United Nations A/AC.105/927

General Assembly

Distr.: General
11 December 2008

Original: English

Committee on the Peaceful Uses of Outer Space

Outreach activities carried out in 2008 in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response

Report of the Secretariat

Contents

V.08-58748 (E) 280109 290109

I. Introduction

1. In its resolution 61/110 of 14 December 2006, 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. In that same resolution, the Assembly agreed that the programme should be named the United Nations Platform for Space-based Information for Disaster Management and Emergency Response and that it should be implemented as a programme of the Office for Outer Space Affairs of the Secretariat.

2. In its resolution 62/217 of 22 December 2007, the General Assembly agreed that the acronym of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response should be UN-SPIDER and 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 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 2008 with regard to the platform programme for the period 2007-2009 and the workplan for the biennium 2008-2009.

II. Outreach activities

4. As laid out in its workplan for the biennium 2008-2009 (under activity 4 on outreach activities), in 2008 UN-SPIDER was:

(a) To ensure the participation of expert speakers in at least five relevant conferences and meetings aimed at promoting UN-SPIDER activities;

(b) To support at least three regional and international seminars and workshops by helping participants from developing countries meet their travelling costs;

(c) To organize at least three workshops, training courses, expert meetings or seminars;

(d) To organize at least one workshop, expert meeting or symposium for the benefit of the user community in Geneva.

5. Furthermore, in the workplan it was specified that the activities defined for 2008 should be carried out in the framework of outreach activities. The text of the workplan for the biennium 2008-2009 can be found on the UN-SPIDER website (http://www.unspider.org).

---

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

6. The above-mentioned targets for 2008 were met. All the workshops, expert meetings, conferences and training courses mentioned in the programme were held.

A. 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. UN-SPIDER outreach activities have focused on the organization of international and regional workshops and expert meetings. The international workshops held in the framework of UN-SPIDER have focused on bringing together experts and practitioners to enhance horizontal coordination; the regional workshops have focused on selected themes and on strengthening vertical coordination; and the expert meetings have focused on selected issues and on shaping the strategic framework of UN-SPIDER.

8. In 2008, the following four workshops were organized by UN-SPIDER staff:

(a) The United Nations international UN-SPIDER expert meeting on building upon the network of regional support offices, held in Salzburg, Austria, from 7 to 9 February 2008;

(b) The United Nations regional UN-SPIDER workshop on building upon regional space-based solutions for disaster management and emergency response for the Caribbean, held in Hastings, Barbados, from 8 to 11 July 2008;

(c) The United Nations regional UN-SPIDER workshop on building upon regional space-based solutions for disaster management and emergency response for the Pacific, held in Suva from 16 to 19 September 2008;

(d) The second United Nations international UN-SPIDER workshop on disaster management and space technology: bridging the gap, held in Bonn, Germany, from 13 to 15 October 2008.

9. For a description of each workshop and a summary of the recommendations and conclusions that resulted from them, see paragraphs 24-67 below. Detailed meeting notes, programmes, lists of participants and copies of the presentations for each workshop are available on the UN-SPIDER website (http://www.unoosa.org/oosa/en/unspider/recentworkshops.html).

B. Working meeting on United Nations initiatives in the area of risk and disaster management and space-based solutions

10. The Office for Outer Space Affairs organized, together with the Group on Earth Observations (GEO), a one-day working meeting on United Nations initiatives in the area of risk and disaster management and space-based solutions in Geneva on 27 March 2008. The working meeting was aimed to benefit the end-user community based in Geneva. Representatives from entities of the United Nations system and relevant partner organizations and institutions were invited to present their initiatives in the area of risk and disaster management and emergency response, and to provide information on existing programmes that facilitate access to and the use of space-based solutions and information to support those initiatives. The discussion

that followed the presentations provided an opportunity for representatives of United Nations entities to identify possible synergies with a view to coordinating more closely the work carried out by their entities.

