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Report of the Scientific and Technical Subcommittee on its forty-seventh session, held in Vienna from 8 to 19 February 2010

I. Introduction

1. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space held its forty-seventh session at the United Nations Office at Vienna from 8 to 19 February 2010, under the chairmanship of Ulrich Huth (Germany).

2. The Subcommittee held 20 meetings.

A. Attendance

3. Representatives of the following 57 member States of the Committee attended the session: Algeria, Argentina, Australia, Austria, Belgium, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Cuba, Czech Republic, Ecuador, France, Germany, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kazakhstan, Kenya, Lebanon, Libyan Arab Jamahiriya, Malaysia, Mexico, Morocco, Netherlands, Nigeria, Pakistan, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Slovakia, South Africa, Spain, Sweden, Switzerland, Syrian Arab Republic, Thailand, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela (Bolivarian Republic of) and Viet Nam.

4. At its 718th meeting, on 8 February, the Subcommittee decided to invite observers for Azerbaijan, Croatia, the Dominican Republic, Tunisia and the United Arab Emirates, at their request, to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further

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requests of that nature and that it would not involve any decision of the Subcommittee concerning status. The Subcommittee took note of the application by Tunisia for membership in the Committee (A/AC.105/C.1/2010/CRP.4).

5. Observers for the International Atomic Energy Agency (IAEA), the International Telecommunication Union (ITU) and the World Meteorological Organization attended the session.

6. The session was attended by observers for the following intergovernmental organizations having permanent observer status with the Committee: European Organisation for Astronomical Research in the Southern Hemisphere, European Space Agency (ESA), European Telecommunications Satellite Organization, Regional Centre for Remote Sensing of North African States and Asia-Pacific Space Cooperation Organization (APSCO). The European Union was also represented at the session. The session was also attended by observers for the following non-governmental organizations with permanent observer status with the Committee: Association of Space Explorers, European Space Policy Institute, EURISY, International Academy of Astronautics (IAA), International Astronautical Federation (IAF), International Astronomical Union, International Institute for Applied Systems Analysis, International Society for Photogrammetry and Remote Sensing, International Space University, Prince Sultan Bin Abdulaziz International Prize for Water, Secure World Foundation (SWF), Space Generation Advisory Council (SGAC), Planetary Society and World Space Week Association.

7. A list of the representatives of States, United Nations entities and other international organizations attending the session is contained in A/AC.105/C.1/2010/INF/39.

B. Adoption of the agenda

8. At its 718th meeting, on 8 February, the Subcommittee adopted the following agenda:

1. Adoption of the agenda.
2. Election of the Chairman.
3. Statement by the Chairman.
4. General exchange of views and introduction of reports submitted on national activities.
5. United Nations Programme on Space Applications.
6. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III).
7. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment.
8. Space debris.
9. Space-system-based disaster management support.

10. Recent developments in global navigation satellite systems.

11. Use of nuclear power sources in outer space.

12. Near-Earth objects.

13 International Space Weather Initiative.

14 Long-term sustainability of outer space activities.

15. 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.

16. Draft provisional agenda for the forty-eighth session of the Scientific and Technical Subcommittee.

17. Report to the Committee on the Peaceful Uses of Outer Space.

C. Election of the Chairman

9. At its 718th meeting, the Subcommittee elected Ulrich Huth (Germany) Chair for the period 2010-2011, pursuant to General Assembly resolution 64/86.

D. General statements

10. The Subcommittee welcomed the election of Ulrich Huth as Chair for a two-year term, starting in 2010. The Subcommittee expressed its appreciation to the outgoing Chair, Aboubekr Seddik Kedjar (Algeria), for his leadership and contribution to furthering the achievements of the Subcommittee during his term of office.

11. Statements were made by representatives of the following member States during the general exchange of views: Algeria, Argentina, Australia, Austria, Brazil, Burkina Faso, Canada, China, Colombia, Cuba, Ecuador, France, Germany, Greece, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kenya, Malaysia, Mexico, Nigeria, Pakistan, Poland, Republic of Korea, Romania, Russian Federation, Saudi Arabia, South Africa, Spain, Switzerland, Syrian Arab Republic, Thailand, Turkey, United Kingdom, United States and Venezuela (Bolivarian Republic of). A statement was also made by the representative of the Bolivarian Republic of Venezuela on behalf of the Group of Latin American and Caribbean States. The observer for Tunisia made a general statement. General statements were also made by APSCO, the Regional Centre for Remote Sensing of North African States, the European Space Policy Institute, IAF, the International Astronomical Union, the International Society for Photogrammetry and Remote Sensing, SGAC and SWF.

12. The Subcommittee welcomed APSCO as the newest permanent observer of the Committee.

13. At the 718th meeting, the Chair made a statement outlining the work of the Subcommittee at its current session and reviewing the global space activities of the previous year, including important advances that had been made as a result of international cooperation.

14. At the 721st meeting, the Director of the Office for Outer Space Affairs of the Secretariat made a statement reviewing the work programme of the Office and provided information about the strategic framework for the biennium 2010-2011.

15. The Subcommittee conveyed its condolences to Haiti for the suffering caused by the devastating impact of the earthquake of 12 January 2010 and the massive humanitarian crisis that ensued. The Subcommittee noted that loss of life and property could be diminished if better information were made available to improve risk assessment, early warning and monitoring of disasters, and stressed the critical role that space-based systems could play in supporting disaster management by providing accurate and timely information and communication support.

16. The view was expressed that the Subcommittee should review its schedule of meetings and documentation levels with a view to identifying areas where savings might be possible. The view was also expressed that the Committee should consider reviewing the status of non-governmental organizations having permanent observer status with the Committee.

17. Some delegations expressed their support for the Chair of the Committee's initiative contained in a paper entitled "Towards a UN Space Policy" (A/AC.105/2009/CRP.12) and were of the view that the policy could improve coordination among member States and entities within the United Nations system in the use of space science and technology for the benefit of all countries.

18. The Subcommittee heard the following scientific and technical presentations:

(a) "Summary of APRSAF-16", by the representative of Japan;

(b) "The RIM-PAMELA international experiment opens the window into the world of very high energy physics and dark matter", by the representative of the Russian Federation;

(c) "A look at the social and historical aspects of space research" and "Technical aspects of space constructions and bases", by the representatives of Turkey;

(d) "Centre national d'études spatiales: summary of activities", by the representative of France;

(e) "Third African Leadership Conference on Space Science and Technology for Sustainable Development", by the representative of Algeria;

(f) "The United Arab Emirates' space activities", by the representative of the United Arab Emirates;

(g) "APSCO information data service system: preliminary study", by the observer for APSCO;

(h) "Space activities of Tunisia", by the representative of Tunisia.

E. National reports

19. The Subcommittee took note with appreciation of the reports submitted by Member States (A/AC.105/953 and Add.1-2, and A/AC.105/C.1/2010/CRP.7) for its consideration under agenda item 4, "General exchange of views and introduction of reports submitted on national activities". The Subcommittee recommended that the Secretariat continue to invite Member States to submit annual reports on their space activities.

F. Symposium

20. On 8 February, the Office for Outer Space Affairs organized an industry symposium on the theme "Nurturing the development of space technology", which was moderated by the Chair of the Scientific and Technical Subcommittee. The presentations given at the symposium included the following: "An international comparison of space technology nurturing", by Rachel Villain of Euroconsult; "Space technology development: challenges and opportunities", by Ahmad Sabirin Arshad of Astronautic Technology Sdn Bhd; "Critical steps in space science and technology development", by Adigun Ade Abiodun of the National Space Research and Development Agency; "Trend of small EO satellites and their applications", by Hyon Sock Chang of the Satrec Initiative; and "Nurturing the development of space technology: the UNOOSA perspective", by Mazlan Othman, Director of the Office for Outer Space Affairs.

G. Adoption of the report of the Scientific and Technical Subcommittee

21. After considering the items before it, the Subcommittee, at its 737th meeting, on 19 February, adopted its report to the Committee on the Peaceful Uses of Outer Space, containing its views and recommendations, as set out in the paragraphs below.

II. United Nations Programme on Space Applications

22. In accordance with paragraph 8 of General Assembly resolution 64/86, the Subcommittee considered agenda item 5, "United Nations Programme on Space Applications".

23. At the 726th meeting, the Expert on Space Applications made a statement outlining the activities carried out and planned under the United Nations Programme on Space Applications.

24. The representatives of China, Colombia, Greece, India, Japan, Switzerland and the United States made statements under agenda item 5.

25. The Working Group of the Whole was reconvened under the chairmanship of S. K. Shivakumar (India), in accordance with paragraph 9 of General Assembly resolution 64/86. The Working Group of the Whole held six meetings, from 10 to 19 February 2010. At its 736th meeting, on 19 February, the Subcommittee endorsed

the report of the Working Group of the Whole, which is contained in annex I to the present report.

26. The Subcommittee heard a presentation entitled “Aiding basic space science in developing nations: the official development assistance programme of Japan”, by the representative of Japan.

A. Activities of the United Nations Programme on Space Applications

27. 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 (A/AC.105/969, paras. 2-8). The Subcommittee noted that the Programme for 2009 had been carried out satisfactorily and commended the work accomplished by the Office under the Programme.

