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Committee on the Peaceful Uses of Outer Space
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Draft report

Chapter II

Recommendations and decisions

B. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space

1. The Committee considered the agenda item "Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)" in accordance with General Assembly resolution 65/97.

2. The representatives of Canada and Japan made statements under the item. Representatives of other member States also made statements relating to the item during the general exchange of views and the discussion on the report of the Scientific and Technical Subcommittee on its forty-eighth session.

3. The Committee heard a presentation entitled "The space generation working groups: input from the next generation of space leaders on the development of space" by the observer for the Space Generation Advisory Council.

4. The Committee endorsed the recommendations of the Scientific and Technical Subcommittee, submitted to the Subcommittee at its forty-eighth session by its Working Group of the Whole, which had been reconvened under the chairmanship of S. K. Shivakumar (India) to consider, inter alia, the implementation of the recommendations of UNISPACE III (A/AC.105/987, paras. 62 and 63, and annex I, sect. C, paras. 7-9 and 11).

5. The Committee noted with appreciation that the Action Team on Public Health, co-chaired by Canada and India, had submitted the final report of the Action

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Team (A/AC.105/C.1/L.305) for consideration by the Subcommittee at its forty-eighth session, and noted that the Secretariat would transmit the report to the World Health Organization (WHO), with an invitation to WHO to report to the Subcommittee at its forty-ninth session on the possible development of long-term tele-epidemiology and tele-health activities, and that consideration would be given to the creation of an international committee on tele-epidemiology and tele-health.

6. The Committee had before it for its consideration a conference room paper entitled "Draft contribution of the Committee on the Peaceful Uses of Outer Space to the United Nations Conference on Sustainable Development: harnessing space-derived geospatial data for sustainable development" (A/AC.105/2011/CRP.9). The Committee endorsed the draft contribution contained in the conference room paper and agreed that the text should constitute the contribution of the Committee to the United Nations Conference on Sustainable Development, to be held in Rio de Janeiro, Brazil, in 2012. The Committee noted that the Secretariat would submit the report in all official languages of the United Nations to the Division for Sustainable Development of the Department of Economic and Social Affairs, which serves as the secretariat for the Conference.

7. The Committee had before it a report on international cooperation in promoting the use of space-derived geospatial data for sustainable development (A/AC.105/973) and noted that the document constituted the final report under the agenda item on international cooperation in promoting the use of space-derived geospatial data for sustainable development, consideration of which had been concluded at the fifty-third session of the Committee.

8. The Committee noted that a regional centre for space science and technology education for Western Asia, in Arabic language and affiliated to the United Nations, would be established in Jordan by the end of 2011.

9. The Committee noted with appreciation the publication of the report on the events of World Space Week 2010 (ST/SPACE/56), prepared by the World Space Week Association in cooperation with the Office for Outer Space Affairs.

C. Report of the Scientific and Technical Subcommittee on its forty-eighth session

10. The Committee took note with appreciation of the report of the Scientific and Technical Subcommittee on its forty-eighth session (A/AC.105/987), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution 65/97.

11. The Committee expressed its appreciation to Ulrich Huth (Germany) for his able leadership during the forty-eighth session of the Subcommittee.

12. The representatives of Canada, China, Germany, Italy, Japan, Mexico, Nigeria, Portugal, the Russian Federation, the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements relating to that item were also made by other member States. Statements were also made under this item by the representative of Colombia on behalf of the Group of Latin American and Caribbean States and the representative of Venezuela (Bolivarian Republic of) on behalf of the Group of 77 and China.

13. The Committee heard the following presentations:

(a) "Operational services based on space data in support of seismic risk management", by the representative of Italy;

(b) "The International Space Station", by the representative of the United States;

(c) "Example of the application of satellites under the great east Japan earthquake and others", by the representative of Japan;

(d) "Human space flight", by the representative of the United States;

(e) "Italian contribution to the Alpha Magnetic Spectrometer (AMS-2)", by the representative of Italy;

(f) "Space debris mitigation: the Russian experience", by the representative of the Russian Federation;

(g) "World Space Week Report and recognition", by the observer for the World Space Week Association;

(h) "Sustainable use of space through orbital debris control", by the observer for the International Academy of Astronautics (IAA);

(i) "Results of the 2011 International Academy of Astronautics Planetary Defence Conference", by the observer for IAA.