11. Representatives of the following United Nations entities, partner institutions and other international entities attended the working meeting: Office for the Coordination of Humanitarian Affairs of the Secretariat, Office for Outer Space Affairs, United Nations Institute for Training and Research, World Food Programme, secretariat of the International Strategy for Disaster Reduction (ISDR), United Nations Geographic Information Working Group, World Health Organization, International Telecommunication Union, World Meteorological Organization, European Commission, European Centre for Training and Research in Earthquake Engineering, Environmental Systems Research Institute, Inc. and GEO.

12. Participants in the working meeting agreed, inter alia, that:

(a) Minimum common operational datasets should be available and accessible;

(b) Value-added products must be made available to end-users;

(c) Areas with a higher frequency of disasters should be given priority;

(d) Networks should be established, existing linkages should be strengthened (including at the field level) and agreements should be put in place before disasters strike;

(e) Partnerships should be established, including with the private sector;

(f) Duplication of efforts should be avoided, especially considering that a dataset could be useful to different users;

(g) Advantage should be taken of existing forums, such as the United Nations Spatial Data Infrastructure of the United Nations Geographic Information Working Group, the Inter-Agency Meeting on Outer Space Activities and the ISDR thematic platforms.

13. UN-SPIDER will take into consideration the above recommendations and conclusions when working with the Geneva-based end-user community.

C. Fifth United Nations-wide meeting on the use of space technologies for emergency response and humanitarian assistance

14. The Office for Outer Space Affairs organized the fifth United Nations-wide meeting on the use of space technologies for emergency response and humanitarian assistance in Bonn, Germany, on 16 and 17 October 2008. Thirty-one representatives from 25 United Nations entities and partner institutions attended the two-day meeting, which focused on understanding the current evolving operational environment and the need for closer coordination among entities inside and outside the United Nations system.

15. The programme of the meeting included nine presentations. In addition, five detailed technical presentations were delivered on the second day of the meeting to provide United Nations experts with information on how to access and

use space-based solutions. Discussions held on both days focused on accessing available initiatives, making the products widely available and evaluating the work carried out by the United Nations and partner institutions.

16. Representatives from United Nations entities updated the Common Vision for 2009 on the United Nations and the Use of Space Technologies for Emergency Response and Humanitarian Assistance to reflect the discussion points raised and conclusions reached during the meeting. All United Nations representatives present at the meeting confirmed the role of the Office for Outer Space Affairs as cooperating body of the Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters (also called the International Charter on Space and Major Disasters) and agreed that all requests for activations of the Charter from entities in the United Nations system should be sent through the Office for Outer Space Affairs only.

D. Participation of expert speakers in relevant conferences and meetings

17. UN-SPIDER experts participated in a number of relevant international and regional meetings in order to provide information about space-based solutions for disaster management and emergency response and present the work of the programme. Among the meetings attended in 2008 were the following:

(a) An international conference entitled “Earth Observation: Solutions for Decision-Making”, held at the Berlin Air Show in Berlin on 27 and 28 May;

(b) The First Joint Project Team Meeting for Sentinel Asia Step-2, held in Kobe, Japan, on 5 and 6 June;

(c) The European Union Community Civil Protection Mechanism Assessment Mission Course, held in Agros, Cyprus, from 6 to 13 June;

(d) The fifteenth annual conference of the International Emergency Management Society, held in Prague from 17 to 19 June;

(e) A workshop entitled “Role of Modern Civil Protection Systems and the New Global Challenges: from the Hyogo Framework of Action to Real-time Response”, held in Geneva on 25 June;

(f) An international conference entitled “Global Change and Water Resources in West Africa”, held in Ouagadougou from 25 to 28 August;

(g) The 2008 International Disaster and Risk Conference, held in Davos, Switzerland, from 25 to 29 August;

(h) The Seventh International Conference of the African Association of Remote Sensing of the Environment, held in Accra from 27 to 31 October;

(i) The Fifth Plenary Session of the Group on Earth Observations, held in Bucharest from 19 to 20 November;

(j) The First Regional Conference on Geoinformatics: Disaster Management and Early Warning Systems, held in Kuwait City from 24 to 26 November;

(k) The Third Asian Ministerial Conference on Disaster Risk Reduction, held in Kuala Lumpur from 2 to 4 December.