28. The Subcommittee noted with appreciation that, since its previous session, additional resources for 2010 had been provided by various Member States and organizations, as acknowledged in the report of the Expert (A/AC.105/969, paras. 55 and 56).

29. The Subcommittee expressed its concern that the financial resources available for carrying out the Programme remained limited. The Subcommittee appealed to Member States to continue supporting the Programme through voluntary contributions. The Subcommittee was of the view that the limited resources of the United Nations should be focused on activities with the highest priority.

30. The Subcommittee noted that the activities of the Programme in 2010 (see para. 35 below) would place emphasis on the following areas, inter alia: socio-economic benefits of space activities, small satellite technology for sustainable development, space weather, global navigation satellite systems, mountain regions and space law.

31. The Subcommittee noted with appreciation the donation of telescope facilities and a planetarium by the official development assistance programme of Japan, as well as the provision of technical assistance by the National Astronomical Observatory of Japan and the Japan International Cooperation Agency, which had contributed, for more than 20 years, to the development of basic science, especially in support of education and research in developing countries.

1. Year 2009

Meetings, seminars, symposiums, training courses and workshops

32. With regard to the activities of the United Nations Programme on Space Applications carried out in 2009, 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 referred to in the report of the Expert on Space Applications (A/AC.105/969, para. 52 and annex I):

(a) The Governments of Austria, Azerbaijan, Bhutan, India, Iran (Islamic Republic of), Peru, the Republic of Korea, Switzerland and the United States;

(b) APSCO, ESA, IAA, IAF, the Japan Aerospace Exploration Agency (JAXA) and the National Aeronautical and Space Administration and the National Oceanic and Atmospheric Administration of the United States.

Long-term fellowships for in-depth training

33. 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.

Technical advisory services

34. The Subcommittee 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.105/969, paras. 46-51).

2. Year 2010

Meetings, seminars, symposiums, training courses and workshops

35. The Subcommittee recommended the approval of the following programme of meetings, seminars, symposiums, training courses and workshops for 2010:

(a) United Nations/Republic of Moldova/United States of America Workshop on Applications of Global Navigation Satellite Systems, to be held in Chisinau in May;

(b) United Nations/Turkey/European Space Agency Workshop on Space Technology Applications for Socio-economic Benefits, to be held in Istanbul in September;

(c) United Nations/Austria/European Space Agency Symposium on the Use of Small Satellites for Sustainable Development, to be held in Graz, Austria, in September;

(d) United Nations/International Astronautical Federation Workshop on Applications of Global Navigation Satellite Systems, to be held in Prague in September;

(e) Eleventh United Nations/International Academy of Astronautics Workshop on Small Satellites in the Service of Developing Countries, to be held in Prague in September;

(f) United Nations/Plurinational State of Bolivia/European Space Agency Workshop on Space Technology's Contribution to Sustainable Development in the Mountain Regions of Andean Countries, to be held in Cochabamba, Plurinational State of Bolivia, in the second half of 2010;

(g) United Nations/National Aeronautics and Space Administration/Japan Aerospace Exploration Agency Workshop on the International Space Weather Initiative, to be held in Luxor, Egypt, in November;

(h) United Nations/Thailand/European Space Agency Workshop on Space Law, to be held in Bangkok in November.

B. International Space Information Service

36. The Subcommittee noted with satisfaction the publication of *Highlights in Space 2009*, which had been compiled in a CD-ROM from a report prepared in cooperation with IAF and the International Institute of Space Law. The Subcommittee expressed its appreciation to the contributors for their work.

37. The Subcommittee noted with appreciation 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

38. The Subcommittee noted that the schedule of nine-month postgraduate courses for the period 2008-2011 offered by the regional centres for space science and technology education, affiliated to the United Nations, was included in the report of the Expert on Space Applications (A/AC.105/969, annex III).

39. The Subcommittee noted with appreciation that a publication on performance assessment and the future of the Regional Centre for Space Science and Technology Education in Asia and the Pacific had been made available to the Subcommittee at its current session.

40. The Subcommittee recalled that the General Assembly, in its resolution 64/86, 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[1] and, to that end, fostered interregional dialogue on space matters between Member States.

41. In that regard, the Subcommittee noted that the third African Leadership Conference on Space Science and Technology for Sustainable Development had been held in Algiers from 7 to 9 December 2009 with financial support from the Office for Outer Space Affairs. The Conference had been hosted by the Government of Algeria and organized by the Algerian Space Agency. At the Conference, Algeria, Kenya, Nigeria and South Africa signed an agreement on the African Resource Management constellation. Recommendations were made in several areas of cooperation among African countries, including space-based disaster forecast and management support, Earth observation for monitoring global climate change, water resources management and desertification, and capacity-building in space policy and space law. The fourth African Leadership Conference will be hosted by the Government of Kenya in 2011.

42. The Subcommittee noted that an international symposium, to be organized by IAA and the Government of Nigeria, on the characteristics and attributes of the

[1] General Assembly resolution 55/2.

equatorial plane, would be hosted by Nigeria from 30 November to 2 December 2010.

43. The Subcommittee also noted that the sixteenth session of the Asia-Pacific Regional Space Agency Forum (APRSAF) had been held in Bangkok from 26 to 29 January 2010. The theme of the session was "Space applications: contributions towards human safety and security". At the Forum, participants considered, inter alia, activities related to the Step 2 phase of Sentinel Asia, the APRSAF Satellite Technology for the Asia-Pacific Region (STAR) Programme, the Space Applications for Environment project, GNSS and space education and awareness. The seventeenth session of APRSAF would be jointly organized by the Government of Australia and the Government of Japan, and be hosted by Australia in November 2010.

44. The Subcommittee further noted that APSCO had organized several activities in 2009, including a training course on remote sensing technology and application, held in China, and the first APSCO symposium on space technology and applications, held in Thailand. The workplan of APSCO for 2010 included activities in spatial data sharing, atmospheric research and the development of an Asia-Pacific ground-based optical satellite observation system. A second APSCO symposium on space technology and applications, on the theme of agriculture and food security, will be held in Pakistan in September 2010.

45. The Subcommittee further noted that the Second Hemispheric Encounter on National Mechanisms and Networks for Disaster Risk Reduction, entitled "Encounter of Santa Marta: from Theory to Practice," would be held in Santa Marta, Colombia, from 14 to 16 April 2010. The event would be co-organized by the Government of Colombia through the Ministry of the Interior and of Justice and its Directorate for Risk Management for Disaster Prevention and Relief, the General Secretariat of the Organization of American States through its Department of Sustainable Development, and the secretariat of the International Strategy for Disaster Reduction through its regional office for the Americas. The meeting would be an opportunity to discuss the contribution of space-based information to regional disaster risk management practice.

46. The Subcommittee further noted the preparations being made for the Sixth Space Conference of the Americas, to be hosted by the Government of Mexico in November 2010, with a preparatory meeting to be held in Chile in June 2010. Representatives of Colombia, Ecuador and Mexico, as well as of the pro tempore secretariat of the Fifth Space Conference of the Americas, established by the Government of Ecuador, and the International Group of Experts, met in Quito on 16 and 17 December 2009 with financial support from the Office for Outer Space Affairs. The meeting resulted in a detailed workplan for the remaining preparations in the lead-up to the Sixth Space Conference of the Americas, including activities in the areas of tele-health, sustainable mountain development, disaster management, space policy and space law, and institutional aspects of regional cooperation and coordination.

III. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)

47. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 6, “Implementation of the recommendations of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)”.

48. The representatives of Canada, Iran (Islamic Republic of), Japan, Nigeria and the United States made statements under agenda item 6.

49. The Subcommittee heard the following scientific and technical presentations:

(a) “ASI and bi/multilateral space astronomy facilities”, by the representative of Italy;

(b) “Recent Earth observation/space technology applications for societal benefits in India”, by the representative of India;

(c) “Advances of space medicine and biology research in Russia”, by the representative of the Russian Federation;

(d) “Training experience in Italy under the cooperation agreement between Kenya and Italy”, by the representative of Italy;

(e) “World Space Week in Iran”, by the representative of the Islamic Republic of Iran;

(f) “Opening a new window to other worlds with spectropolarimetry: SEARCH”, by the representative of Austria;

(g) “Action team 6 on improving public health: an overview”, by the representative of Canada;

(h) “Tele-health/telemedicine in Burkina Faso”, by the representative of Burkina Faso;

(i) “The youth space vision for the next decade: looking back to look forward”, by the observer for SGAC.

50. The Subcommittee expressed its appreciation for the flexible approach adopted in implementing the recommendations of UNISPACE III. By making use of multi-year workplans and action teams, the Committee was able to address a wide range of issues, thereby enabling maximum implementation of those recommendations.

51. The Subcommittee noted with satisfaction that further progress had been made in the implementation of the remaining recommendations of UNISPACE III and that a number of activities and initiatives had been undertaken by Member States, United Nations entities and other observers of the Committee in the past year.

52. The Subcommittee noted that the Action Team on Public Health (action team 6) and the Action Team on Near-Earth Objects (action team 14) had held meetings during its forty-seventh session.

53. The Subcommittee noted with appreciation that the Action Team on Public Health, co-chaired by Canada and India, had included in its workplan the use of telecommunications in the context of tele-health and Earth observation applications in the context of tele-epidemiology, with an emphasis on improving public health and infectious disease management. The Subcommittee noted that the action team was pursuing the objectives contained in its workplan for the period 2010-2011 and would present a report at the forty-eighth session of the Subcommittee. The Subcommittee also noted that the action team encouraged Member States to contribute to the team's report by sharing experiences and views on the way forward.