1. United Nations Programme on Space Applications

(a) Activities of the United Nations Programme on Space Applications

14. The Committee took note of the discussion of the Subcommittee under the item on the United Nations Programme on Space Applications, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 30-53, and annex I, paras. 2 and 3).

15. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group of the Whole, which had been convened under the chairmanship of S. K. Shivakumar (India) to consider this item (A/AC.105/987, paras. 33 and 45).

16. The Committee took note of the activities of the Programme carried out in 2010, as presented in the report of the Scientific and Technical Subcommittee (A/AC.105/987, paras. 41-44) and in the report of the Expert on Space Applications (A/AC.105/980, annex I).

17. The Committee expressed its appreciation to the Office for Outer Space Affairs for the manner in which the activities of the Programme had been implemented. The Committee also expressed its appreciation to the Governments and intergovernmental and non-governmental organizations that had sponsored those activities.

18. The Committee noted with satisfaction that further progress was being made in the implementation of the activities of the Programme for 2011, as described in the report of the Subcommittee (A/AC.105/987, para. 45).

19. The Committee noted with satisfaction that the Office for Outer Space Affairs was helping developing countries and countries with economies in transition to participate in and benefit from activities being carried out under the Programme.

20. The Committee noted with concern the limited financial resources available to implement the Programme and appealed to States and organizations to continue supporting the Programme through voluntary contributions.

21. The Committee noted with appreciation the implementation of the Programme's Basic Space Science Initiative and Basic Space Technology Initiative (see A/AC.105/2011/CRP.14), as well as its preparation of the Human Space Technology Initiative (see A/AC.105/2011/CRP.13), aimed at enhancing the participation of developing countries in activities at the International Space Station.

(i) Conferences, training courses and workshops of the United Nations Programme on Space Applications

22. The Committee endorsed the workshops, training courses, symposiums and expert meetings planned for the remaining part of 2011 and expressed its appreciation to Austria, Argentina, Canada, Iran (Islamic Republic of), Malaysia, Nigeria, South Africa, the Syrian Arab Republic, Viet Nam and the United Arab Emirates, as well as to ESA and IAF, for co-sponsoring, hosting and supporting those activities (see A/AC.105/980, annex II).

23. The Committee noted with appreciation that the first United Nations Expert Meeting on the Human Space Technology Initiative would be held in Putrajaya, Malaysia, in the fourth quarter of 2011 and expressed its appreciation to the Government of Malaysia, the National Space Agency of Malaysia and the National University of Malaysia for acting as host to and supporting that meeting.

24. The Committee endorsed the programme of workshops, training courses, symposiums and expert meetings related to natural resources management, basic space technology, human space technology, space weather, global navigation satellite systems (GNSS), socio-economic benefits and space law to be held in 2012 for the benefit of developing countries.

25. The Committee noted with appreciation that the host countries of the regional centres for space science and technology education, affiliated to the United Nations, were providing the centres with significant financial and in-kind support.

(ii) Long-term fellowships for in-depth training

26. The Committee expressed its appreciation to the Politecnico di Torino, the Istituto Superiore Mario Boella and the Istituto Elettrotecnico Nazionale Galileo Ferraris for the fellowships that they provided for postgraduate studies on GNSS and related applications.

27. The Committee expressed its appreciation to the Government of Japan and the Kyushu Institute of Technology for establishing the United Nations/Japan Long-term Fellowship Programme on Nanosatellite Technologies under the framework of the Basic Space Technology Initiative of the Programme.

28. The Committee noted that it was important to increase opportunities for in-depth education in all areas of space science, technology and applications and

space law through long-term fellowships and urged Member States to make such opportunities available at their relevant institutions.

(iii) Technical advisory services

29. The Committee noted with appreciation the technical advisory services provided under the United Nations Programme on Space Applications in support of activities and projects promoting regional cooperation in space applications, as referred to in the report of the Expert on Space Applications (A/AC.105/980, paras. 43-52).

(b) International Space Information Service

30. The Committee noted with satisfaction that the publication entitled *Highlights in Space 2010* had been issued on CD-ROM.

