridge the gap between the space community and the risk reduction and disaster response community;
- (c) To identify ways and mechanisms to support countries in the region, using Ecuador as a starting point;
- (d) To reach consensus on capacity-building strategies in Latin America regarding space applications in risk management and disaster response.

39. In terms of results, the workshop made it possible for the Office for Outer Space Affairs, through UN-SPIDER, to do the following:

- (a) To collect profiles on six countries (Colombia, Costa Rica, Dominican Republic, Guatemala, Peru and Venezuela (Bolivarian Republic of)) describing the progress made in the use of space-based information in each country;
- (b) To obtain information or advice about agencies to contact, procedures to follow and aspects to be aware of in order to facilitate the technical mission that was held the week after the workshop in Ecuador had taken place;
- (c) To make progress in planning the technical mission to the Dominican Republic and in preparations for carrying out similar missions to Colombia, Guatemala and Venezuela (Bolivarian Republic of);
- (d) To identify ways to conduct joint activities with ISDR, CIIFEN, CRECTEALC, CEPREDENAC, the National Commission on Space Activities (CONAE) of Argentina, the Pan American Institute of Geography and History and others;
- (e) To obtain insight, with regard to the planning, organizing, implementing and reporting phases, that could be applied in holding similar regional workshops in Africa and Asia.

C. Third international UN-SPIDER workshop on disaster management and space technology: from concept to application

1. Programme and attendance

40. The third international UN-SPIDER workshop on disaster management and space technology: from concept to application was organized by the Office for Outer Space Affairs and the German Aerospace Center (DLR) with the support of the secretariat of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa.²

41. The main objectives of the workshop were to promote access to and use of space-based technologies and solutions for disaster management and emergency response within relevant communities and to report on progress made in the framework of UN-SPIDER with regard to designing and implementing applications in the knowledge portal to meet the needs of users.

42. Introductory keynote addresses on space-based information in support of disaster management and 40 plenary presentations were given. In addition, four thematic sessions addressing the following four issues were held:

- (a) Space technology in support of risk reduction and disaster management;
- (b) Adaptation to global climate change and land degradation utilizing innovative monitoring and analysing tools;
- (c) SpaceAid;
- (d) Disaster medicine, telemedicine and integrated vector management.

43. A total of 150 participants from the following 52 countries attended the workshop: Algeria, Australia, Austria, Bangladesh, Barbados, Benin, Bulgaria, Burkina Faso, Cameroon, Canada, Chile, China, Congo, Croatia, Eritrea, Ethiopia, France, Georgia, Germany, Greece, India, Iran (Islamic Republic of), Italy, Jordan, Kazakhstan, Kenya, Kyrgyzstan, Lithuania, Malawi, Namibia, Netherlands, Nigeria, Poland, Portugal, Republic of Moldova, Russian Federation, Senegal, Serbia, Slovakia, Sri Lanka, Sudan, Switzerland, Thailand, Trinidad and Tobago, Turkey, Ukraine, United Kingdom, United Republic of Tanzania, United States, Uzbekistan, Viet Nam and Zimbabwe.

44. Several representatives of United Nations entities and other international and regional bodies also attended the workshop. Various space agencies and disaster management organizations, international scientific organizations, knowledge transfer and educational institutions, and private companies were also represented.

45. The workshop participants met with members from the United Nations Geographic Information Working Group (UNGIWG), which held its tenth plenary meeting in Bonn, Germany, from 19 to 21 October 2009. Other events that coincided with the activities that were already in the workshop programme included meetings on the Caribbean flood management project, the Namibian SensorWeb Pilot Project on integrated flood management and the Geographic Information

² United Nations, *Treaty Series*, vol. 1954, No. 33480.

Support Team. Participants agreed that synergies for fostering communication and network development between these international groups could be achieved.

46. Funds allocated by the United Nations, the Government of Germany and DLR were used to defray the costs of the workshop (including side events), air travel and daily subsistence allowance for 28 participants from developing countries and countries with economies in transition.

2. Observations and recommendations

47. One of the main goals of the workshop was to link the space community and the disaster management community. It also aimed to provide recommendations for moving forward on the set-up of an integrated information and communication platform. With those goals in mind, the workshop was divided into four thematic sessions dealing with the following issues: space technology in support of risk and disaster management; SpaceAid; adaptation to global climate change and land degradation utilizing innovative monitoring and analysing tools; and the contribution of space-based solutions to the fields of emergency and disaster medicine, telemedicine and vector-borne diseases.

48. At the first thematic session, on space technology in support of risk and disaster management, relevant space-based solutions and information for risk and disaster management support and emergency response were discussed. They included ongoing and planned initiatives, case studies and best practices, available geospatial data for disaster studies and capacity-building opportunities. The work carried out by the Group on Earth Observations (GEO) with respect to its societal benefit area of disasters was highlighted.³ Additionally, a prototype of the UN-SPIDER knowledge portal was presented.