54. The view was expressed that the Subcommittee should consider organizing a fourth United Nations conference on the exploration and peaceful uses of outer space in order to address present and future challenges to humanity, such as climate change.

55. The Working Group of the Whole, reconvened in accordance with General Assembly resolution 64/86, also considered agenda item 6, "Implementation of the recommendations of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)". At its 736th meeting, on 19 February, the Subcommittee endorsed the recommendations of the Working Group of the Whole concerning the implementation of the recommendations of UNISPACE III, which are contained in annex I to the present report.

56. The Subcommittee welcomed the decision by the Working Group of the Whole to focus its efforts relating to the implementation of the recommendations of UNISPACE III on the Committee's contribution to the work of the Commission on Sustainable Development.

57. The Subcommittee noted that discussions were ongoing on the establishment of a regional centre for space science and technology education where the working language would be Arabic.

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

58. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 7, "Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment".

59. The representatives of Canada, China, Germany, India, Italy, Japan, Malaysia, the Russian Federation and the United States made statements under agenda item 7.

60. The Subcommittee heard the following scientific and technical presentations:

(a) "CBERS and HJ-1A/1B data applications and international cooperation", by the representative of China;

(b) "Forest and environmental monitoring activities in the climate change process", by the representative of Germany;

(c) “OCEANSAT-2 mission”, by the representative of India;

(d) “Formalizing South Africa’s national space programme”, by the representative of South Africa;

(e) “International cooperation in operational environmental satellites: the US experience”, by the representative of the United States;

(f) “Use of remote sensing to improve water management in Saudi Arabia”, by the observer for the Prince Sultan Bin Abdulaziz International Prize for Water.

61. In the course of the discussions, delegations reviewed national and cooperative programmes on remote sensing. Examples were given of national, bilateral, regional and international programmes to further socio-economic and sustainable development, notably in the following areas: agriculture and fishery; climate change monitoring; detecting illegal crops and opium poppy cultivation; early warning of and response to natural and man-made disasters; geology; humanitarian relief; hydrology; managing ecosystems and natural resources; mapping biodiversity resources, coastal zones, land use, wasteland and wetlands; monitoring air quality, desertification, droughts, food security, deforestation, the ionosphere and weather; oceanography; rural development and urban planning; and search and rescue efforts.

62. The Subcommittee noted with satisfaction that a growing number of developing countries were actively developing and deploying their own remote-sensing satellite systems and utilizing space-based data to advance socio-economic development.

63. The Subcommittee noted that the increased convergence of space-based data, geographic information systems and GNSS technologies was generating valuable information for policy- and decision-making.

64. The Subcommittee recognized the important role played by APRSAF, APSCO, the Committee on Earth Observation Satellites (CEOS), the Group on Earth Observation (GEO), the Global Monitoring for Environment and Security (GMES) and the Integrated Global Observing Strategy Partnership, in promoting international cooperation in the use of remote sensing technology, in particular for the benefit of developing countries.

65. The Subcommittee noted the progress made by GEO in the implementation of the Global Earth Observation System of Systems (GEOSS) and further noted that, at its sixth plenary session, held in Washington, D.C., on 17 and 18 November 2009, GEO had adopted the strategic targets for implementing GEOSS by 2015 and data-sharing implementation guidelines.

66. The Subcommittee noted the increased availability of space-based data at little or no cost, including those provided by the Argentine Earth observation satellite SAC-C, the China-Brazil Earth resources satellites, the Greenhouse Gases Observing Satellite of Japan and the United States Landsat image archive.

V. Space debris

67. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 8, “Space debris”.

68. The representatives of Colombia, Germany, Greece, India, Indonesia, Italy, Japan, the Russian Federation, the United States and Venezuela (Bolivarian Republic of) made statements under agenda item 8. The observer for ESA also made a statement.

69. The Subcommittee heard the following scientific and technical presentations:

(a) "IADC Protection Manual and IADC response to COPUOS request on internationally accessible databases of objects in outer space", by the representative of India;

(b) "Space debris activities in India", by the representative of India;

(c) "USA space debris environment and operational updates", by the representative of the United States;

(d) "Cost and benefit of space debris mitigation measures", by the representative of Germany;

(e) "Swiss contributions to a better understanding of the space debris environment", by the representative of Switzerland;

(f) "Recent space debris mitigation activities in France", by the representative of France;

(g) "GEO protected region: ISON informational support for tasks of spacecraft flight safety and space debris removal", by the representative of the Russian Federation.

70. The Subcommittee had before it a note by the Secretariat on national research on space debris, safety of space objects with nuclear power sources on board and problems relating to their collision with space debris, containing replies received from Member States on the issue (A/AC.105/951 and Add.1).

71. The Subcommittee noted with satisfaction that at its current session the Secretariat had made available the text of the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space in the form of a publication (ST/SPACE/49).

72. The Subcommittee noted with satisfaction that some States were implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space 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 Subcommittee also noted that other States were using the IADC Guidelines and the European Code of Conduct for Space Debris Mitigation as references in the regulatory framework established for national space activities.

73. The Subcommittee welcomed the presentation made by the representative of India, in his capacity as Chair of IADC, pursuant to the agreement of the Committee contained in paragraph 116 of its report on its fifty-second session, in 2009.[2] The Subcommittee requested IADC to inform it of any revisions made to the IADC

[2] *Official Records of the General Assembly, Sixty-fourth Session, Supplement No. 20* (A/64/20).

Space Debris Mitigation Guidelines in the light of evolving technologies and debris mitigation practices. The Subcommittee noted that the Space Debris Mitigation Guidelines of the Committee might have to be amended in accordance with such revisions.

74. The Subcommittee noted with appreciation that States had adopted a number of approaches and concrete actions to mitigate space debris, including the reorbiting of satellites, passivation, end-of-life operations and the development of specific software and models for space debris mitigation. The Subcommittee also noted that research was being conducted 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.

75. The view was expressed that a comprehensive study on the long-term evolution of the space debris environment was needed.

76. The view was expressed that since the future of space exploration would largely depend on the effectiveness of space debris mitigation measures, all States, and in particular space-faring nations, should pay attention to the issue.

77. The view was expressed that the cost of space debris mitigation measures should be shared by all space users equally and that sharing that cost would keep the business environment for space activities fair and competitive.

78. The view was expressed that States without the capability and expertise to fully implement the Space Debris Mitigation Guidelines of the Committee should benefit from the best practices of and training provided by States with relevant experience.

79. The view was expressed that it was essential to harmonize existing approaches related to enhancing the safety, security and sustainability of space activities.

80. The Subcommittee agreed that Member States, in particular space-faring nations, should pay greater attention to the problem of collisions of space objects, including those with nuclear power sources (NPS) on board, with space debris and to other aspects of space debris, including its re-entry into the atmosphere. It noted that the General Assembly, in its resolution 64/86, had called for the continuation of national research on that question, for the development of improved technology for the monitoring of space debris and for the compilation and dissemination of data on space debris and had agreed that international cooperation was needed to expand appropriate and affordable strategies to minimize the impact of space debris on future space missions. The Subcommittee agreed that research on space debris should continue and that Member States should make available to all interested parties the results of that research, including information on practices that had proved effective in minimizing the creation of space debris.

81. The Subcommittee agreed that Member States and space agencies should once again be invited to provide reports on research on space debris, the safety of space objects with NPS on board and problems relating to the collision of such space objects with space debris.

82. Some delegations expressed the view that reports on national research on space debris, safety of space objects with NPS on board 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 NPS.

83. The view was expressed that it was necessary to continue improving the Space Debris Mitigation Guidelines. The lack of clear requirements and the use of phrases such as "in so far as 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. In general, those countries insisted on imposing restrictions and controls on other countries that were keen to use technology, as was their right, to consolidate improved conditions of life for their people.

84. The view was expressed that space should be considered a safe, secure and sustainable environment by its users and that States should continue to be diligent in actively pursuing ways and means to limit the amount of space debris in order to sustain the space environment for the long term.

85. The view was expressed that in connection with the problem of space debris States should take into account that the Earth's space environment was a limited resource.

86. The view was expressed that it was important to expeditiously support technical measures for implementing existing and future regulatory frameworks and that progress in that regard could be stimulated by an information platform related to objects in outer space to be established under the auspices of the United Nations, taking due account of potential financial implications and liability issues.

87. The view was expressed that in addition to two-line element data sets, available on the World Wide Web, an international platform on space objects created and maintained on a voluntary basis would preserve transparency and encourage partnerships for ensuring the safety of human space flights and national missions.

88. The view was expressed that the Space Debris Mitigation Guidelines of the Committee should be further developed and that the Scientific and Technical Subcommittee and the Legal Subcommittee of the Committee should cooperate with the aim of developing legally binding rules relating to space debris.

89. The view was expressed that legally binding space debris mitigation measures were not necessary and that States should seek an acknowledgement, by the broadest possible community of nations, that space debris could be controlled and that national implementation of space debris mitigation practices was consistent with mission objectives and principles of cost-effectiveness.

VI. Space-system-based disaster management support

90. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 9, "Space-system-based disaster management support".