31. The Committee noted with satisfaction that the Secretariat had continued to enhance the International Space Information Service and the website of the Office for Outer Space Affairs (www.unoosa.org).

(c) Regional and interregional cooperation

32. The Committee noted with satisfaction that the United Nations Programme on Space Applications continued to emphasize, promote and foster cooperation with Member States at the regional and global levels to support the regional centres for space science and technology education, affiliated to the United Nations. The highlights of the activities of the regional centres supported under the Programme in 2010 and the activities planned for 2011 and 2012 were presented in the report of the Expert on Space Applications (A/AC.105/980, annexes I-III).

(d) International Satellite System for Search and Rescue

33. The Committee noted with satisfaction that the International Satellite System for Search and Rescue (COSPAS-SARSAT) currently had 41 member States and two participating organizations and that it had six polar-orbiting and five geostationary satellites that provided worldwide coverage for emergency beacons. The Committee also noted that since 1982 COSPAS-SARSAT had provided assistance in rescuing at least 30,773 persons in 8,406 search and rescue events and that in 2010 the system's alert data had helped to save 2,398 lives in 660 search and rescue events worldwide.

34. The Committee further noted that the use of satellites in medium-Earth orbit continued to be explored, with a view to improving international satellite-aided search and rescue operations.

35. The Committee welcomed the continued efforts to enhance COSPAS-SARSAT, including through the testing of global positioning system satellites and improving the capabilities of beacons to best take advantage of medium-Earth orbit satellites.

2. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment

36. The Committee took note of the discussion of the Subcommittee under this agenda item, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 65-75).

37. In the course of the discussion, delegations reviewed national and cooperative programmes on remote sensing, providing examples of national programmes and bilateral, regional and international cooperation, that contribute to enhancing the potential of remote-sensing technology and to enhancing capacity-building in developing countries in the use of remote-sensing technology to advance their socio-economic development.

38. The Committee recognized the important role played by international intergovernmental organizations in promoting international cooperation in the use of remote-sensing technology, such as the Committee on Earth Observation Satellites (CEOS) and the Group on Earth Observations (GEO).

39. The Committee noted the important role played in promoting regional cooperation in the use of remote-sensing technology by regional organizations such as the Asia-Pacific Space Cooperation Organization (APSCO) and its remote-sensing satellite project, and the Asia-Pacific Regional Space Agency Forum (APRSAF) and its initiatives the Sentinel Asia Project, the Space Application for Environment programme and the Regional Readiness Review for Key Climate Missions.

40. The Committee noted that the next plenary meeting of CEOS would be held in Lucca, Italy, on 8 and 9 November 2011, hosted by the Italian Space Agency, the current chair of CEOS.

3. Space debris

41. The Committee took note of the discussion of the Subcommittee under the agenda item on space debris, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 76-96).

42. The Committee endorsed the decisions and recommendations of the Subcommittee on this item (A/AC.105/987, paras. 81, 88 and 89).

43. The Committee noted with appreciation that some States were already implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines of the Committee and/or the Inter-Agency Space Debris Coordination Committee (IADC) Space Debris Mitigation Guidelines and that other States had developed their own space debris mitigation standards based on those guidelines. The Committee also noted that other States were using the IADC Guidelines and the European Code of Conduct for Space Debris Mitigation as reference points in their regulatory frameworks for national space activities.

44. Some delegations called on the Scientific and Technical Subcommittee to continue its thorough consideration of the issue of space debris mitigation, in particular by paying greater attention to debris coming from platforms with nuclear power sources in outer space and collisions of space objects with space debris and

their derivatives, as well as to improve the technology and the collaborative networks for monitoring of space debris.

45. Some delegations were of the view that the future of space activities largely depended on space debris mitigation and urged those countries which had not yet done so to implement the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space.

46. Some delegations were of the view that further studies and research should be carried out, including in the areas of technology for space debris observation, space debris environmental modelling and technologies to protect space systems from space debris and to limit the creation of additional space debris, in order to enhance the Guidelines and to keep them up to date with new techniques and capabilities of detection and reduction of space debris, in accordance with General Assembly resolution 62/217.

47. Some delegations were of the view that the Space Debris Mitigation Guidelines of the Committee should be further developed and that the Scientific and Technical Subcommittee and the Legal Subcommittee should cooperate in developing legally binding rules relating to space debris.