E. Support to regional and international seminars and workshops

18. 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. One participant from China received support to attend the second regional course on the use of geographic information systems and remote sensing in disaster risk management, held in Bangkok from 5 to 16 May 2008 and 10 participants from Latin America received funding from UN-SPIDER to attend the Workshop on Establishing a University Network in Latin America for Disaster Reduction (which included a training course and workshop on landslides), held in Antigua, Guatemala, from 2 to 10 June 2008.

19. In addition, UN-SPIDER provided grants to support four specific UN-SPIDER meetings organized by relevant regional institutions, which were responsible for organizing either a workshop or a training session in their region. The grants provided by UN-SPIDER were used mainly to defray the travel and living costs of participants from developing countries from the respective region.

20. The first of those four meetings was a West African regional workshop on UN-SPIDER and the role of the International Charter on Space and Major Disasters, held in Abuja on 21 and 22 May 2008. The workshop was organized jointly by the National Space Research and Development Agency and the National Emergency Management Agency of Nigeria and was attended by over 200 participants from 20 countries, mostly from within Africa. The objective of the workshop was to raise awareness about UN-SPIDER and the International Charter on Space and Major Disasters and provide a forum for discussing ways of improving regional access to space-based information for disaster management.

21. The second of those four meetings, entitled “Spring School on Natural Disasters and Spatial Solutions for Disaster Management: Flooding”, was organized by the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (Brazil campus) in Santa Maria, Brazil, from 8 to 12 September 2008. A total of 35 participants from 11 countries attended the training course to discuss and learn more about space-based solutions for disaster management, specifically for the management of floods. Further information is available on the website of the Regional Centre (http://www.crectealc.org/).

22. The third of those meetings was organized by the Iranian Space Agency. The Iranian Space Agency/UN-SPIDER regional workshop on building upon regional space-based solutions for disaster management and emergency response, held in Tehran from 6 to 8 October 2008, brought together over 60 experts from the area to present information on existing initiatives and solutions, and discuss specific UN-SPIDER activities for the Islamic Republic of Iran and neighbouring countries. Participants also reflected on the best concepts for delivering support to both national activities and national planning and policies that make use of space-based technologies. Discussions took place on the impact of global climate change on the

increase in natural disasters in the area and on how space-based technologies could contribute to mitigating that impact.

23. The fourth of those meetings was a workshop on the technical, organizational and legal aspects of using space technology for disaster management and emergency response that was held in Rabat from 10 to 12 November 2008. The workshop was organized with the support of UN-SPIDER by the Regional Centre for Space Science and Technology—in French Language, the Islamic Educational, Scientific and Cultural Organization, the Islamic Development Bank, the Royal Centre for Remote Sensing (CRTS) and the Ecole Mohammadia d'Ingénieurs. The workshop, which was attended by 130 participants from 23 countries, covered four main themes: the kind of space technology available for disaster management, regional and international initiatives for disaster management, national experiences and space law. Information on many regional and international initiatives was presented at the workshop, as were experiences gained with regard to space technology and space-based information for disaster management in many different countries of the region. Further information is available on the website of the Regional Centre (http://www.crastelf.org.ma/).

III. United Nations international UN-SPIDER expert meeting on building upon the network of regional support offices

A. Programme and attendance

24. The United Nations international UN-SPIDER expert meeting on building upon the network of regional support offices, held in Salzburg, Austria, from 7 to 9 February 2008, was organized by the Office for Outer Space Affairs and the Centre for Geoinformatics of the University of Salzburg.

25. The objectives of the expert meeting were:

(a) To review the status of implementation of the activities planned for 2007 and the establishment of the UN-SPIDER offices;

(b) To discuss the UN-SPIDER network of regional support offices, which is one of the three cornerstones of the programme, the other two cornerstones being UN-SPIDER staff and the national focal points;

(c) To define ways and means of efficiently coordinating and interacting with the network of regional support offices, reviewing how they would contribute to the UN-SPIDER activities contained in the workplan for the biennium 2008-2009;

(d) To draft an operational plan detailing activities to be implemented by the network of regional support offices during the period 2008-2009.