49. At the second session, SpaceAid was discussed. SpaceAid enables countries and international organizations to quickly and efficiently access space-based information. The main objective of the session was to link both the space community and the disaster management community. It also aimed to provide recommendations for moving forward on the set-up of an extended SpaceAid service by building on existing mechanisms. In order to reach those aims, three working groups discussed the following topics: (a) mapping existing mechanisms; (b) user requirements; and (c) strategies and agreements for international coordination.

50. At the third session, participants dealt with the issue of adapting to global climate change and land degradation utilizing innovative monitoring and analysing tools. Especially in developing countries, vulnerability to climate and environmental change is likely to increase as rapid population growth places ever-greater demands on resources. Presentations were given by representatives from Bangladesh, Ethiopia, Sri Lanka, the Sudan and Zimbabwe.

51. At the fourth session, the contribution of space-based solutions to the fields of emergency and disaster medicine, telemedicine and vector-borne diseases was explored. Several case studies from Africa, as well as from Australia and

³ The societal benefit area of disasters is one of nine such areas identified in the 10-Year Implementation Plan of the Group on Earth Observations. The text of the Plan is available at <http://www.geosec.org>.

Bangladesh, demonstrated that awareness was growing of the increasing risks to human health caused by epidemics of infectious diseases, including malaria, meningitis and cholera, that were weather and climate sensitive. It was recognized that such epidemics seriously disrupted societies and overburdened national health systems. It was also recognized that improved understanding of current and future changes in the climate, as well as of the consequences of such changes, was needed. It was recommended that in situ ground measurement systems, remote sensing monitoring techniques and appropriate early warning systems (as expressed by several authors) be further developed and integrated. It was noted that new strategies for preventing and controlling vector-borne diseases emphasized the integrated vector management approach, as it reinforced the links between health and the environment.

D. UN-SPIDER expert meeting on managing disasters using space-based technology in Central Asia

52. The UN-SPIDER expert meeting on managing disasters using space-based technology in Central Asia, the first such meeting on Central Asia, was held in Bishkek on 26 August 2009. It was organized to bring together 25 experts from the geospatial community and the disaster management community who represented international and regional organizations, government and academic institutions, and the private sector. The costs of participation for two experts from the disaster management community from the region were defrayed.

53. At the expert meeting two presentation sessions were held, as well as a discussion and recommendations session. The programme of the meeting and the list of participants is included in the meeting notes available at the UN-SPIDER website.

54. The first presentation, which focused on the work being carried out by the risk reduction and emergency response community, was entitled “Disaster management and risk reduction in Central Asia: current status and needs/expectations”. The second presentation was entitled “Opportunities of space-based information for disaster management and risk reduction”.

55. During the discussion and recommendations session, participants broadly outlined the main ways in which further access to and use of space-based information in Central Asia could be supported. The recommendations were grouped according to the following three themes:

(a) Data access and use: participants stressed the need to ensure access to and use of space-based information. Having agreed that there was no lack of data, the issue was the ability to analyse the data to produce information, to share the data and information with others who could benefit from it, and to ensure that such information was used to support decision-making;

(b) Capacity-building: building capacity was one of the main topics discussed by the participants. The focus was on adopting a capacity-building approach that rested on training individuals to use space-based information to support activities targeting the full disaster management cycle, on institutionalizing the use of such information in agencies and organizations responsible for

conducting those tasks and on supporting access to hardware, software and related infrastructure to make use of such information, as defined in the UN-SPIDER capacity-building strategy (A/AC.105/947, para. 9). Participants noted that there was a scarcity of qualified “geospatial workers” and a need to institutionalize the use of space-based information;

(c) Networking in Central Asia, at the regional and national levels: participants agreed that there was a need to hold additional meetings and to establish a Central Asian repository of information and a Central Asian coordination mechanism for disaster reduction and response.

IV. Additional outreach activities

A. Special event to launch the SPIDER Global Thematic Partnership at the second session of the Global Platform for Disaster Reduction

56. Pursuant to the guidelines contained in General Assembly resolution 61/110, according to which UN-SPIDER should work closely with, inter alia, ISDR, meetings for five regions (the Americas, Asia, Asia and the Pacific, Africa and Europe) were held to gather elements for the design of a thematic partnership within the framework of technical platforms established by ISDR in support of the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters.⁴

57. On the occasion of the second session of the Global Platform for Disaster Reduction, the Office for Outer Space Affairs organized, together with GEO, the Asian Disaster Reduction Center and the Economic and Social Commission for Asia and the Pacific, a special event to launch the SPIDER Global Thematic Partnership.

58. The Partnership will facilitate networking among practitioners worldwide involved in providing space-based information and services in support of disaster risk management. The SPIDER Global Thematic Partnership is in line with efforts made by ISDR, in particular with its efforts to support national and regional platforms in reducing the risk of disaster.