48. Some delegations were of the view that reports on national research on space debris, safety of space objects with nuclear power sources onboard and problems relating to their collision with space debris did not contain replies from the States that were largely responsible for creating space debris, including debris from platforms with nuclear power sources.

49. The view was expressed that it was necessary to continue improving the Space Debris Mitigation Guidelines of the Committee. The lack of clear requirements and the use of phrases such as “to the extent possible” provided a form of protection for those countries that had traditionally used technology without any restrictions or controls and, in some cases, without regard for human life or the environment.

50. The view was expressed that it would be beneficial for Member States to exchange information on measures to reduce the creation and the proliferation of space debris; collection, sharing and dissemination of data on space objects; and re-entry notifications.

4. Space-system-based disaster management support

51. The Committee took note of the discussion of the Subcommittee under the agenda item on space-system-based disaster management support, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 97-114, and annex I, paras. 12 and 13).

52. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group of the Whole, which was convened, inter alia, to consider this item (A/AC.105/987, para. 114 and annex I, para. 1).

53. The Committee noted with satisfaction the progress reflected in the reports on the activities carried out in 2010 in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) (A/AC.105/981 and A/AC.105/985).

54. The Committee noted with appreciation the inauguration of the Beijing office of UN-SPIDER on 10 November 2010.

55. The Committee noted with appreciation the cash and in-kind contributions made by the Governments of Austria, China, Germany, the Republic of Korea and Turkey to support the activities of the UN-SPIDER programme in 2010.

56. The Committee noted with satisfaction that the Office for Outer Space Affairs had to date signed cooperation agreements for the establishment of UN-SPIDER regional support offices with Algeria, Iran (Islamic Republic of), Nigeria, Pakistan, Romania and Ukraine, as well as with the Asian Disaster Reduction Center, based in Kobe, Japan; the Regional Center for Mapping of Resources for Development, based in Nairobi; the University of the West Indies, based in St. Augustine, Trinidad and Tobago, and the Water Center for the Humid Tropics of Latin America and the Caribbean, based in Panama City. The Committee noted with appreciation that the Governments of Colombia, Indonesia, South Africa and Turkey had each made an offer to host a UN-SPIDER regional support office.

57. The Committee noted the proposed workplan for the UN-SPIDER programme for the biennium 2012-2013 (A/AC.105/2011/CRP.16) and agreed that Member States should consider providing the programme with the necessary additional resources to ensure that greater support could be provided to Member States by UN-SPIDER and its regional support offices.

58. The Committee noted with satisfaction the increase in the availability of space-based information to support disaster management, particularly emergency response activities, through several existing mechanisms, such as 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), the Sentinel Asia project and the Global Monitoring for Environment and Security (GMES) Services and Applications for Emergency Response (SAFER) initiative in Europe, as well as COSPAS-SARSAT.

59. The view was expressed that, by relying on voluntary contributions alone, the UN-SPIDER programme might lack long-term sustainability. It was suggested to consider funding a more substantial part of the programme through regular budget resources.

5. Recent developments in global navigation satellite systems

60. The Committee took note of the discussion of the Subcommittee under the agenda item on recent developments in global navigation satellite systems, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 115-134).

61. The Committee noted with appreciation that the International Committee on Global Navigation Satellite Systems (ICG) continued to make significant progress towards the goals of encouraging compatibility and interoperability among global and regional space-based positioning, navigation and timing systems and promoting the use of GNSS and their integration into infrastructures, particularly in developing countries.

62. The Committee noted that ICG supported multi-GNSS campaigns and that an important new development was the agreement of the Providers' Forum to liaise

with relevant international bodies to ensure that receiver output formats for future GNSS signals were unambiguously defined.

63. The Committee noted with appreciation that the achievements of the ICG Providers' Forum, as reflected in the publication entitled *Current and Planned Global and Regional Navigation Satellite Systems and Satellite-based Augmentation Systems* (ST/SPACE/50), was made available for training and information dissemination on global applications of GNSS and their benefits for humanity.

64. The Committee noted with appreciation the activities conducted and/or planned in the framework of the ICG workplan focusing on building capacity, specifically in deploying instruments for the International Space Weather Initiative, developing a GNSS education curriculum, utilizing regional reference frames and applying GNSS in various areas to support sustainable development, as reflected in the report of the Secretariat (A/AC.105/996).