91. The representatives of Germany, India, Indonesia, Iran (Islamic Republic of), Japan, Malaysia, Nigeria, the Philippines, the Russian Federation and the United States made statements under agenda item 9.

92. The Subcommittee heard the following scientific and technical presentations:

(a) “Asian Disaster Reduction Centre and its activities”, by the representative of Japan;

(b) “HJ-1 small satellites and application for disaster reduction”, by the representative of China;

(c) “International global monitoring aerospace system: IGMASS”, by the representative of the Russian Federation;

(d) “Cosmo-Sky Med: earthquakes in Haiti and L’Aquila”, by the representative of Italy;

(e) “Technical support for non-technical decision support for approaching the last mile problem”, by the representative of Germany;

(f) “Applications of remote sensing satellites and GNSS for disaster management and Earth environment monitoring in Indonesia”, by the representative of Indonesia;

(g) “Bhuvan Portal for space-based information for decision-making”, by the representative of India;

(h) “Space technology and management of the flooding in Burkina Faso in September 2009: from Charter activation to rapid mapping”, by the representative of Burkina Faso.

93. The Subcommittee had before it the following documents:

(a) Capacity-building strategy of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (A/AC.105/947);

(b) Report of the Secretariat on outreach activities carried out in 2009 in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (A/AC.105/952);

(c) Report on activities carried out in 2009 in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (A/AC.105/955).

94. At the 728th meeting of the Subcommittee, the Programme Coordinator for the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) made a statement on the activities carried out in 2009 and on the implementation of the activities planned for 2010.

95. The Subcommittee noted with satisfaction the progress made with regard to the activities carried out within the framework of UN-SPIDER in 2009, including the support provided through the programme to the emergency efforts made in response to major disasters worldwide.

96. The Subcommittee noted with satisfaction the voluntary contributions that were being made available by Member States, including cash contributions from Austria, Croatia, Germany and Spain, 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 2010-2011.

97. The Subcommittee noted with appreciation that Algeria, Iran (Islamic Republic of), Nigeria and Romania, as well as the Asian Disaster Reduction Centre, were contributing to the implementation of the UN-SPIDER workplan in their capacity as hosts of regional support offices.

98. The Subcommittee welcomed the signature, during its current session, of cooperation agreements for the establishment of regional support offices in Pakistan and Ukraine.

99. The Subcommittee welcomed the offers of the Philippines and South Africa, as well as of the Water Center for the Humid Tropics of Latin America and the Caribbean and the University of the West Indies, to host UN-SPIDER regional support offices.

100. The Subcommittee noted the activities of Member States that were contributing to increasing the availability and use of space-based solutions in support of disaster management, including the following: the Sentinel Asia project, which in its second phase of implementation was also building upon the additional infrastructure being provided by the Korea Aerospace Research Institute and the Geo Informatics and Space Technology Development Agency of Thailand, as well as the Wide-band InterNetworking Engineering Test and Demonstration Satellite; the International Satellite System for Search and Rescue (COSPAS-SARSAT); the Mesoamerican Regional Visualization and Monitoring System (SERVIR), as well as the SERVIR system in Africa, which is being implemented by the Regional Centre for Mapping of Resources for Development; 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 Famine Early Warning System Network; GEONETCast, which is a nearly global satellite-based data dissemination system; those falling within the framework of APRSAF; and the Services and Applications for Emergency Response (SAFER) project being implemented in the framework of the GMES initiative in Europe.

101. The Subcommittee noted with appreciation the extensive support provided by Member States, international and regional organizations and UN-SPIDER in the provision of space-based information to support relief efforts following the earthquake that struck Haiti on 12 January 2010.

102. The Working Group of the Whole, reconvened in accordance with General Assembly resolution 64/86, also considered agenda item 9, “Space-system-based disaster management support”. At its 736th meeting, on 19 February, the Subcommittee endorsed the report of the Working Group of the Whole, which is contained in annex I to the present report.

VII. Recent developments in global navigation satellite systems

103. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 10, “Recent developments in global navigation satellite systems”.

104. The representatives of China, Germany, India, Italy, Japan, Nigeria, the Russian Federation and the United States made statements under agenda item 10.

105. The Subcommittee heard the following scientific and technical presentations:

(a) "Introduction of the Quasi-Zenith Satellite System (QZSS)", by the representative of Japan;

(b) "Highlights of the space communications and navigation symposium", by the representative of Austria.

106. The Subcommittee had before it the following documents:

(a) Note by the Secretariat on the Fourth Meeting of the International Committee on Global Navigation Satellite Systems (A/AC.105/948);

(b) Report of the Secretariat on activities carried out in 2009 in the framework of the workplan of the International Committee on Global Navigation Satellite Systems (A/AC.105/950).

107. The Subcommittee reviewed issues related to the International Committee on Global Navigation Satellite Systems (ICG), the latest developments in the field of GNSS science and innovative technology applications, and new GNSS applications.

108. The Subcommittee noted with appreciation that ICG had been established on a voluntary basis as a forum to promote cooperation, as appropriate, on matters of mutual interest to its members related to civil satellite-based positioning, navigation, timing and value-added services, as well as compatibility and interoperability of GNSS, while increasing their use to support sustainable development, particularly in developing countries.

109. The Subcommittee noted with satisfaction that the fourth meeting of ICG was held in Saint Petersburg, Russian Federation, from 14 to 18 September 2009 and that the fifth meeting of ICG would be held in Turin, Italy, from 18 to 22 October 2010 in cooperation with the European Union. The Subcommittee also noted that the sixth meeting of ICG would be hosted by Japan, in 2011, and the seventh meeting would be hosted by China, in 2012.

110. The Subcommittee commended the Office for Outer Space Affairs for the support it continued to provide in its role as the executive secretariat of ICG and its Providers' Forum.

111. The Subcommittee noted the progress made with regard to the ICG workplan and welcomed the adoption of a new principle on transparency for open services.

112. The Subcommittee noted that participants in the Providers' Forum continued to discuss the enhancement of the compatibility and interoperability of current and future regional and global navigation satellite systems, to consider proposals on open service information dissemination and on service performance monitoring, and to exchange views on issues related to the spectrum of radio-navigation satellite services. The Subcommittee also noted that the Providers' Forum had held its fourth meeting in conjunction with the fourth meeting of ICG.

113. The Subcommittee noted that the United States was committed to keeping the global positioning system (GPS) as a central pillar in an emerging international system of GNSS. The Subcommittee also noted that new applications for GPS were constantly being introduced and that in addition to having 30 operational satellites the system would also have the GPS Block III spacecraft, which would be launched during 2010.

114. The Subcommittee noted with appreciation the cash contributions made by the United States, which enabled the Office for Outer Space Affairs to undertake a number of activities relating to GNSS, ICG and the Provider's Forum, including the organization of regional workshops.

115. The Subcommittee noted that the baseline 24-satellite constellation of the Global Navigation Satellite System (GLONASS) of the Russian Federation would be deployed in 2010 and would operate in the framework of the GLONASS federal mission-oriented programme, to be extended through 2020.

116. The Subcommittee noted that Galileo, Europe's future satellite navigation system, was scheduled to become available with as many as 18 of the planned 30 satellites in 2014 and that innovative receiver technologies and Galileo-based application programmes were being developed. The Subcommittee took note of the test beds of Germany's Galileo test and development environment for land mobile applications and for the maritime Galileo test and development environment for nautical navigation solutions and port-oriented traffic guidance systems.

117. The Subcommittee noted that Italy, as one of the founders of the Galileo and the European Geostationary Navigation Overlay Service projects, continued to promote and develop national application projects aimed at fostering the use of satellite navigation, harmonizing them with European projects.

118. The Subcommittee noted that the GPS-aided GEO-Augmented Navigation System, a space-based augmentation system, was being implemented over Indian airspace. The final operational phase of this system had been approved and was expected to be commissioned by 2011. The Indian Regional Navigation Satellite System, capable of providing optimal position accuracy using a stand-alone satellite system, was also going to be implemented and would comprise seven satellites: three in geostationary orbit and four in geosynchronous orbit. That system was expected to be commissioned during the period 2012-2013.

119. The Subcommittee noted that Japan was promoting the Quasi-Zenith Satellite System (QZSS) and the Multi-functional Transport Satellite (MTSAT) Satellite-based Augmentation System (MSAS), both of which were augmentation systems of GPS. While the first QZSS satellite would be launched in 2010, MSAS had been commissioned for air navigation in September 2007 and, since then, had been providing aircraft with high-quality service.

120. The Subcommittee noted that the third satellite in the Compass/BeiDou Navigation Satellite System of China had been successfully launched in January 2010 and that the Compass demonstration system, completed in 2003, had been put to use in a wide variety of fields, such as mapping, telecommunications, water conservation, fishery, transportation and the prevention of forest fires.

121. The Subcommittee noted that Nigeria was establishing 13 continuously operating reference stations as part of the ground segment of a future space-based augmentation system for Africa.

VIII. Use of nuclear power sources in outer space

122. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 11, “Use of nuclear power sources in outer space”.

123. The representatives of the United States and Venezuela (Bolivarian Republic of) made statements under agenda item 11.