26. The above objectives were also discussed in break-out groups under the following three main topics: capacity-building and knowledge management and transfer; the knowledge portal; and support to national disaster management planning and policies.

27. A total of 35 senior experts from the following countries participated in the meeting: Argentina, Austria, Cameroon, Croatia, Germany, Iran (Islamic Republic of), Kenya, Morocco, Netherlands, Pakistan, Panama, Saudi Arabia, South Africa, Spain, Thailand, Turkey and United States of America. The following international entities were represented: the Asian Disaster Preparedness Center, the Water Center for the Humid Tropics of Latin America and the Caribbean and the African Regional Centre for Space Science and Technology Education—in French Language.

B. Observations and recommendations

28. Meeting participants reviewed the key elements of the UN-SPIDER workplan for the biennium 2008-2009 and other relevant documents and reports related to the network of regional support offices, the national focal points and partner organizations. They then discussed the topics of capacity-building and knowledge management and transfer. A brainstorming session was followed by a discussion aimed at identifying how partner institutions could contribute to the relevant capacity-building and knowledge management and transfer activities contained in the workplan, keeping in mind their expertise and resources.

29. A draft concept for the knowledge portal was presented to participants by UN-SPIDER staff. Feedback and recommendations on how to further develop the portal were collected in break-out groups and subsequently discussed in the plenary. In addition to discussing the main issue of the content, participants also considered the following issues: the design, the collection and input of information, the navigation and the linkages to relevant institutions and organizations.

30. The third topic to be discussed was the support to national disaster management planning and policies. Participating experts attempted to define, in greater detail, how such support could be provided, how countries could request it and how UN-SPIDER partners could contribute and even take regional leadership in helping countries access and use space-based solutions for disaster management.

31. The expert meeting was made possible by the funds provided to UN-SPIDER by the Ministry for Transport, Innovation and Technology of Austria. A total of 11 participants were provided with funding to attend the workshop.

IV. United Nations regional UN-SPIDER workshop on building upon regional space-based solutions for disaster management and emergency response for the Caribbean

A. Programme and attendance

32. The United Nations regional UN-SPIDER workshop on building upon regional space-based solutions for disaster management and emergency response for the Caribbean was held in Hastings, Barbados, from 8 to 11 July 2008. The workshop was organized by the Office for Outer Space Affairs, together with the United Nations Development Programme office in Barbados and the subregional office of the Organisation of Eastern Caribbean States in Barbados, the Caribbean Disaster

Emergency Response Agency and the Department of Emergency Management of the Government of Barbados.

33. The objectives of the workshop were: to provide information on the current status of space technology for disaster management and emergency response in the Caribbean; to showcase regional space-based initiatives relevant to disaster management support (including risk reduction) and emergency response; to identify approaches to harmonize the various initiatives helping developing countries in the region to access and use space-based technologies for disaster management and risk reduction; and to reflect on the best concepts for delivering support to both national activities and national planning and policies taking into consideration the use of space-based technologies.

34. The programme started with an opening ceremony that was followed by introductory presentations and presentations on the following topics: “International and regional initiatives”; “The end-user perspective”; “Building upon opportunities”; and “Building capacity”. The presentations provided participants with the opportunity to learn about existing initiatives using space-based information, the use of space-based solutions in disaster management and possibilities for collaboration.

35. The presentations were also meant to prepare participants for discussions to be held in the break-out groups, which dealt with the following topics:

(a) Capacity-building and knowledge management;

(b) Existing initiatives and coordination for space-based disaster responses: possible elements of a regional coordinating framework;

(c) Increasing access to space-based information and building upon the proposal made by GEO;

(d) Steps forward and a template for national disaster management offices.

36. A total of 63 participants from the following countries and territories took part in the workshop: Anguilla, Antigua and Barbuda, Austria, Barbados, Belize, British Virgin Islands, Canada, Colombia, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Netherlands Antilles, Panama, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, United Kingdom of Great Britain and Northern Ireland and United States. United Nations entities, regional institutions responsible for building capacity in and promoting the use of space-based technologies, national space agencies, academic and research institutions and private sector entities were also represented.