65. Some delegations reiterated their commitment to provide additional funds in the form of voluntary contributions to the Office for Outer Space Affairs in support of the programme on GNSS applications, including the meetings and activities of ICG and its Providers' Forum.

66. The Committee noted with appreciation that the Fifth Meeting of ICG and the sixth meeting of its Providers' Forum had been held in Turin, Italy, in October 2010 (see A/AC.105/982).

67. The Committee expressed its appreciation for the work undertaken by the Office for Outer Space Affairs in assisting with the planning and organization of the meetings of ICG and for its continued support as executive secretariat for ICG and its Providers' Forum.

68. The Committee noted that the sixth meeting of ICG would be hosted by Japan in Tokyo from 5 to 9 September 2011, and that China had expressed its interest in hosting the ICG meeting in 2012.

6. Use of nuclear power sources in outer space

69. The Committee took note of the discussion of the Subcommittee under the agenda item on the use of nuclear power sources in outer space, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 135-150).

70. The Committee endorsed the decisions and recommendations of the Subcommittee and the Working Group on the Use of Nuclear Power Sources in Outer Space, reconvened under the chairmanship of Sam A. Harbison (United Kingdom) (A/AC.105/987, para. 150, and annex II, paras. 9-11).

71. Some delegations were of the view that the Safety Framework for Nuclear Power Source Applications in Outer Space represented a significant advance in the development of safe nuclear power source applications and that the implementation of the Safety Framework by Member States and international intergovernmental organizations would provide assurance to the global public that space nuclear power source applications were being developed, launched and used in a safe manner.

72. Some delegations expressed the view that it was exclusively States, irrespective of their level of social, economic, scientific or technical development, that had an obligation to engage in the regulatory process associated with the use of

nuclear power sources in outer space and that the matter concerned all humanity. Those delegations were of the view that Governments bore international responsibility for national activities involving the use of nuclear power sources in outer space conducted by governmental and non-governmental organizations and that such activities must be beneficial, not detrimental, to humanity.

73. Some delegations were of the view that the use of nuclear power sources in outer space should be as limited as possible and that comprehensive and transparent information on measures taken to ensure safety should be provided to other States. Those delegations were of the view that, while nuclear power sources were needed for some interplanetary missions, no justification existed for the use of nuclear power sources in terrestrial orbits, for which other sources of energy were available that were much safer and had been proved to be efficient.

74. The view was expressed that the workshops organized by the Working Group promoted activities related to the use of nuclear power sources in outer space. In that connection, that delegation was of the view that the proliferation of nuclear power sources in outer space, including terrestrial orbits, should not be allowed, as the effects of their use in outer space on humankind and the environment had not been assessed and there was no definite framework establishing responsibilities and introducing technical and legal tools that could effectively address critical situations that might arise because of undue practices.

75. The view was expressed that the Safety Framework was not sufficient in its present form to meet the challenges posed by the use of nuclear power sources in outer space.

7. Near-Earth objects

76. The Committee took note of the discussion of the Subcommittee under the agenda item on near-Earth objects, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 151-165, and annex III, paras. 9 and 10).

77. The Committee endorsed the recommendations of the Subcommittee and its Working Group on Near-Earth Objects, which was convened under the chairmanship of Sergio Camacho (Mexico) (A/AC.105/987, para. 165 and annex III).

78. The Committee noted that the International Academy of Astronautics (IAA) had held its second conference on impacts by asteroids and comets on the Earth, entitled “From threat to action” and co-organized by the Romanian Space Agency, from 9 to 12 May 2011 in Bucharest. The conference, which was a follow-up to the first IAA Planetary Defense Conference entitled “Protecting Earth from asteroids”, held in 2009 in Granada, Spain, addressed the following issues: potentially hazardous objects: recent progress; discovery and tracking resources and plans; impacts, consequences and education; mission planning and technologies; campaign planning; legal, policy and political framework for planetary defence; and moving forward on planetary defence.

79. The view was expressed that progress had been made in expanding the global network for the detection and characterization of near-Earth objects but that more time was needed to consider how international cooperation could be formulated to design potential deflection missions with regard to such objects. That delegation was of the view that international cooperation in further developing detection

capabilities and information-sharing networks on near-Earth objects was of utmost importance.