124. The Subcommittee had before it a working paper by the Chair of the Working Group on the Use of Nuclear Power Sources entitled “Draft elements of a potential new workplan of the Working Group on the Use of Nuclear Power Sources in Outer Space” (A/AC.105/C.1/L.302).

125. The Subcommittee welcomed the agreement on the Safety Framework for Nuclear Power Sources Applications in Outer Space (A/AC.105/934) reached by the IAEA Commission on Safety Standards at its twenty-fifth meeting, in April 2009.

126. The Subcommittee encouraged Member States to implement the Safety Framework.

127. The Subcommittee expressed its appreciation to the IAEA secretariat for making the joint publication of the Safety Framework available to the Subcommittee in the form of a hard copy and on a CD-ROM.

128. Some delegations expressed the view that the Safety Framework represented a significant advance in the development of safe NPS 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 NPS applications were being developed, launched and used in a safe manner.

129. The view was expressed that it was exclusively States, irrespective of their level of social, economic, scientific or technical development, that had an obligation to engage in regulatory activity associated with the use of NPS in outer space and that the matter concerned all of humanity. That delegation was of the view that Governments bore international responsibility for national activities involving the use of NPS in outer space conducted by governmental and non-governmental organizations and that such activities must be beneficial and not detrimental to humanity.

130. The view was expressed that no justification existed for contemplating the use of NPS in Earth orbits when other sources of energy were available that were much safer and that had proved to be efficient.

131. The view was expressed that the application of NPS to space missions was important because it could help States to further the objectives of space exploration.

132. In accordance with General Assembly resolution 64/86, the Working Group on the Use of Nuclear Power Sources in Outer Space was reconvened under the chairmanship of Sam A. Harbison (United Kingdom). The Working Group held four meetings.

133. The Subcommittee noted with appreciation the intersessional work conducted by the Working Group on a proposal for a new workplan, aimed at assisting the Subcommittee in promoting and facilitating the implementation of the Safety Framework.

134. At its 732nd meeting, on 17 February, the Subcommittee endorsed the report of the Working Group, including the agreement on the Working Group's workplan for the period 2010-2015. The report of the Working Group is contained in annex II to the present report.

135. The view was expressed that NPS applications addressed in the second objective of the workplan should be in conformity with international law, the Charter of the United Nations and United Nations treaties and principles on outer space, in particular with the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Outer Space Treaty).[3]

136. The view was expressed that all Member States should be involved in decision-making and in identifying the issues and challenges associated with the application of NPS and the Safety Framework and that such involvement would ensure the success of the implementation of the workplan.

137. The view was expressed that a closer link should be established between the Scientific and Technical Subcommittee and the Legal Subcommittee with the aim of promoting international norms relevant to matters being considered by the Scientific and Technical Subcommittee under this item, as well as to matters related to space debris and the use of nuclear power sources in outer space.

IX. Near-Earth objects

138. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 12, "Near-Earth objects".

139. The representatives of Germany, Japan, Mexico and the United States made statements under agenda item 12.

140. The Subcommittee heard the following scientific and technical presentations:

(a) "Legal aspects of NEO threat response and related institutional issues", by the representative of Australia;

(b) "The NEO problem: activities in Russia", by the representative of the Russian Federation;

(c) "Near-Earth object observations program", by the representative of the United States;

(d) "Global project on the anti-asteroid protection of the Earth", by the representative of Ukraine;

(e) "On the possible approach to formation of echelon short-term reaction of the international planetary defense system", by the representative of the Russian Federation;

(f) "The Hayabusa mission: challenge to near-Earth asteroid sample return and new insights into solar system origin", by the representative of Japan;

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[3] United Nations, *Treaty Series*, vol. 610, No. 8843.

(g) “Apophis 2029: a unique mission opportunity”, by the representative of France;

(h) “Current status of ESA’s space situational awareness near-Earth object programme”, by the observer for ESA;

(i) “NEO IAWN workshop summary”, by the observer for SWF.

141. The Subcommittee had before it the following documents:

(a) Note by the Secretariat on information on research in the field of near-Earth objects carried out by Member States, international organizations and other entities (A/AC.105/949);

(b) Interim report of the Action Team on Near-Earth Objects (2009-2010) (A/AC.105/C.1/L.301).

142. The Subcommittee noted that near-Earth objects were asteroids and comets with orbits that could cross the orbit of the Earth. The Subcommittee also noted that interest in asteroids was largely fuelled by their scientific value as remnant debris from the formation process of the inner solar system, the potentially devastating consequences of such objects colliding with the Earth and the wide range of natural resources they contained.

143. The Subcommittee noted that early detection and precision tracking were the most effective tools for the management of threats posed by near-Earth objects. The Subcommittee also noted that any measures to mitigate such threats would require coordinated international efforts and increased knowledge of the properties of near-Earth objects.

144. The Subcommittee noted with satisfaction that the Association of Space Explorers and SWF, with support from the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean, had organized a workshop on the establishment of a near-Earth object information, analysis and warning network, which had been held in Mexico City, under the auspices of the Government of Mexico, in January 2010.

145. The Subcommittee also noted with satisfaction that the University of Nebraska-Lincoln (United States) had prepared, in order to assist the intersessional work of the Action Team on Near-Earth Objects and the Working Group on Near-Earth Objects, a report entitled “Legal aspects of NEO threat response and related institutional issues”, in which key legal and institutional issues linked to potential future threats posed by near-Earth objects were examined.

146. The Subcommittee noted with appreciation the international projects undertaken by Member States to detect and characterize near-Earth objects, such as the Panoramic Survey Telescope and Rapid Response System, the Large Millimeter Telescope, the Large Synoptic Survey Telescope and the Pulkovskaya Observatory. In that regard, the Subcommittee also noted with satisfaction the progress made in a segment dedicated to the assessment and classification of impact risks of near-Earth objects of the ESA Space Situational Awareness programme.

147. The Subcommittee noted with satisfaction that the Romanian Space Agency would co-organize the IAA Planetary Defence Conference to be held in Romania, in May 2011.

148. The Subcommittee noted that some Member States had implemented or were planning to implement fly-by and exploration missions to near-Earth objects. The Subcommittee welcomed past and upcoming missions investigating near-Earth objects, including the Dawn, Deep Impact and Stardust spacecraft missions of the United States; the Near Earth Object Surveillance Satellite mission of Canada; the Marco Polo near-Earth object sample return mission of ESA and JAXA; the Hayabusa near-Earth object sample return mission of Japan; and the prospective AsteroidFinder spacecraft mission of Germany.

149. The Subcommittee noted the significant progress achieved by the United States in reaching its target of detecting 90 per cent of all near-Earth objects larger than one kilometre in diameter. The Subcommittee noted that the United States had determined that fewer than 150 of the 900 near-Earth objects with a diameter larger than one kilometre could pose a hazard of collision with the Earth.

150. The Subcommittee agreed that efforts to detect, track and characterize near-Earth objects should be continued and expanded at the national and international levels.

151. In accordance with General Assembly resolution 64/86, the Working Group on Near-Earth Objects was reconvened, under the chairmanship of Sergio Camacho (Mexico). The Working Group on Near-Earth Objects held three meetings.

152. At its 735th meeting, on 18 February, the Subcommittee endorsed the report of the Working Group on Near-Earth Objects, which is contained in annex III to the present report.

X. 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

153. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 15, “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 a single issue/item for discussion.

154. The representatives of Colombia, Saudi Arabia and Venezuela (Bolivarian Republic of) made statements on agenda item 15. The observer for Azerbaijan made a statement. The observer for ITU also made a statement.

155. The Subcommittee welcomed the information provided in the annual report for 2009 of the ITU Radiocommunication Bureau on the use of the geostationary satellite orbit and other orbits (www.itu.int/itu-R/space/snl/report), as well as other

documents referred to in conference room paper A/AC.105/C.1/2010/CRP.9. The Subcommittee invited ITU to continue submitting reports to it.

156. Some delegations expressed interest in the rational, efficient and equitable use of the geostationary orbit and the necessity of finding the means and tools to implement an effective mechanism that would lead to concrete results.

157. Some delegations were of the view that the geostationary orbit was a limited natural resource that risked becoming saturated, that its exploitation should be rationalized and that it should be 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.

158. Some delegations expressed the view that the geostationary orbit was a limited natural resource with sui generis characteristics that risked saturation and that, therefore, equitable access to it should be guaranteed for all States, taking particular account of the needs and interests of developing countries and the geographical position of certain countries.

159. The view was expressed that the geostationary orbit provided unique potential for access to communication and information, in particular for assisting developing countries in implementing social programmes and educational projects, and in providing medical assistance.

160. Some delegations were of the view that this item should remain on the agenda of the Subcommittee in order to ensure the use of the geostationary orbit in accordance with international law.

161. Some delegations were of the view that a closer link should be established between the Scientific and Technical Subcommittee and the Legal Subcommittee with the aim of promoting international norms relevant to matters being considered by the Scientific and Technical Subcommittee under this item, as well as to matters related to space debris, use of nuclear power sources in outer space and matters related to delimitation.

XI. International Space Weather Initiative

162. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 13, “International Space Weather Initiative” under the workplan contained in the annex to document A/AC.105/933 (para. 16).

163. The representatives of Canada, China, India, Indonesia, Japan and the United States made statements under agenda item 13. The observer for the World Meteorological Organization also made a statement.

