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Committee on the Peaceful Uses of Outer Space Forty-ninth session Vienna, 7-16 June 2006

Draft report

Chapter II

Addendum

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

1. In accordance with General Assembly resolution 60/99, the Committee considered the item on the implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III).

2. The representatives of Argentina, Brazil, Chile, China, France, Germany, India, Italy, Japan, Nigeria, the United Kingdom and the United States made statements under the item. During the general exchange of views, statements relating to this item were also made by representatives of the following member States: [...]. The observers for IAF and SIA also made statements. The invited representative of the secretariat of GEO also made a statement.

3. The Committee had before it, for its consideration, the following:

(a) Contribution of the Committee on the Peaceful Uses of Outer Space to the work of the Commission on Sustainable Development for the thematic cluster 2006-2007: space for sustainable development (A/AC.105/872);

(b) Strengthening the link between the Committee and the Commission on Sustainable Development (A/AC.105/2006/CRP.11).

4. The Committee noted that, in accordance with General Assembly resolution 60/99, the Scientific and Technical Subcommittee at its forty-third session had convened the Working Group of the Whole to consider the



implementation of the recommendations of UNISPACE III. The Chairman of the Working Group of the Whole was Muhammad Nasim Shah (Pakistan).

5. The Committee endorsed the recommendations of the Scientific and Technical Subcommittee and its Working Group of the Whole with regard to the implementation of the recommendations of UNISPACE III.

6. The Committee heard under this item a presentation entitled "World Space Week in Bangladesh", by F. R. Sarker of SIA.

7. The Committee emphasized the importance of implementing the Plan of Action contained in its report to the General Assembly on the implementation of the recommendations of UNISPACE III (A/59/174, sect. VI.B), which had been endorsed by the General Assembly in its resolution 59/2 of 20 October 2004.

8. The Committee noted that, in accordance with General Assembly resolution 59/2, the Committee should continue to consider, in its future sessions, the implementation of the recommendations of UNISPACE III until the Committee considered that concrete results had been achieved.

9. The Committee agreed that the recommendations of UNISPACE III were being effectively implemented through the use of multi-year workplans, the establishment of actions teams and reports from ad hoc and other groups on their activities. The Committee agreed that that flexible approach enabled it to address a wide range of important and related issues.

10. The Committee noted with appreciation that Member States were implementing the recommendations of UNISPACE III by, among others, actively supporting and participating in the work related to the 10-year implementation plan of GEO, the efforts of the Integrated Global Observing Strategy (IGOS) and CEOS. The Committee also noted that some Member States were contributing to the implementation of the recommendations of UNISPACE III by continuing to contribute to the work of the action teams established by the Committee to implement those recommendations.

11. The Committee agreed that the establishment of the action teams had created, under the voluntary leadership of Governments, a unique and useful mechanism that allowed for governmental and non-governmental entities to participate in the follow-up to UNISPACE III while preserving the pivotal role of Member States.

12. The Committee noted with satisfaction that, during its forty-ninth session, the Action Team on an Environmental Monitoring Strategy had met. The Committee welcomed the report on the progress being made by the Action Team on Near-Earth Objects.

13. The Committee noted with appreciation that Member States were also contributing to the implementation of the recommendations of UNISPACE III through a number of national and regional activities and efforts.

14. The Committee noted with appreciation that the International Committee on GNSS (ICG) had been established on a voluntary basis as an informal body to promote cooperation, as appropriate, on matters of mutual interest related to civil satellite-based positioning, navigation, timing and value-added services, as well as the compatibility and interoperability of GNSS systems, while increasing their use to support sustainable development, particularly in developing countries. The

Committee also noted that since the establishment of ICG, 19 States and intergovernmental and non-governmental organizations had confirmed their participation in ICG as members or observers. The Committee further noted that, at its meeting held on 6 June 2006, the terms of reference for ICG had been finalized by the ad hoc working group established for that purpose.