80. The Committee noted that, on the margins of its fifty-fourth session, the Action Team on Near-Earth Objects had held two meetings to continue its work on the draft recommendations for an international response to the near-Earth object impact threat, as referred to in the report of the Subcommittee (A/AC.105/987, annex III, para. 10).

8. Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union

81. The Committee took note of the discussion of the Subcommittee under the agenda item on the examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 202-209).

82. Some delegations reiterated the view that the geostationary orbit was a limited natural resource at risk of becoming saturated, which threatened the sustainability of outer space activities. Those delegations were of the view that the exploitation of the geostationary orbit should be rationalized and made available to all States, irrespective of their current technical capabilities, thus giving them the opportunity to have access to the geostationary orbit under equitable conditions, taking into account in particular the needs of developing countries and the geographical position of certain countries, with the participation and cooperation of ITU.

83. Some delegations were of the view that the geostationary orbit offered unique potential for the implementation of social programmes, educational projects and medical assistance. Those delegations therefore considered that the item on the geostationary orbit should remain on the agenda of the Subcommittee for further discussion through working groups, intergovernmental panels or task forces, for the purpose of continuing to analyse its scientific and technical characteristics.

9. International Space Weather Initiative

84. The Committee took note of the discussion of the Subcommittee under the agenda item on the International Space Weather Initiative, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 166-177).

85. The Committee noted that the International Space Weather Initiative had significantly contributed to the observation of space weather through the deployment of instrument arrays and the sharing of observed data among researchers around the world.

86. The Committee welcomed the fact that participation in the International Space Weather Initiative was open to scientists from all countries, as instrument hosts or instrument providers. In that regard, the Committee noted that 15 instrument arrays with close to 1,000 instruments were operating in 96 countries, implemented by designated coordinators of the Initiative.

87. The Committee noted that the International Space Weather Initiative offered Member States the opportunity to coordinate the global monitoring of space weather using space- and ground-based assets, assist in consolidating common knowledge and develop essential forecast capabilities to improve the safety of space-based assets.

88. The Committee noted with appreciation that the second workshop on the International Space Weather Initiative would be hosted by Nigeria in Abuja from 17 to 21 October 2011.

10. Long-term sustainability of outer space activities

89. The Committee took note of the discussion of the Subcommittee under the agenda item on the long-term sustainability of outer space activities, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 178-201).

90. The Committee endorsed the recommendations on the item made by the Scientific and Technical Subcommittee and the Working Group on the Long-term Sustainability of Outer Space Activities, reconvened under the chairmanship of Peter Martinez (South Africa) (A/AC.105/987, paras. 189-190, and annex IV, paras. 9-12).

91. The Committee had before it the following:

(a) Working paper submitted by the Chair of the Working Group on the terms of reference and methods of work of the Working Group on the Long-term Sustainability of Outer Space Activities of the Scientific and Technical Subcommittee (A/AC.105/C.1/L.307/Rev.1);

(b) Comments received from the Russian Federation on the draft terms of reference of the Working Group on the Long-term Sustainability of Outer Space Activities (A/AC.105/2011/CRP.10);

(c) Comments received from Mexico on the draft terms of reference of the Working Group on the Long-term Sustainability of Outer Space Activities (A/AC.105/2011/CRP.11).

92. The Committee, at its […] meeting, adopted the terms of reference and methods of work of the Working Group on the Long-term Sustainability of Outer Space Activities of the Scientific and Technical Subcommittee, contained in annex II to the present report.

93. The Committee recalled its agreement made at its fifty-second session, in 2009, that the Committee would consider whether the set of best practices guidelines should require review by the Legal Subcommittee before endorsement by the Committee and that, once the set of best practices guidelines had been endorsed, the Committee might also consider whether it should be annexed to a specific General Assembly resolution or should be endorsed by the Assembly as part of its

annual resolution on international cooperation in the peaceful uses of outer space (A/64/20, para. 162).

94. The Committee noted the agreement by the Working Group, endorsed by the Subcommittee at its forty-eighth session, that expert groups should be established and their chairs or co-chairs should be identified by the end of April 2011, with a view to reporting on the progress made to the Committee at its fifty-fourth session (A/AC.105/987, annex IV, para. 11).