164. The Subcommittee heard the following scientific and technical presentations:

(a) “International experiments of the Russian Academy of Sciences in the framework of the space weather programme”, by the representative of the Russian Federation;

(b) “International Space Weather Initiative”, by the representative of the United States;

(c) “Space weather impact on radio systems”, by the representative of Germany;

(d) “Canadian space weather activities in support of the International Space Weather Initiative”, by the representative of Canada;

(e) “Japan’s contribution to the ISWI”, by the representative of Japan;

(f) “Space debris, near-Earth objects and space weather research and observation in Indonesia”, by the representative of Indonesia.

165. The Subcommittee had before it notes by the Secretariat containing reports on regional and international activities related to the International Space Weather Initiative (A/AC.105/967 and Add.1 and A/AC.105/C.1/2010/CRP.8).

166. The Subcommittee noted that the International Space Weather Initiative would contribute to the observation of space weather through the deployment of instrument arrays and the sharing of observed data among researchers around the world.

167. The Subcommittee noted that the Initiative would explore the solar corona; deepen understanding of the function of the Sun and the effects that the variability of the Sun could have on the Earth’s magnetosphere, environment and climate; explore the ionized environments of planets; and determine the limits of the heliosphere and deepen understanding of its interaction with interstellar space.

168. The Subcommittee welcomed the fact that participation in the Initiative was open to scientists from all countries, as instrument hosts or instrument providers.

169. The Subcommittee noted that the Initiative offered Member States the opportunity to coordinate 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.

170. The Subcommittee noted that events related to space weather were of significant concern to all countries, owing to technological and economic interdependence and the growing dependence on space assets to deliver vital services.

171. The Subcommittee noted with appreciation that information on the ground-based worldwide instrument arrays was being distributed through a newsletter being published by the Space Environment Research Centre of Kyushu University (Japan) and through the website of the International Space Weather Initiative (www.iswi-secretariat.org).

172. The Subcommittee noted with appreciation that the Office for Outer Space Affairs had joined the study of the effect of sudden disturbances on the ionosphere and had installed a sudden ionospheric disturbance monitor at its permanent outer space exhibit. The daily data sets produced by that instrument and recorded by the Office were being transferred to Stanford University (United States) for scientists worldwide to use in their analysis of the complex relationship between the Earth and the Sun.

173. The Subcommittee welcomed the fact that the United Nations Programme on Space Applications had organized the first of a series of United Nations workshops, co-sponsored by ESA, the National Aeronautical and Space Administration and JAXA and held in the Republic of Korea in 2009, to consider the International

Space Weather Initiative, and that the next workshop was scheduled to take place in Egypt in November 2010. The third and fourth workshops in the series would be hosted by Nigeria in 2011 and Ecuador in 2012.

XII. Long-term sustainability of outer space activities

174. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 14, "Long-term sustainability of outer space activities", under the workplan contained in the report of the Committee at its fifty-second session.[4]

175. The representatives of Bolivia (Plurinational State of), Canada, China, Colombia, France, Germany, India, Italy, Japan, Nigeria, the Republic of Korea, Romania, the Russian Federation, Saudi Arabia, the United States and Venezuela (Bolivarian Republic of) made statements on the item.

176. The Subcommittee heard a presentation entitled "Space situational awareness sharing update", by the representative of the United States.

177. The Subcommittee had before it the following:

(a) A working paper submitted by France on the long-term sustainability of outer space activities (A/AC.105/C.1/L.303);

(b) A conference room paper on the long-term sustainability of outer space activities: preliminary reflections (A/AC.105/C.1/2010/CRP.3).

178. The Subcommittee recalled the importance of ensuring the safe and sustainable future use of outer space and noted, in accordance with the workplan related to this item, that a working group should be established to support the preparation of a report on the long-term sustainability of outer space activities, the examination of measures that could enhance the long-term sustainability of such activities and the preparation of a set of best-practice guidelines.

179. The Subcommittee agreed that any best-practice guidelines that may be developed should be implemented on a voluntary basis and be focused on practical and prudent short- and medium-term measures that could be implemented in a timely manner.

180. The Subcommittee recognized that, should such guidelines be developed, adequate provisions should be made to enable the guidelines to be reviewed and updated in the future in the light of experiences gained from their implementation and of new challenges that might emerge from future developments in the use of outer space.

181. At its 735th meeting, on 18 February 2010, the Subcommittee established the Working Group on the Long-term Sustainability of Outer Space Activities.

182. At its 737th meeting, on 19 February 2010, the Subcommittee elected Peter Martinez (South Africa) Chair of the Working Group.

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[4] *Official Records of the General Assembly, Sixty-fourth Session, Supplement No. 20* (A/64/20), para. 161.

183. The Subcommittee recommended to the Committee that, taking into account the importance of the item, the Working Group be allowed to hold one meeting during the fifty-third session of the Committee, in June 2010, with interpretation services into the six languages of the United Nations, with a view to further developing its terms of reference and a method of work.

184. The Subcommittee agreed that the Working Group should examine the long-term sustainability of outer space activities in all its aspects, including its contribution to the achievements of the Millennium Development Goals,[5] taking into account the concerns of all countries, in particular those of developing countries, and consistent with the peaceful uses of outer space. The Subcommittee agreed that the Working Group should avail itself of the progress made within existing entities, including but not limited to commercial entities operating within the space industry, the other working groups of the Subcommittee, the Conference on Disarmament, the International Telecommunication Union, the Inter-Agency Space Debris Coordination Committee, the International Organization for Standardization, the World Meteorological Organization and the International Space Environment Service. The Subcommittee agreed that the Working Group should avoid duplicating the work being done within those international entities and instead identify areas of concern for the long-term sustainability of outer space activities that were not covered by them.

185. The Subcommittee noted that States could contribute to the long-term sustainability of outer space activities by implementing the Space Debris Mitigation Guidelines of the Committee and the Safety Framework for Nuclear Power Source Applications in Outer Space.

186. Some delegations stressed the need to take into consideration the contribution of space-based-systems to sustainable development and avoid any measures that would limit access to space by nations with emerging space capabilities.

187. Some delegations expressed the view that efforts to ensure the long-term sustainability of outer space activities should be considered in the wider context of sustainable development.

188. Some delegations expressed the view that, should an agreement to develop guidelines on safe space operations be reached, such guidelines should take into consideration current policies, principles, procedures, regulations, standard practices and guidelines; maintain or improve the safety of spaceflight operations; and protect the space environment without imposing unacceptable or unreasonable costs.

189. Some delegations stressed that any measures or set of guidelines that may be recommended should be consistent with international law and that the regulation of space activities remained the responsibility of States.

190. The view was expressed that the Subcommittee should not seek to develop new legal regimes, but rather encourage greater adherence to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies,[6] the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched

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[5] A/56/326, annex.

[6] United Nations, *Treaty Series*, vol. 610, No. 8843.

into Outer Space,[7] the Convention on International Liability for Damage Caused by Space Objects[8] and the Convention on Registration of Objects Launched into Outer Space.[9]

191. The view was expressed that the Subcommittee should not seek to create a global space traffic management system during its consideration of this agenda item.

192. The view was expressed that it was necessary to recognize, in the context of this agenda item, the concern relating to security guarantees, with a view to providing assurances of continued access to outer space for peaceful purposes.

193. The view was expressed that the scope of the discussion of long-term sustainability of outer space activities should take into account the needs of developing countries, particularly with respect to small satellites.

194. The view was expressed that this item should not serve as a pretext for States that were 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.

195. The view was expressed that it was necessary to clearly define the purpose and range of the work to be conducted under this item and the expected outcomes, including its relationship to the draft European code of conduct for outer space activities, to the concepts “space traffic management” and “transparency and confidence-building measures” and to the Space Debris Mitigation Guidelines of the Committee.

196. The view was expressed that a coordination mechanism should be established to allow for close interaction with the Presidency of the European Union on the evolution of the draft European code of conduct for outer space activities.

197. The view was expressed that the Subcommittee should identify an appropriate mechanism to cooperate with other entities and organizations.

198. The view was expressed that any mechanism for cooperating with other entities and organizations should be consistent with the established practices of the Committee.

199. The view was expressed that Governments bore international responsibility for national activities and that this responsibility was not transferable.

200. The Subcommittee noted that a potential collision had been successfully avoided in early January 2010 following the provision of information by the United States Joint Space Operations Command to the Government of Nigeria relating to the anticipated collision course of an object catalogued as space debris.

201. The view was expressed that satellite operators should de-orbit their satellites prior to losing control over them in order to prevent collisions with other objects and subsequent proliferation of space debris.

202. The view was expressed that the Working Group on Long-Term Sustainability of Outer Space Activities should address, inter alia, the following topics: best

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[7] Ibid., vol. 672, No. 9574.
[8] Ibid., vol. 961, No. 13810.
[9] Ibid., vol. 1023, No. 15020.

practices by spacecraft operators relating to all kinds of natural or artificial risks in space and all associated tools, including the Two-Line Element data set, and international platforms on space objects.

203. The view was expressed that the results, procedures and lessons learned of the data centre established by the Space Data Association, composed of interested private-sector satellite operators, should be taken into account when considering the long-term sustainability of outer space activities. The data centre was established to serve as an interactive repository for commercial satellite orbit, manoeuvre and payload frequency information to promote the safety of space operations by encouraging coordination and communication among its participating members.

