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Committee on the Peaceful Uses of Outer Space Scientific and Technical Subcommittee Fiftieth session Vienna, 11-22 February 2013

# Draft report

Addendum

# [...]. United Nations Programme on Space Applications

- 1. In accordance with General Assembly resolution 67/113, the Subcommittee considered agenda item 4, "United Nations Programme on Space Applications".
- 2. At the 789th meeting, the Expert on Space Applications made a statement outlining the activities carried out and planned under the United Nations Programme on Space Applications.
- 3. The representatives of Brazil, Canada, China, Germany, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Nigeria, Pakistan, the Republic of Korea and the Russian Federation made statements under agenda item 4. A statement was also made under this item by the representative of Chile on behalf of the Group of Latin American and Caribbean States. During the general exchange of views, statements relating to the item were also made by representatives of other member States.
- 4. The Working Group of the Whole was reconvened under the chairmanship of V. K. Dadhwal (India), in accordance with paragraph 7 of General Assembly resolution 67/113. At its [...]th meeting, on [...] February, the Subcommittee endorsed the report of the Working Group of the Whole, which is contained in annex I to the present report.
- 5. The Subcommittee heard the following scientific and technical presentations:
- (a) "A proposal for a new regional centre for space science and technology education in East Asia and the Pacific", by the representative of China;
  - (b) "Mars 2013", by the representative of Austria;

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(c) "A New Asia-Pacific Regional Space Agency Forum initiative: Asian beneficial collaboration through Japanese Experiment Module (Kibo) utilization (Kibo-ABC)", by the representative of Japan.

## A. Activities of the United Nations Programme on Space Applications

- 6. The Subcommittee had before it the report of the Expert on Space Applications, outlining the mandate and orientation of the United Nations Programme on Space Applications (see A/AC.105/1031, paras. 2-10). The Subcommittee noted that the Programme for 2012 had been carried out satisfactorily and commended the work accomplished by the Office under the Programme.
- 7. The Subcommittee noted with appreciation the voluntary contributions (cash and in-kind) provided by various Member States and organizations for 2012 (see A/AC.105/1031, paras. 47-48).
- 8. The Subcommittee noted that the priority areas of the Programme were: (a) environmental monitoring; (b) natural resources management; (c) satellite communications for tele-education and telemedicine applications; (d) disaster risk reduction; (e) developing capabilities in the use of global navigation satellite systems; (f) the Basic Space Science Initiative; (g) space law; (h) climate change; (i) the Basic Space Technology Initiative; and (j) the Human Space Technology Initiative.

#### 1. Year 2012

Meetings, seminars, symposiums, training courses and workshops

- 9. With regard to the activities of the United Nations Programme on Space Applications carried out in 2012, the Subcommittee expressed its appreciation to the following for co-sponsoring the various workshops, symposiums and training courses that had been held within the framework of the Programme, as referred to in the report of the Expert on Space Applications (A/AC.105/1031, para. 49 and annex I):
- (a) The Governments of Argentina, Austria, Chile, Ecuador, Italy, Japan, Latvia and the United States;
- (b) Centre for Information on Natural Resources of Chile, Institute for Space Research of the Austrian Academy of Sciences, Italian Space Agency (ASI), Latvian Geospatial Information Agency, National Commission on Space Activities (CONAE) of Argentina, Quito Astronomical Observatory of the National Technical School of Ecuador and University of Tokyo (Japan);
- (c) ESA, IAF, International Center for Space Weather Science and Education of Kyushu University (Japan), International Committee on Global Navigation Satellite Systems (ICG), ISPRS, Japan Aerospace Exploration Agency (JAXA), National Aeronautics and Space Administration (NASA) of the United States and SWF.