37. The workshop was made possible by a contribution from the Ministry for European and International Affairs of Austria. The funds were used to defray the costs of the workshop, including side events, and the air travel and daily subsistence allowance of 25 participants and 3 staff members of the Office for Outer Space Affairs.

B. Observations and recommendations

38. At the end of the first day of the workshop, a brainstorming session was held on opportunities and needs specific to the Caribbean. The purpose of that session was to enable participants to better understand the situation in the Caribbean and to lay the ground for discussions in break-out groups.

39. The results of the brainstorming exercise were then clustered into subtopics. Under the subtopic "Opportunities", participants listed the opportunities that had been presented during the workshop, regional capacity and coordination as key to moving forward, existing capacity-building initiatives, spatial data infrastructure and data standards, information dissemination and opportunities within the private sector. Under the subtopic "Needs", participants identified the need for vertical coordination in order to ensure the incorporation of space-based solutions into effective institutional arrangements, the additional need for all types of capacity-building and knowledge management initiatives, space-based information capable of fulfilling the requirements of the region and technology solutions that would enable regional and national actors to make appropriate use of space-based information.

40. On the second day, participants expanded on the discussions of the first day by breaking into three separate groups, each of which focused on a different issue.

41. The first break-out group discussed capacity-building and knowledge management, and the related needs and requirements of the region. The group then presented its recommendations according to the following four topics, all of which were affected by the cross-cutting issues of funding and sustainability: (a) training and education; (b) institutional systems and policy; (c) research and development; and (d) knowledge management. The need to create a regional capacity-building and knowledge management vision and strategy that could be translated into a policy and a workplan providing detailed implementation steps, including at the national level, was highlighted by all participants.

42. The second break-out group discussed existing initiatives and coordination for space-based disaster response. The current situation was assessed on the basis of the presentations delivered and the group looked at ways of coordinating initiatives in order to make existing structures and information more accessible to States in the Caribbean. The group started by identifying those initiatives that might be the backbone of a regional coordination or facilitation framework, then identified the elements of a national and regional coordination strategy and, finally, discussed the means of coordinating space-based disaster responses in the Caribbean, building upon the identified institutions and initiatives.

43. The third break-out group discussed ways of increasing access to space-based information and taking advantage of a proposal for a regional pilot project brought forward within the framework of GEO. The discussion was centred on three aspects, focusing on existing opportunities. Opportunities for accessing space-based information were identified and recommendations to increase all Caribbean States' access to and use of space-based information, including that provided in the framework of the International Charter on Space and Major Disasters, were discussed.

44. Discussions within the three break-out groups aimed at identifying which steps would have to be taken in order to ensure the integration and maximum use of such information so as to make communities within the Caribbean safer from disasters and better prepared at all phases of the disaster management cycle. The directors of national disaster management offices considered it instrumental to have a template detailing how, what kind of and in which sequence space-based information could be used most effectively, taking into consideration limitations in terms of human and financial resources.

45. On the last day of the workshop, participants moved from discussing ideal scenarios to more realistic situations, with a view to identifying small steps and, to the extent possible, an easy-to-implement set of actions to be taken by national disaster management offices. The following questions were asked: (a) what do we need to do; (b) what arrangements do we have in place; (c) what are the institutional arrangements; (d) which key people should be involved and how; and (e) which are the first and most important steps to be taken. On the basis of the discussions that those questions provoked, a draft template for national disaster management offices was drafted and circulated to participants for comment and additional input.

V. United Nations regional UN-SPIDER workshop on building upon regional space-based solutions for disaster management and emergency response for the Pacific

A. Programme and attendance

46. The Office for Outer Space Affairs, the Economic and Social Commission for Asia and the Pacific and the South Pacific Applied Geoscience Commission (SOPAC) organized the United Nations regional UN-SPIDER workshop on building upon regional space-based solutions for disaster management and emergency response for the Pacific, held in Suva from 16 to 19 September 2008. The purpose of the workshop was to help States in the Pacific learn how to access and use space technology for disaster management and emergency response.