XIII. Draft provisional agenda for the forty-eighth session of the Scientific and Technical Subcommittee

204. In accordance with General Assembly resolution 64/86, the Subcommittee considered agenda item 16, "Draft provisional agenda for the forty-eighth session of the Scientific and Technical Subcommittee". The Working Group of the Whole, convened pursuant to paragraph 9 of that resolution, considered the draft provisional agenda for the forty-eighth session of the Subcommittee.

205. At its 736th meeting, on 19 February, the Subcommittee endorsed the recommendations of the Working Group of the Whole concerning the draft provisional agenda for the forty-eighth session of the Subcommittee, contained in annex I to the present report.

206. The Subcommittee noted that the Secretariat had scheduled the forty-eighth session of the Subcommittee to be held from 7 to 18 February 2011.

Annex I

Report of the Working Group of the Whole

I. Introduction

1. In accordance with paragraph 9 of General Assembly resolution 64/86, the Scientific and Technical Subcommittee, at its forty-seventh session, reconvened its Working Group of the Whole. The Working Group held six meetings, from 10 to 19 February 2010, under the chairmanship of S. K. Shivakumar (India). The Working Group considered the United Nations Programme on Space Applications, the implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III), space-system-based disaster management support and the draft provisional agenda for the forty-eighth session of the Subcommittee, to be held in 2011. At its 6th meeting, on 19 February, the Working Group adopted the present report.

II. United Nations Programme on Space Applications

2. For its consideration of the United Nations Programme on Space Applications, the Working Group of the Whole had before it the report of the Expert on Space Applications (A/AC.105/969). It was noted that the Expert had supplemented the report with a statement.

3. The Working Group of the Whole noted the workshops, seminars, symposiums, training courses and long-term fellowships for in-depth training, as well as technical advisory services, that had been proposed in the report of the Expert on Space Applications (A/AC.105/969, annex II).

III. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)

4. For its consideration of the implementation of the recommendations of UNISPACE III, the Working Group of the Whole had before it the following:

(a) A note by the Secretariat on space benefits for Africa: contribution of the United Nations system (A/AC.105/941);

(b) A note by the Secretariat on the contribution of the Committee on the Peaceful Uses of Outer Space to the work of the Commission on Sustainable Development for the thematic cluster 2010-2011 (A/AC.105/944);

(c) A conference room paper on the status of the implementation of the recommendations of UNISPACE III (A/AC.105/C.1/2010/CRP.5);

(d) A conference room paper on promoting greater participation of young people in space science and technology (A/AC.105/C.1/2010/CRP.6).

5. The Working Group of the Whole considered the way forward in its consideration of the implementation of the recommendations of UNISPACE III and agreed that it should focus its efforts on the preparation of a contribution by the Committee to the work of the Commission on Sustainable Development for the thematic clusters for 2012-2013, 2014-2015 and 2016-2017.

6. In that regard, the Working Group of the Whole recommended that the Committee should contribute to the thematic clusters in which space technology and its applications played a particularly important role; pay attention to the cross-cutting issues identified by the Commission; identify areas where space-based systems could complement terrestrial systems in order to promote integrated solutions; and include, as appropriate and in addition to examples of regional and international cooperation, national success stories that might provide useful examples for the overall contribution of the Committee.

7. The Working Group of the Whole requested the Secretariat to provide, for consideration by the Committee at its fifty-third session, a template for the preparation of its contribution to the work of the Commission for the thematic cluster for 2012-2013.

8. The Working Group of the Whole noted that the recommendations of UNISPACE III that were not considered to have been implemented (see A/AC.105/C.1/2010/CRP.5, annex) related to ongoing activities being carried out by the primary actors. The Working Group therefore agreed that it would suspend consideration of the status of implementation of those recommendations and that it would discontinue the annual reporting.

9. The Working Group of the Whole recommended that the issue of promoting the greater participation of young people in space science and technology be considered under the item “Space and society” of the agenda of the Committee.

IV. Space-system-based disaster management support

10. For its consideration of space-system-based disaster management support, the Working Group of the Whole had before it the documents referred to in paragraph 93 of the report of the Subcommittee at its current session.

11. The Working Group of the Whole noted with satisfaction the progress made in terms of the activities carried out in 2009 within the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER).

12. The Working Group of the Whole requested the Office for Outer Space Affairs of the Secretariat to prepare a proposal to be considered by the Committee at its fifty-third session, in June 2010, on the establishment of a fund for SpaceAid.

13. The Working Group of the Whole took note of a presentation by the Office for Outer Space Affairs explaining that such a fund could enable quick and direct acquisition of satellite imagery to support emergency and humanitarian response in cases when existing mechanisms could not provide the imagery needed, such as when users needed to receive imagery from specific sensors or needed to have

multi-agency licences, as well as for humanitarian response, early recovery and reconstruction.

V. Draft provisional agenda for the forty-eighth session of the Scientific and Technical Subcommittee

14. The Working Group of the Whole noted that, in accordance with General Assembly resolution 64/86, the Scientific and Technical Subcommittee would submit to the Committee its proposal on the draft provisional agenda for the forty-eighth session of the Subcommittee, to be held in 2011, and recommended the following draft provisional agenda:

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;

   (Work for 2011 as reflected in the multi-year workplan in paragraph 8 of annex II to the report of the Scientific and Technical Subcommittee on its forty-seventh session)

   (b) Near-Earth objects;

   (Work for 2011 as reflected in the multi-year workplan in paragraph 11 of annex III to the report of the Scientific and Technical Subcommittee on its forty-fifth session (A/AC.105/911))

   (c) International Space Weather Initiative;

   (Work for 2011 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 the report of the Committee on the Peaceful Uses of Outer Space on its fifty-second session)[a]

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 forty-ninth 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.

15. The Working Group of the Whole agreed that the topic for the symposium to be organized in 2011 by the Committee on Space Research, 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 "Planetary protection".

16. The Working Group of the Whole requested the Secretariat to ensure that at least two hours will be available during each session of the Subcommittee from 2011 to 2013 for holding the workshops to be organized in accordance with the workplan under the item "Use of nuclear power sources in outer space" (see paragraph 10 (c) of annex II to the report of the Scientific and Technical Subcommittee on its forty-seventh session).

17. The Working Group of the Whole requested the Secretariat to take measures, in close consultation with the Chairman of the Subcommittee, to rationalize and optimize the use of time of the Subcommittee, including on the possible scheduling of the symposium during the second week, as appropriate. To enable the Subcommittee to commence its consideration of all the items of the provisional agenda in a timely and balanced manner, the Working Group agreed that the possibility of scheduling the item entitled "General exchange of views" over a longer period of time during the session, and of limiting the number of slots for statements per meeting, should be explored.

18. The Working Group of the Whole recommended that the reports to be submitted by Member States on their national activities in outer space (see para. 19 of the report of the Scientific and Technical Subcommittee on its forty-seventh session) should comprise a summary of those activities and not exceed three pages.

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[a] *Official Records of the General Assembly, Sixty-fourth Session, Supplement No. 20* (A/64/20), para. 161.

Annex II

Report of the Working Group on the Use of Nuclear Power Sources in Outer Space

1. At its 722nd meeting, on 10 February 2010, the Scientific and Technical Subcommittee reconvened its Working Group on the Use of Nuclear Power Sources in Outer Space, under the chairmanship of Sam A. Harbison (United Kingdom of Great Britain and Northern Ireland).

2. The Working Group recalled with satisfaction that at the forty-sixth session of the Subcommittee, in 2009, the Joint Expert Group of the Scientific and Technical Subcommittee and the International Atomic Energy Agency (IAEA), established by the Subcommittee at its forty-fourth session, in 2007, had completed, one year ahead of the schedule contained in its multi-year workplan, preparation of the Safety Framework for Nuclear Power Source Applications in Outer Space and that in 2009 the Safety Framework had been adopted by the Subcommittee at its forty sixth session and endorsed by the Committee on the Peaceful Uses of Outer Space at its fifty-second session.

3. The Working Group noted that, in accordance with the working arrangements agreed to by the Subcommittee and IAEA, the Safety Framework had been considered and agreed to by the IAEA Commission on Safety Standards at its twenty-fifth meeting, in April 2009.

4. The Working Group also noted with satisfaction that the Safety Framework had been made available by the Secretariat in document A/AC.105/934 and by the IAEA secretariat as a joint publication of the Subcommittee and IAEA.

5. The Working Group further noted with appreciation the efficient cooperation with the IAEA secretariat and expressed its gratitude to the IAEA secretariat for making the joint publication available to the Subcommittee in the form of a hard copy and a CD-ROM. The Working Group further noted that free electronic copies of the publication would remain available on the IAEA website (www.iaea.org/Publications/Booklets/Safety/safetyframework1009.pdf).

6. At the first meeting of the Working Group, on 10 February, the Chairman recalled the tasks before the Working Group stemming from its intersessional work during 2009. In this connection, the Chairman also recalled that in June 2009 the Working Group had held an informal meeting at which members discussed ways of promoting and facilitating the implementation of the Safety Framework and providing a sound basis for deciding what, if any, further work should be carried out to support implementation of the Safety Framework. The Chairman further recalled that the main outcome of that meeting had been an agreement on proposing preparation of a new multi-year workplan of the Working Group to be presented for consideration of the Subcommittee.