Long-term fellowships for in-depth training

- 10. The Subcommittee expressed its appreciation to the Government of Italy, which, through the Politecnico di Torino and the Istituto Superiore Mario Boella and with the collaboration of the Istituto Elettrotecnico Nazionale Galileo Ferraris, had continued to provide four 12-month fellowships for postgraduate studies in global navigation satellite systems (GNSS) and related applications.
- 11. The Subcommittee expressed its appreciation to the Government of Japan for expanding the United Nations/Japan Long-Term Fellowship Programme on Nanosatellite Technologies. Under that Programme, the Kyushu Institute of Technology would annually accept up to four doctoral and two master's degree students for postgraduate study from 2013 to 2017.

### Technical advisory services

12. The Subcommittee noted with appreciation the technical advisory services provided under the United Nations Programme on Space Applications in support of activities promoting regional and international cooperation in space applications, as referred to in the report of the Expert on Space Applications (A/AC.105/1031, paras. 38-43).

### 2. Year 2013

Meetings, seminars, symposiums, training courses and workshops

- 13. The Subcommittee recommended the approval of the following programme of meetings, seminars, symposiums, training courses and workshops for 2013:
- (a) United Nations/Pakistan Workshop on Integrated Use of Space Technology for Food and Water Security, to be held in Islamabad from 11 to 15 March;
- (b) United Nations/Croatia Workshop on the Applications of Global Navigation Satellite Systems, to be held in Baška, Krk Island, Croatia, from 21 to 25 April;
- (c) United Nations/Indonesia International Conference on Integrated Space Technology Applications to Climate Change, to be held in Jakarta from 2 to 4 September;
- (d) United Nations/China Workshop on Human Space Technology, to be held in Beijing from 16 to 20 September;
- (e) United Nations/Austria/ESA Symposium on Data Analysis and Image Processing for Space Applications and Sustainable Development: Space Weather Instruments and Data Modelling, to be held in Graz, Austria, from 16 to 19 September;
- (f) United Nations/IAF Workshop on Space Technology for Economic Development, to be held in Beijing from 20 to 22 September;
- (g) United Nations/United Arab Emirates Symposium on Basic Space Technology, to be held in Dubai, United Arab Emirates, from 20 to 23 October;

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(h) United Nations/Belarus Workshop on Space Technology Applications for Socioeconomic Benefits, to be held in Minsk from 11 to 15 November 2013.

## B. Regional and interregional cooperation

- 14. The Subcommittee noted that the schedule of nine-month postgraduate courses for the period 2011-2013 offered by the regional centres for space science and technology education, affiliated to the United Nations, was annexed to the report of the Expert on Space Applications (A/AC.105/1031, annex III).
- 15. The Subcommittee had before it the educational curriculum on GNSS (ST/SPACE/59), developed for nine-month postgraduate courses at the regional centres for space science and technology education, affiliated to the United Nations.
- 16. The Subcommittee recalled that the General Assembly, in its resolution 67/113, had welcomed the establishment, in 2012, of the Centre for Space Science and Technology Education for Western Asia, affiliated to the United Nations, and located in Jordan.
- 17. The Subcommittee welcomed a proposal by the Government of China to establish a regional centre for space science and technology education, hosted by Beihang University in Beijing, under the United Nations Programme on Space Applications. The Subcommittee noted that the Office for Outer Space Affairs would facilitate an evaluation mission in that regard.
- 18. The Subcommittee recalled that the General Assembly, in its resolution 67/113, had emphasized that regional and interregional cooperation in the field of space activities was essential to strengthen the peaceful uses of outer space, assist States in the development of their space capabilities and contribute to the achievement of the goals of the United Nations Millennium Declaration and, to that end, had requested relevant regional organizations to offer the assistance necessary so that countries could carry out the recommendations of regional conferences; and that the Assembly had recognized, in that regard, the important role played by conferences and other mechanisms in strengthening regional and international cooperation among States, such as the African Leadership Conference on Space Science and Technology for Sustainable Development, APRSAF, APSCO and the Space Conference of the Americas.
- 19. The Subcommittee noted that the nineteenth session of APRSAF had been held in Kuala Lumpur from 11 to 14 December 2012 under the theme "Enriching the quality of life through innovative space programmes". The Subcommittee further noted that the twentieth session of the Forum would be organized by the Viet Nam Academy of Science and Technology and would take place in Hanoi.
- 20. The Subcommittee also noted that the African Leadership Conference on Space Science and Technology for Sustainable Development would be held in Ghana in 2013 and that a working group had been established to formulate the African Space Policy and Strategy, which would lead to the establishment of the African Space Agency.
- 21. The Subcommittee further noted that APSCO had held its sixth Council Meeting, in Tehran on 17 and 18 July 2012, at which it had approved a number of