95. The Committee noted with satisfaction the nominations of chairs, co-chairs and experts for the expert groups as at 9 June 2011 (A/AC.105/2011/CRP.15), which would allow the expert groups to commence their work in accordance with the terms of reference and methods of work of the Working Group on the Long-term Sustainability of Outer Space Activities, contained in annex II to the present report.

96. The Committee requested the Secretariat to continue to invite member States of the Committee and intergovernmental organizations with permanent observer status with the Committee to nominate points of contact for the Working Group and suitable experts to participate in the expert groups, in order to facilitate further progress in the Working Group's activities.

97. Some delegations expressed concern over the fragility of the space environment and the challenges related to the long-term sustainability of outer space activities, owing in particular to the increasing number of space actors, spacecraft and space debris.

98. Some delegations were of the view that the consideration of the long-term sustainability of outer space activities should not be used as a pretext for States that had been able to develop their space capabilities without controls, resulting in the challenges faced today, to restrict or impose controls on other States wishing to exercise their legitimate right to use the same technology for their national benefit.

99. Some delegations were of the view that outer space, as a limited natural resource, should be protected and used rationally, and that clear regulations, rules and recommendations were needed in order to ensure the sustainability of outer space activities in the long term.

100. Some delegations were of the view that any outcome of the discussion held in the framework of the Working Group should not contain any measures that would limit access to space by States with emerging space capabilities. It was also stressed that setting overly high standards or thresholds for space activities in a way that might hinder the enhancement of capacity-building of developing countries should be avoided. Those delegations were of the view that more capacity-building activities in the legal and scientific and technical areas were required and that the relevant expertise should be made available to developing countries.

101. The view was expressed that the adoption of the terms of reference and methods of work of the Working Group would enable the Scientific and Technical Subcommittee to conduct a pragmatic analysis of space activities that allowed the Subcommittee to forecast a broad array of trends and factors affecting the long-term sustainability of outer space activities.

102. The view was expressed that the exploration and peaceful uses of outer space should be a cooperative endeavour and that achieving a balance between the

Committee's regulatory and promotional roles would contribute to the long-term sustainability of outer space activities.

103. The view was expressed that it was necessary to ensure that space activities were conducted in a sustainable manner and that all countries had equitable access to the limited natural resources of outer space.

104. The view was expressed that the activity of the Working Group should conform to the Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space[1] and give due attention to preventing the placement of weapons in outer space.

105. The view was expressed that it was desirable, under this item of the Subcommittee, to consider the possibility of developing generic guidelines on cooperation in the field of high technology, to develop a common vision regarding standards and best practices in the area of physical and legal protection of the export and import of space technologies, and to exchange views on policies, practices and organizational and technical procedures that would ensure the legitimate use of controlled space-related products.

11. Draft provisional agenda for the forty-ninth session of the Scientific and Technical Subcommittee

106. The Committee took note of the discussion of the Subcommittee on the agenda item on the draft provisional agenda for the forty-ninth session of the Scientific and Technical Subcommittee, as reflected in the report of the Subcommittee (A/AC.105/987, paras. 210-225, and annex I, sect. F).

107. On the basis of the deliberations of the Scientific and Technical Subcommittee at its forty-eighth session, the Committee agreed that the following substantive items should be considered by the Subcommittee at its forty-ninth session:

1. General exchange of views and introduction of reports submitted on national activities.
2. United Nations Programme on Space Applications.
3. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III).
4. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment.
5. Space debris.
6. Space-system-based disaster management support.
7. Recent developments in global navigation satellite systems.
8. Items to be considered under workplans:
   (a) Use of nuclear power sources in outer space;

[1] General Assembly resolution 1962 (XVIII).