7. After considering comments on and suggested changes to the draft workplan (A/AC.105/C.1/L.302), the Working Group agreed that the workplan should have the following objectives:

(a) To promote and facilitate the implementation of the Safety Framework by providing information pertinent to challenges faced by member States and international intergovernmental organizations, in particular those considering or initiating involvement in applications of nuclear power sources (NPS) in outer space;

(b) To identify any technical topics for, and establish the objectives, scope and attributes of, any potential additional work by the Working Group to further enhance safety in the development and use of space NPS applications. Any such additional work would require the approval of the Subcommittee and would be developed with due consideration for relevant principles and treaties.

8. The Working Group agreed that it would advance these objectives by conducting the following workplan for the period from 2010 to 2015:

2010 Develop a draft workplan. After its adoption by the Subcommittee, the Working Group will (a) request the Secretariat to invite member States and international intergovernmental organizations to participate in workshops in the period 2011-2013, (b) invite member States and international intergovernmental organizations with experience in space NPS applications to provide information in 2011 and 2012 (at workshops to be held in conjunction with the forty-eighth and forty-ninth sessions of the Subcommittee) on their implementation of the Safety Framework and (c) request the Secretariat to invite member States and international intergovernmental organizations considering or initiating involvement in space NPS applications to make presentations in 2011 and 2012 (at workshops to be held in conjunction with the forty-eighth and forty ninth sessions of the Subcommittee, respectively) summarizing their plans, progress to date and any challenges faced or foreseen in implementing the Safety Framework or specific elements thereof;

2011 Hold a workshop, with simultaneous interpretation, during the forty eighth session of the Subcommittee, with member States and international intergovernmental organizations making presentations pursuant to the invitation extended in 2010. In its report to the Subcommittee, the Working Group will (a) summarize the proceedings of the workshop, (b) identify any significant challenges that should be addressed in the presentations at the workshop to be held in 2012 and (c) request the Secretariat to invite member States and international intergovernmental organizations with experience in space NPS applications to make presentations in 2012 (at a workshop to be held in conjunction with the forty-ninth session of the Subcommittee) providing information pertinent to addressing the challenges in implementing the Safety Framework;

2012 Hold a workshop under the same arrangements as in 2011, with member States and international intergovernmental organizations making presentations pursuant to the invitations extended in 2010 and 2011.

In its report to the Subcommittee, the Working Group will (a) summarize the proceedings of the workshop, (b) identify any significant challenges that should be addressed in the presentations at the workshop to be held in 2013 and (c) request the Secretariat to invite member States and international intergovernmental organizations with experience in space NPS applications to make additional presentations in 2013 (at a workshop to be held under the same arrangements as in 2011) addressing the additional challenges identified in 2012;

2013 Hold a workshop under the same arrangements as in 2011 and 2012, with member States and international intergovernmental organizations making presentations pursuant to the invitation extended in 2012; include in a report of the Working Group to the Subcommittee a summary of the workshop and of its deliberations on the main issues identified during the workshop;

2014 Determine whether the current workplan should be extended; if it is not to be extended, prepare a draft report with recommendations for potential future work to promote and facilitate implementation of the Safety Framework;

2015 If the workplan has not been extended, finalize the report and recommendations.

9. The Working Group requested the Secretariat to invite, in March 2010, member States and international intergovernmental organizations with experience in space NPS applications, and those considering or initiating involvement in space NPS applications, to notify the Secretariat of their plans, if any, to provide workshop presentations in 2011 and 2012, in accordance with the workplan of the Working Group.

10. The Working Group agreed on the following arrangements for the implementation of its new workplan:

(a) Papers for the workshops to be held in the period 2011-2013 should be submitted to the Secretariat by mid-November of the previous year and will be made available, in all official languages of the United Nations, to member States and permanent observers prior to the corresponding sessions of the Subcommittee;

(b) To facilitate meeting the objectives of the workplan, the Working Group may conduct, as necessary, intersessional work to further study and discuss the challenges and issues raised at each of the workshops. A summary of such intersessional work will be made available to the Subcommittee in all official languages of the United Nations;

(c) The Secretariat is requested to ensure that at least two hours will be available during each session of the Subcommittee from 2011 to 2013, for holding the workshops, and to reflect the above arrangement in the provisional agendas of the Subcommittee.

11. The Working Group noted with appreciation the contribution of IAEA as an observer of the Working Group and encouraged its continued participation. In this connection, the Working Group agreed that the Secretariat should continue

maintaining close working relations with IAEA and that each year IAEA should be invited to participate in the work of the Working Group, including the workshops.

12. The Working Group noted with appreciation the contribution of the European Space Agency to the development of the Safety Framework and encouraged that international intergovernmental organization to continue its active participation in future work of the Working Group.

13. The Working Group agreed to hold a teleconference on 11 May 2010 at 1600 hours GMT and, subject to replies received to the invitation referred to in paragraph 9 above, to make a decision on the need to hold an informal meeting from 9 to 11 June, during the fifty-third session of the Committee.

14. The view was expressed that NPS applications addressed in the second objective of the workplan should be in conformity with international law, the Charter of the United Nations and the United Nations treaties and principles on outer space, in particular the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

15. Some delegations were of the view that the objectives of the workplan were appropriately focused on the implementation of the Safety Framework, which had been developed with due consideration of relevant principles and treaties, as noted in the preface to the Safety Framework (A/AC.105/934).

16. The view was expressed that all member States should be involved in the decision-making and in identifying the issues and challenges associated with the application of NPS and the Safety Framework and that that would ensure the success of the implementation of the workplan.

17. At its 4th meeting, on 17 February 2010, the Working Group adopted the present report.

Annex III

Report of the Working Group on Near-Earth Objects

1. Pursuant to paragraph 9 of General Assembly resolution 64/86, the Scientific and Technical Subcommittee, at its forty-seventh session, reconvened its Working Group on Near-Earth Objects.

2. Sergio Camacho (Mexico) was elected Chair of the Working Group on Near-Earth Objects at the 729th meeting of the Subcommittee, on 15 February 2010. The Working Group expressed its appreciation to the outgoing Chair, Richard Crowther (United Kingdom of Great Britain and Northern Ireland), for the excellent manner in which he had led its work and the work of the Action Team on Near-Earth Objects.

3. In accordance with the multi-year workplan under the item on near-Earth objects (A/AC.105/911, annex III, para. 11), the Working Group did the following:

(a) Considered the reports submitted in response to the annual request for information on near-Earth object (NEO) activities and continued intersessional work;

(b) Continued the work begun during the intersessional period on drafting international procedures for handling the NEO threat and sought agreement on those procedures;

(c) Reviewed progress made on international cooperation and collaboration on NEO observations;

(d) Facilitated, for the purpose of NEO threat detection, a more robust international capability for exchanging, processing, archiving and disseminating data;

(e) Prepared an updated interim report of the Action Team on Near-Earth Objects (2009-2010) (A/AC.105/C.1/L.301).

4. The Working Group noted with satisfaction the work of the Action Team on Near-Earth Objects, as reflected in the draft recommendations for an international response to the threat of NEO impact (A/AC.105/C.1/L.301, annex).

5. The Working Group heard a statement from the representative of Australia on the report entitled “Legal aspects of NEO threat response and related institutional issues”, prepared by the University of Nebraska-Lincoln (United States), in which key legal and institutional issues linked to potential future threats posed by NEOs were examined. The Working Group also heard a statement by the observer for the Secure World Foundation (SWF) on a workshop organized jointly by the Association of Space Explorers and SWF, with support from the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean, on the establishment of a NEO information, analysis and warning network. The workshop was held in Mexico City from 18 to 20 January 2010, under the auspices of the Government of Mexico. The Working Group agreed that the report of the workshop and the report prepared by the University of Nebraska-Lincoln could be considered by the Action Team on Near-Earth Objects between sessions during 2010 and 2011.

6. The Working Group noted that in 2011 it should do the following, among other things:

(a) Consider the reports submitted in response to the annual request for information on NEO activities and continue intersessional work;

(b) Finalize the agreement on international procedures for handling the NEO threat and engage international stakeholders;

(c) Review progress on international cooperation and collaboration on NEO observations and on capability for exchanging, processing, archiving and disseminating data for the purpose of detecting NEO threats;

(d) Consider the final report of the Action Team on Near-Earth Objects.

7. The Working Group further noted that its intersessional work for the period 2010-2011 could include workshops involving experts in various subjects related to the draft recommendations made by the Action Team (A/AC.105/C.1/L.301, annex). The Working Group agreed that the reports of those workshops could further assist the Action Team in finalizing recommendations for the international response to the threat posed by NEOs.

8. The Working Group agreed that the Action Team should continue its intersessional work, in accordance with the multi-year workplan, to further review draft recommendations for an international response to the threat of NEO impact, for consideration by the Working Group at the forty-eighth session of the Subcommittee, in 2011. The Working Group agreed that the Action Team would meet on the margins of the fifty-third session of the Committee on the Peaceful Uses of Outer Space, to be held in June 2010, to finalize draft recommendations for the international response to the threat of NEO impact. In that context, the Working Group encouraged Member States to participate in the intersessional work on NEOs and submit their contributions to the Chair of the Action Team.

9. At its 3rd meeting, on 18 February 2010, the Working Group adopted the present report.