new projects, reviewed the progress being made on those approved earlier and agreed to hold its next meeting in 2013.

22. The Subcommittee recalled the Pachuca Declaration, adopted by the Sixth Space Conference of the Americas, held in Pachuca, Mexico, from 15 to 19 November 2010, which developed a regional space policy for the near future and also, inter alia, created a space experts advisory group. The Subcommittee further noted that the pro tempore secretariat of the Conference had organized a regional meeting under the theme "Use of space for humans and environmental security in the Americas" in Mexico City from 17 to 20 April 2012 and a meeting of the heads of space agencies, which took place on 12 November 2012 in Santiago.

# [...]. Space-system-based disaster management support

- 23. In accordance with General Assembly resolution 67/113, the Subcommittee considered agenda item 8, "Space-system-based disaster management support".
- 24. The representatives of Austria, Canada, Egypt, France, Germany, India, Japan, Pakistan, the Russian Federation and the United States made statements under agenda item 8. A statement was made under the item by the representative of Chile on behalf of the Group of Latin American and Caribbean States. During the general exchange of views, statements relating to the item were also made by representatives of other member States.
- 25. The Subcommittee heard the following scientific and technical presentations:
- (a) "Russian Federation practices with regard to use of space-based remote sensing data in predicting and monitoring emergencies", by the representative of the Russian Federation;
- (b) "Universal access to the International Charter on Space and Major Disasters", by the representative of France;
- (c) "Disaster and emergency management: the contribution of the Italian space system COSMO-SkyMed 5", by the representative of Italy;
- (d) "Development strategy for an early warning system for disasters in Mexico", by the representative of Mexico.
- 26. The Subcommittee had before it the following:
- (a) Report on the fifth United Nations Platform for Space-based Information for Disaster Management and Emergency Response international workshop, entitled "Strengthening global synergies through knowledge management, portals and networks" (Bonn, Germany, 24-26 April 2012) (A/AC.105/1023);
- (b) Report on activities carried out in 2012 in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (A/AC.105/1027);
- (c) Report of the Secretariat on technical advisory support activities carried out in 2012 in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (A/AC.105/1029);

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- (d) Report on the United Nations International Conference on Space-based Technologies for Disaster Management: Risk Assessment in the Context of Global Climate Change (Beijing, 7-9 November 2012) (A/AC.105/1033);
- (e) Conference room paper on the International Expert Meeting on Crowdsource Mapping for Disaster Risk Management and Emergency Response carried out in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (A/AC.105/C.1/2013/CRP.5);
- (f) Conference room paper on the United Nations Platform for Space-based Information for Disaster Management and Emergency Response: proposed workplan for the biennium 2014-2015 (A/AC.105/C.1/2013/CRP.6).
- 27. The Subcommittee expressed its appreciation for the efforts of the Office for Outer Space Affairs to bring the reports on UN-SPIDER activities in 2012 to its attention, and noted with satisfaction the progress made with regard to all planned activities in the programme framework, including the continuing support provided through the programme for emergency response efforts during major disasters worldwide, such as the floods in Cameroon, Pakistan and the Philippines and the earthquake in the Islamic Republic of Iran.
- 28. The Subcommittee noted with satisfaction the ongoing activities of Member States that were contributing to increasing the availability and use of space-based solutions in support of disaster management, and also supporting the UN-SPIDER programme, including the following: the Sentinel Asia project and its coordination of emergency observation requests through the Asian Disaster Reduction Centre, the European Earth Observation Programme (Copernicus) emergency mapping service, and 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).
- 29. The Subcommittee noted the launch by Charter members of the implementation of the principle of universal access, which would allow any national disaster management authority, including those in States that were not members of the Charter, to submit requests for emergency response.
- 30. The view was expressed that it was necessary to establish complementary relationships between UN-SPIDER and other existing initiatives, including Sentinel Asia, for more effective cooperation and avoidance of duplication of efforts.
- 31. The view was expressed that it was necessary to continue synergy and collaboration between the Charter and UN-SPIDER programme.
- 32. The Subcommittee took note of the expert contributions by Member States and regional support offices in 2012 to all UN-SPIDER technical advisory missions, as well as their sharing of experiences with other interested countries.
- 33. The Subcommittee noted the wide interest and expert participation in the fifth United Nations Platform for Space-based Information for Disaster Management and Emergency Response international workshop, entitled "Strengthening global synergies through knowledge management, portals and networks", organized by UN-SPIDER with support from the Government of Germany and held in Bonn, Germany, from 24 to 26 April 2012, and the United Nations International