(Work for 2012 as reflected in the multi-year workplan in paragraphs 8 and 9 of annex II to the report of the Scientific and Technical Subcommittee on its forty-seventh session (A/AC.105/958))

(b) Near-Earth objects;

(Work for 2012 as reflected in the multi-year workplan in paragraph 9 of annex III to the report of the Scientific and Technical Subcommittee on its forty-eighth session (A/AC.105/987))

(c) International Space Weather Initiative;

(Work for 2012 as reflected in the multi-year workplan in paragraph 16 of annex I to the report of the Scientific and Technical Subcommittee on its forty-sixth session (A/AC.105/933))

(d) Long-term sustainability of outer space activities;

(Work for 2011 as reflected in the multi-year workplan in paragraph 161 of the report of the Committee on the Peaceful Uses of Outer Space on its fifty-second session (A/64/20), subject to any decision to be made during the fifty-fourth session of the Committee, in 2011)

9. Single issue/item for discussion: examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union.

10. Draft provisional agenda for the fiftieth session of the Scientific and Technical Subcommittee, including identification of subjects to be dealt with as single issues/items for discussion or under multi-year workplans.

108. The Committee endorsed the recommendation that the Working Group of the Whole, the Working Group on the Use of Nuclear Power Sources in Outer Space, the Working Group on Near-Earth Objects and the Working Group on the Long-term Sustainability of Outer Space Activities should be reconvened at the forty-ninth session of the Scientific and Technical Subcommittee.

109. The Committee recalled its agreement reached at its fifty-third session that two hours of each session of the Subcommittee from 2011 to 2013 should be available for holding workshops under the workplan of the Working Group on the Use of Nuclear Power Sources in Outer Space on the item “Use of nuclear power sources in outer space” (A/AC.105/958, annex II, paras. 8 and 10).

110. The Committee welcomed the agreement of the Subcommittee that the topic for the symposium to be organized in 2012 by the Office for Outer Space Affairs, in accordance with the agreement reached by the Subcommittee at its forty-fourth session, in 2007 (A/AC.105/890, annex I, para. 24), should be “The Earth observation services industry: market opportunities”. The symposium should

target the contribution of the Committee to the United Nations Conference on Sustainable Development and should include observance of the fortieth anniversary of the launch of Landsat-1 (A/AC.105/987, para. 213).

F. Space and society

111. The Committee considered the agenda item entitled "Space and society", in accordance with General Assembly resolution 65/97. The Committee focused its discussions on the theme "Space and education", in particular on the issue of promoting the greater participation of young people in space science and technology.

112. The representatives of India, Japan, Malaysia, Nigeria, South Africa, the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements relating to that item were also made by representatives of other member States.

113. The Committee heard the following presentations:

(a) "Space and education", by the representative of the United States;

(b) "Space Biology Group: research and space support centre", by the representative of Switzerland;

(c) "Space weather and space debris awareness in Indonesia", by the representative of Indonesia;

(d) "Bridging space and the society: recent educational activities in Japan", by the representative of Japan;

(e) "The Australian Space Research Program", by the representative of Australia.

114. The Committee noted the information provided by States on their actions and programmes aimed at attracting young people to the field of space by making them aware of the importance of space science, technology and applications and at inspiring future generations to pursue careers in science, technology, engineering and mathematics.

115. The Committee noted with satisfaction that a large number of outreach activities and space curricula and programmes for children, young people and the general public were being established by national space and educational organizations and international organizations to promote awareness of the benefits of space science and technology and applications for achieving socio-economic and sustainable development.

116. The Committee noted that international cooperation in the area of educational programmes on space science and technology was crucial in order to leverage resources and ensure that space-related educational programmes remained relevant to youth worldwide.

117. The Committee noted the role that the International Space Station continued to play in education and in reaching out to education communities worldwide.

118. The Committee noted the activities carried out at the regional level for capacity-building through education and training in space science and technology applications for sustainable development. The Committee noted with appreciation the role of regional centres for space science and technology education, affiliated to the United Nations, in space-related education.

119. The Committee noted that a number of global space-related celebrations, in particular World Space Week, observed from 4 to 10 October each year pursuant to General Assembly resolution 54/68, continued to raise awareness about outer space among young people and the general public and offered a number of educational tools that enabled younger generations to play an active role in the areas of space science and technology.

120. The Committee noted a number of space-related conferences, competitions, exhibitions, symposiums and seminars, at the global level, connecting educators and students and providing them with training and educational opportunities.

121. The Committee recalled the beneficial uses of space applications for society and their increasing use by developing countries in areas such as telemedicine and through the use of distance-learning technologies such as tele-education and e-learning that served as tools to achieve development goals.