47. The workshop brought together decision makers and senior experts from disaster management institutions in the region, national and regional institutions responsible for capacity-building and promoting the use of space-based technologies, United Nations entities, national space agencies and academic and research institutions. The participants made the workshop a dynamic forum for discussing and promoting the use of space-based information for disaster management in the Pacific.

48. The main topics discussed at the workshop included:

(a) The current status of space technology for disaster management and emergency response in the Pacific;

(b) The impact of global climate change on the increase in natural disasters in the region and how space-based technologies can contribute to mitigating that impact;

(c) Regional space-based initiatives relevant to disaster management support (including risk reduction) and emergency response;

(d) Identification of approaches towards the harmonization of the various existing initiatives that are helping developing countries in the Pacific access and use space-based technologies for disaster management and risk reduction;

(e) Promotion of current disaster management and disaster risk reduction initiatives being implemented by the Economic and Social Commission for Asia and the Pacific and SOPAC, as well as by other relevant organizations, such as the United Nations Development Programme, the Office for the Coordination of Humanitarian Assistance, ISDR and the Pacific Disaster Center.

49. The programme of the workshop included plenary sessions, during which 19 presentations were given. Discussions took place in break-out groups to foster the sharing of knowledge and find common solutions and plans of action. The following four topics were discussed by the break-out groups:

(a) Current use of space-based solutions and information in the Pacific (ongoing and planned initiatives, case studies and best practices, access to existing archived and real-time data and capacity-building opportunities);

(b) Current needs of States in the Pacific and the role of space-based solutions and information;

(c) Impact of global climate change on the increase in natural disasters in the Pacific and how space-based solutions can contribute to mitigating that impact;

(d) Discussion on a framework for accessing and using geospatial information to support risk and disaster management in the Pacific.

50. During the workshop, SOPAC presented the Pacific Disaster Net, a web portal and database system designed to be the largest and most comprehensive resource for information on disaster risk management for Pacific island States. Participants at the workshop discussed ways of taking advantage of the communication and collaboration features offered by the Pacific Disaster Net (http://www.pacificdisaster.net).

51. A total of 53 participants from the following countries and territories took part in the workshop: Australia, Austria, Bangladesh, China, Cook Islands, Fiji, Kiribati, Indonesia, Italy, Micronesia (Federated States of), New Zealand, Niue, Philippines, Samoa, Solomon Islands, Tonga, Tuvalu, United States and Vanuatu. United Nations entities, regional institutions responsible for capacity-building in and promoting the use of space-based technologies, national space agencies, academic and research institutions and the private sector were also represented.

52. The workshop was made possible by a significant contribution from the Ministry for European and International Affairs of Austria. Funds provided were used to defray the costs of the workshop, including side events, and the air travel and daily subsistence allowance of 18 participants and 3 staff members of the Office for Outer Space Affairs.

B. Observations and recommendations

53. The group on the current use of space-based solutions and information in the Pacific discussed: relevant ongoing and planned initiatives; examples of successful uses of space-based solutions and information in the Pacific; current opportunities for accessing archived and real-time satellite data; current capacity-building opportunities in the area of geospatial technologies; and ways in which States in the Pacific could have access to existing opportunities provided within the framework of, for example, the International Charter on Space and Major Disasters and Sentinel Asia. There was general agreement that SOPAC played an important role in the use of space-based technologies for disaster management in the Pacific. The Pacific Disaster Center offered to forward requests for the activation of the International Charter "Space and Major Disasters".

54. The group on current needs of States in the Pacific and the role of space-based solutions and information discussed: the types of disaster that disaster managers in the Pacific currently had to deal with; for each type of disaster, the type of information currently being used to support reactions to the disaster and how that information was obtained; and the type of space-based information that would be useful. Floods, storms, hurricanes, active volcanoes, coastal erosion and health-related disasters, such as epidemics, were found to occur very frequently and have a high impact.