B. Exhibition to mark the International Day for Natural Disaster Reduction

59. Pursuant to General Assembly resolution 44/236, in which the Assembly decided to designate the second Wednesday of October International Day for Natural Disaster Reduction, on 14 October 2009 an exhibition and a series of presentations were held in Vienna and in Bonn to provide information on UN-SPIDER and its efforts to respond to natural and man-made disasters. The occasion was used to draw the world’s attention to several devastating natural disasters that had struck the world shortly before that day and to show support for those affected by a cyclone that had hit the Philippines.

⁴ A/CONF.206/6 and Corr.1, chap. I, resolution 1.

60. The day-long event was attended by more than 100 persons, including the Ambassador of the Philippines and other representatives of the Permanent Mission of the Philippines to the United Nations, the Philippine community in Austria, staff members of the Vienna-based organizations and visitors to the Vienna International Centre. The activities that took place in Bonn were also attended by United Nations staff and visitors.

61. Speaking before the Fourth Committee of the General Assembly, Hilario Davide Jr. (Philippines), highlighted the important role space-based technology can play in helping countries prone to natural disasters prepare effective responses to calamities. He expressed the appreciation of his Government for the valuable assistance it received when the storms were buffeting the country from UN-SPIDER of the Office for Outer Space Affairs.

C. Participation of experts in relevant conferences and meetings

62. UN-SPIDER experts participated in a number of relevant meetings to provide information about space-based solutions for disaster management and emergency response and about the work done through UN-SPIDER. Below is a list of the most relevant meetings attended in 2009:

(a) Map World Forum: A Global Confluence of Geospatial Thought, Hyderabad, India, 10-13 February;

(b) First session of the Regional Platform for Disaster Risk Reduction of the Americas, Panama City, 17-19 March;

(c) Lecture on satellite remote sensing: supporting risk and disaster management from space, Ruhr University Bochum, Germany, 20 March;

(d) Meeting of the ISDR Asia Partnership, Bangkok, 23-24 March;

(e) First session of the Committee on Disaster Risk Reduction, Bangkok, 25-27 March;

(f) Global Meeting of the Intergovernmental Coordination Groups for Tsunami Warning Systems, Paris, 24-27 March;

(g) Ninth meeting of the GEO Capacity-Building Committee, Athens, 25-29 April;

(h) First session of the Committee on Development Information, Science and Technology, Addis Ababa, 28 April-1 May;

(i) Second meeting of the Africa Regional Platform for Disaster Risk Reduction, Nairobi, 3-8 May;

(j) Thirty-third International Symposium on Remote Sensing of Environment, Stresa, Italy, 5-7 May;

(k) Twenty-seventh plenary of the Working Group on Information Systems and Services of the Committee on Earth Observation Satellites, Toulouse, France, 11-15 May;

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- (l) Pacific Platform for Disaster Risk Management 2009, Nadi, Fiji, 10-16 May;
- (m) Sixteenth World Congress on Disaster and Emergency Medicine, Victoria, Canada, 12-15 May;
- (n) Meeting to present a project for the development of an Earth observation-based regional centre for crisis data, Innsbruck, Austria, 13-14 May;
- (o) First meeting of the Group on Earth Observation System of Systems (GEOSS) Data-Sharing Task Force, Geneva, 27-28 May;
- (p) Second session of the Global Platform for Disaster Risk Reduction, Geneva, 16-19 June;
- (q) Eleventh international conference of the Global Spatial Data Infrastructure Association, Rotterdam, the Netherlands, 18-19 June;
- (r) A technical meeting with representatives of all United Nations entities involved in generating information for disaster management to establish a data-sharing platform under the United Nations Assistance Mission in Afghanistan, Kabul, 23 June;
- (s) GEOSS Workshop XXVIII: Health and the Environment, Geneva, 7-9 July;
- (t) Second Joint Project Team Meeting for Sentinel Asia Step 2, Denpasar, Indonesia, 15-17 July 2009;
- (u) Thirteenth session of the Intergovernmental Consultative Committee on the Regional Space Applications Programme for Sustainable Development in Asia and the Pacific, Bangkok, 19-24 July;
- (v) Convergencia 2009, Guatemala City, 20-24 July;
- (w) Meeting of the ISDR Asia Partnership, Incheon, Republic of Korea, 13-14 August;
- (x) Third Central Asia GIS Conference, Bishkek, 27-28 August;
- (y) Economic Commission for Africa consultative meeting on a climate activities database, Addis Ababa, 1-2 September;
- (z) Capacity-building in Disaster Geo-information Management in Developing Countries, Enschede, the Netherlands, 23-25 September;
- (aa) International Symposium on Disasters Management, Riyadh, 3-6 October;
- (bb) Global Disaster Alert and Coordination System (GDACS) workshop on disaster information management, Geneva, 7-8 October;
- (cc) Tenth meeting of the United Nations Geographic Information Working Group, Bonn, Germany, 19-21 October;
- (dd) Meeting of the Kenya Humanitarian Forum, Nairobi, 23 October;
- (ee) GEOSS workshop on Disaster Management and Humanitarian Assistance, Kampala, 24-25 October;