Conference on Space-based Technologies for Disaster Management: Risk Assessment in the Context of Global Climate Change, organized by UN-SPIDER with support from the Government of China and held in Beijing from 7 to 9 November 2012.

- 34. The Subcommittee noted with satisfaction the signature of the UN-SPIDER regional support office agreement between the Office for Outer Space Affairs and the National Institute of Aeronautics and Space of Indonesia, which took place in Vienna on 19 February 2013, during the session of the Subcommittee.
- 35. The Subcommittee also noted with satisfaction that the Office for Outer Space Affairs had in February 2013 signed a memorandum of understanding with the International Centre for Integrated Mountain Development, based in Nepal, to establish a UN-SPIDER regional support office in the Himalayan region.
- 36. The Subcommittee noted the renewed offer and commitment of the Russian Federation to host a UN-SPIDER regional support office at the Agency for Support and Coordination of Russian Participation in International Humanitarian Operations (EMERCOM).
- 37. The Subcommittee welcomed the fact that UN-SPIDER regional support offices were currently being hosted by 10 national organizations: Algerian Space Agency; CONAE; Agustín Codazzi Geographic Institute of Colombia; Károly Róbert University of Hungary; National Institute of Aeronautics and Space of Indonesia; Iranian Space Agency; Nigerian National Space Research and Development Agency; Pakistan Space and Upper Atmosphere Research Commission; Romanian Space Agency; and National Space Agency of Ukraine; and by five regional organizations: ADRC, based in Kobe, Japan; Regional Centre for Mapping of Resources for Development, based in Nairobi; International Centre for Integrated Mountain Development in Kathmandu; University of the West Indies, based in Saint Augustine, Trinidad and Tobago; and Water Center for the Humid Tropics of Latin America and the Caribbean, based in Panama City, bringing the total number of regional support offices to 15.
- 38. Some delegations expressed the view that the Office for Outer Space Affairs should explore further cooperation agreements with national institutions and interregional organizations involved in the management of natural disasters to develop training programmes related to the application of space technology for disaster management, and expressed support for the establishment of new UN-SPIDER regional support offices in Latin America and the Caribbean.
- 39. Some delegations expressed the view that it was important to intensify international coordination and cooperation through training programmes in the area of disaster management in the context of the UN-SPIDER programme, particularly in developing countries.
- 40. The Subcommittee noted with satisfaction the voluntary contributions that were being made by Member States, including cash contributions from Austria, China and Germany, and encouraged Member States to provide, on a voluntary basis, all support necessary, including financial support, to UN-SPIDER to enable it to carry out its workplan for the biennium 2014-2015.
- 41. The Working Group of the Whole, reconvened pursuant to General Assembly resolution 67/113, also considered agenda item 8. At its [...]th meeting, on

 $[\dots]$  February, the Subcommittee endorsed the report of the Working Group of the Whole, contained in annex I to the present report.

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