55. The group on the impact of global climate change on the increase in natural disasters in the Pacific discussed how global climate change contributed to determining the type, level and number of disasters in the Pacific; what current and planned initiatives for making geospatial information available could support the mitigation of that impact; and how space-based solutions and information contributed to mitigating that impact. Participants identified the need for good baseline time-series data showing changes. They also noted that capacity-building and awareness-raising measures should be aimed specifically at decision makers.

56. The group on a regional framework for accessing and using geospatial information to support risk and disaster management in the Pacific discussed the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters,[2] insofar as it related to the topic. Participants proposed the completion of an inventory list of data and human capacity based on a common schema. The Pacific Disaster Net was suggested as a platform for facilitating further cooperation.

VI. Second United Nations international UN-SPIDER workshop on disaster management and space technology: bridging the gap

A. Programme and attendance

57. The second United Nations international UN-SPIDER workshop on disaster management and space technology: bridging the gap was held in Bonn, Germany,

[2] A/CONF.206/6 and Corr.1, chap. I, resolution 2.

from 13 to 15 October 2008. The workshop was organized by UN-SPIDER staff at the Office for Outer Space Affairs and the German Aerospace Center (DLR), with support from the ISDR Platform for the Promotion of Early Warning and the Institute for Environment and Human Security at the United Nations University. One of the main goals of the workshop was to promote access to and use of space-based technologies and solutions for disaster management and emergency response within relevant communities.

58. Specifically, the workshop provided an opportunity for decision makers and experts from the space technology and disaster management communities, international scientific organizations, knowledge transfer and educational institutions and private companies working at the international level to come together, with the aim of sharing best practices and knowledge. Participants also presented products and technologies for risk and disaster management, humanitarian aid and emergency response.

59. The workshop included the following four thematic sessions, during which 24 presentations were given:

(a) Space technology in support of risk and disaster management;

(b) Vulnerability and risk assessment;

(c) Contribution of space-based technologies to existing and proposed early warning systems;

(d) Disaster medicine, telemedicine and integrated vector management.

60. A total of 120 participants from the following 37 countries attended the workshop: Austria, Bangladesh, Belgium, Brazil, Cameroon, Canada, China, Colombia, Eritrea, France, Germany, Guatemala, India, Indonesia, Iran (Islamic Republic of), Ireland, Italy, Japan, Kyrgyzstan, Namibia, Nepal, Netherlands, Nigeria, Panama, Portugal, Republic of Korea, South Africa, Spain, Sri Lanka, Sudan, Switzerland, Thailand, Turkey, Ukraine, United Arab Emirates, United Kingdom and United States.

61. The workshop was also attended by representatives of the Office for Outer Space Affairs and other United Nations entities, including the Office for the Coordination of Humanitarian Affairs, the Institute for Environment and Human Security of the United Nations University, the ISDR Platform for the Promotion of Early Warning, the secretariat of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa,[3] the Office of the United Nations High Commissioner for Refugees, the World Health Organization and the World Food Programme. Representatives from regional institutions also attended, including from the European Space Agency, the Asian Disaster Reduction Center and the Proyecto Apoyo a la Prevención de Desastres en la Comunidad Andina (PREDECAN), a project aimed at supporting the prevention of disasters in the States of the Andean Community.

[3] United Nations, *Treaty Series*, vol. 1954, No. 33480.

62. Funds allocated to UN-SPIDER by the Government of Germany and funds from DLR were used to defray the costs of the workshop, including side events, and the air travel and daily subsistence allowance of 14 participants.

B. Observations and recommendations

63. At the first thematic session, on space technology in support of risk and disaster management, information was presented on relevant space-based solutions and information for risk and disaster management support and emergency response, including ongoing and planned initiatives, case studies and best practices, available geospatial data for studying disasters and capacity-building opportunities. The role played by GEO with respect to the societal benefit area of disasters, one of the nine such areas identified in the GEO 10-Year Implementation Plan, was underscored.[4] In addition, a prototype of the UN-SPIDER knowledge portal (a communication and information platform) was presented.