- (ff) Emergency Event Database (EM-DAT) Technical Advisory Group Meeting, New York, 26-28 October;
- (gg) Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific, Bangkok, 26-29 October;
- (hh) International Conference on Geo-spatial Information and Sustainable Development in Africa (AfricaGIS 2009), Kampala, 26-30 October;
- (ii) Regional Seminar and Workshop on Tsunami Risk Assessment and Mitigation for Indian Ocean Countries, Bangkok, 3-9 November;
- (jj) GDACS workshop on map/satellite-image coordination, Geneva, 4-5 November;
- (kk) Inter-Agency Standing Committee workshop on strengthening evidence-based humanitarian decision-making, Geneva, 4-6 November;
- (ll) Sixth Plenary Session of GEO, Washington, D.C., 17-18 November;
- (mm) Committee on Earth Observations workshop on the societal benefit area of disasters, Frascati, Italy, 1-2 December;
- (nn) Pacific Island Countries GIS/Remote Sensing User Conference, Suva, 1-4 December;
- (oo) Pacific Humanitarian Team Workshop, Nadi, Fiji, 2-4 December;
- (pp) Fourth Caribbean Conference on Comprehensive Disaster Management, Montego Bay, Jamaica, 7-11 December;
- (qq) United Nations Climate Change Conference, Copenhagen, 7-18 December.

D. Support to regional and international seminars, workshops and other meetings

63. An important part of the outreach activities carried out in the framework of UN-SPIDER is the support given to international meetings through the provision of funds to help participants from developing countries meet their travelling costs.
64. One person from Cameroon was given support to attend a joint symposium entitled "Geo-informatics for Early Warning and Emergency Management: Towards Better Solutions", held in Prague from 19 to 22 January 2009.
65. The Office for Outer Space Affairs assisted three people from Brazil, Colombia and Peru in participating in a training event organized by CONAE on capacity-building in remote sensing applied to risk reduction for floods, held in Córdoba, Argentina, from 14 to 18 September.
66. An expert from Nigeria received support to attend the seminar on capacity-building held in Enschede, the Netherlands, from 23 to 25 September 2009 and two participants (one from Lesotho and the other from Zimbabwe) received funding to attend the AfricaGIS conference held in Kampala from 26 to 30 October 2009.

67. One expert from the Regional Centre for Training in Aerospace Surveys, in Nigeria, received funds to attend the West Africa Subregional Training Workshop on Risk Assessment, held in Dakar from 25 to 27 November 2009, and three experts from Tonga received support to participate in the Pacific Islands GIS/Remote Sensing Conference, held in Suva from 1 to 4 December 2009. Also, one person from Trinidad and Tobago was supported to attend the Fourth Caribbean Conference on Comprehensive Disaster Management, held in Montego Bay, Jamaica, from 7 to 11 December 2009.

68. In addition, the Office for Outer Space Affairs hosted a technical expert meeting to further develop the Namibian SensorWeb Pilot Project on integrated flood management and water and vector-borne disease modelling in Bonn, Germany, from 24 to 26 August 2009. The tenth meeting of the United Nations Geographic Information Group Working Group, held from 19 to 21 October 2009, and the Caribbean Flood Pilot Initial Review Meeting, held on 20 October 2009, were also hosted by the Office in Bonn.

V. Voluntary contributions

69. The successful implementation of the outreach activities carried out in 2009 benefited from important voluntary contributions (cash and in-kind) received from Governments and private sector entities, including:

(a) The Ministry for Transport, Innovation and Technology of Austria, which contributed 150,000 euros in support of capacity-building and outreach activities;

(b) The Government of Germany, which is contributing 150,000 euros a year for four years in support of the activities of the UN-SPIDER Bonn office;

(c) The Government of Spain, which contributed 50,000 euros to defraying the costs of the regional UN-SPIDER workshop in Quito;

(d) The Ministry for European and International Affairs of Austria, which contributed 49,980 euros to defray the full costs of the expert meetings and missions to small island developing States;

(e) The Government of Ecuador, which contributed to defraying the costs of the regional UN-SPIDER workshop in Quito;

(f) DLR, which contributed to defraying the costs of the UN-SPIDER workshop held in Bonn, Germany;

(g) Google Inc., which provided support for the UN-SPIDER workshop held in Bonn, Germany;

(h) The Association of Austrian Space Industries, which provided support for the UN-SPIDER workshop held in Vienna.