64. The second thematic session was on vulnerability and risk assessment. At that session, it was noted that remote sensing was increasingly being used to carry out rapid damage assessments and map hazards, as well as for vulnerability and risk assessments. The challenges being faced and to be faced in carrying out vulnerability and risk assessments with regard to natural hazards and hazards caused by climate change were discussed, as was the practice of combining remote sensing data with ground truth data. At the session, participants also dealt with the issue of how to incorporate space-based data into information platforms for disaster preparedness and response. Practitioners and scientists were invited to discuss current approaches, particularly with regard to the question of how to combine assessment components based on data from census and other surveys with data generated through remote sensing. Furthermore, session participants explored opportunities to assess vulnerability and risk both before and after disasters, and to examine case studies that showed how vulnerability and risk assessments find their way into information platforms such as the Mesoamerican Regional Visualization and Monitoring System (SERVIR). Emphasis was placed on comparing the use made of remote sensing information for carrying out vulnerability and risk assessments with respect to sudden-onset hazards and gradual-onset hazards of different scales. Furthermore, at the session participants presented examples of work currently being done in different parts of the world, such as the assessment on vulnerability to tsunamis being carried out in Egypt and Indonesia, and the assessment on vulnerability to floods being carried out in Germany and Viet Nam. Special attention was given to sudden-onset hazards, gradual-onset hazards and future hazards (due, for example, to a rise in sea level). In addition, examples of information platforms set up to present such vulnerability and risk information in the scope of disaster preparedness and response were discussed.

65. The plenary group was split into three smaller groups, each dealing with one of the following topics: (a) vulnerability; (b) hazard and risk; and (c) information platforms for disaster preparedness and response.

---

[4] The other eight social benefit areas are: health, energy, climate, water, weather, ecosystems, agriculture and biodiversity. The text of the 10-Year Implementation Plan is available on the GEO website (http://www.geosec.org).

66. The topic of the third thematic session was the contribution of space-based technologies to existing and proposed early warning systems. The development and usability of early warning systems contributes to socio-economic development by reducing the impact of hazards and increasing the resilience of people and structures. At the session, participants examined how public-private partnerships centred on space-based technologies could enable the development, establishment and embedding of early warning systems. Speakers and participants highlighted efforts to gather, analyse and evaluate the demand for early warning systems and how public-private partnerships could lead to the proposal and initiation of projects and the provision of solutions.

67. At the fourth thematic session, on disaster medicine, telemedicine and integrated vector management, participants explored the contribution of space-based solutions in the field of emergency/disaster medicine, telemedicine and vector-borne diseases. It was noted that new strategies for preventing and controlling vector-borne diseases emphasized the integrated vector management approach, as it reinforced the linkages between health and the environment, optimizing benefits to both. Especially in developing countries, vulnerability to climate and environmental change was likely to increase as rapid population growth placed ever-greater demands on resources. In addition, there was a growing awareness of increasing risks to human health as epidemics of weather and climate sensitive infectious diseases, including malaria, meningitis and cholera, seriously disrupted societies and overburdened national health systems. In recognition of the need for improved understanding of current and likely future climate change and of the consequences of such change (in particular with regard to the relationship between the environment and human health), one important objective was the further development and integration of in-situ ground measurement systems, remote sensing monitoring techniques and appropriate early warning systems. The plenary group discussed the following four topics: (a) the kind of support that space-based technologies can provide for preventing epidemics; (b) how space-based technologies can be used to alert of the possibility of an epidemic and develop appropriate responses; (c) the kind of medical use that space-based technologies can be put to during disasters; and (d) building a bridge between the medical and space technology fields.

VII. Voluntary contributions

68. The successful implementation of the outreach activities carried out in 2008 benefited from the support and voluntary contributions (cash and in-kind) received from Governments and private sector entities, including:

(a) The Ministry for European and International Affairs of Austria, which contributed US$ 180,000 to defray the full costs of the workshops held in Hastings, Barbados, and Suva;

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

(c) 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;

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

(e) GeoOrbis Inc. and Globecomm Systems Inc., which provided in-kind support for the workshop held in Hastings, Barbados.