15. The Committee noted with appreciation that, in accordance with its strategy to further implement the recommendations of UNISPACE III, the Office for Outer Space Affairs had been serving as the focal point for matters relating to the establishment of the ad hoc working group and would provide support for the organization of the first meeting of ICG, to be held in Vienna from 30 October to 3 November 2006.

16. The Committee noted with appreciation the progress made with regard to the study on the possibility of creating an international entity to provide for coordination and the means of realistically optimizing the effectiveness of space-based services for use in disaster management. The views of member States and decisions of the Committee with regard to the possibility of creating such an international entity are reflected in paragraphs [...] of the present report.

17. The Committee welcomed with satisfaction the link established between its work relating to the implementation of the recommendations of UNISPACE III and the work being carried out by the Commission on Sustainable Development.

18. The Committee noted with appreciation that the Scientific and Technical Subcommittee had finalized the contribution of the Committee to the work of the Commission on Sustainable Development for the thematic cluster 2006-2007, on the basis of the inputs received from member States, and that the contribution, contained in document A/AC.105/872, had been made available to the Commission at its fourteenth session, held in New York from 1 to 12 May 2006.

19. The Committee expressed its appreciation to the Division for Sustainable Development of the Department of Economic and Social Affairs of the Secretariat for facilitating the submission of the contribution of the Committee to the Commission on Sustainable Development. The Committee agreed that the Office for Outer Space Affairs should continue working closely with the Commission secretariat with a view to further strengthening the connection and interaction between the two bodies.

20. The Committee agreed that the Director of the Division for Sustainable Development should be invited to participate in the sessions of the Committee to inform it of how it could best contribute to the work of the Commission on Sustainable Development and that the Director of the Office for Outer Space Affairs should attend the sessions of the Commission with a view to raising awareness and promoting the benefits of space science and technology, in particular in the areas being addressed by the Commission.

21. The Committee agreed to continue contributing to the policy year of each of the two-year cycles of the multi-year programme of work of the Commission on Sustainable Development. The Committee noted that the following issues would be the focus of the work of the Commission in the period 2008-2009: agriculture, rural development, land, drought, desertification and Africa.

22. The Committee agreed that member States should be requested to provide inputs for the development of a concise document that would emphasize the benefits of the use of, and tools offered by, space science and technology and its applications for meeting the challenges being faced, in particular, by developing countries with regard to the issues to be addressed by the Commission on Sustainable Development in the period 2008-2009. The Committee agreed that the Working Group of the Whole of the Scientific and Technical Subcommittee should, during the forty-fourth session of the Subcommittee, conduct the first review of the draft concise document to be prepared on the basis of the input received from member States.

23. The Committee agreed to finalize, at its fiftieth session, its contribution to the thematic cluster for the cycle 2008-2009 of the Commission on Sustainable Development.

24. The view was expressed that the follow-up to the recommendations of UNISPACE III should take into consideration local and regional capabilities and needs and that the productive work of the action teams should be followed by the definition and implementation of action plans describing specific goals, means and tasks.

25. The view was expressed that implementation of the recommendations of UNISPACE III would enable developing countries to address challenges of development, particularly those challenges relating to the promotion of agriculture, the management of water resources, the eradication of illiteracy and provision of better education and the improvement of public health services.

26. The view was expressed that developing countries could pool their resources to initiate programmes on space applications that had proved successful in other developing countries.

27. The view was expressed that efforts to involve private industry in contributing to the implementation of the recommendations of UNISPACE III should be pursued once clear project proposals were developed that could attract private industry to participate actively in the initiatives of the Committee.

28. The Committee noted that the Global Earth Observation System of Systems (GEOSS) had been created by GEO with a view to using Earth observation applications for addressing matters relating to disaster response and mitigation, health, energy and water management, weather forecasting, climate change, agriculture, biodiversity and ecosystems. The Committee also noted that GEO, through GEOSS, would coordinate the collection of Earth observation data to ensure access to the data and their distribution to all potential users, including developing countries. The Committee further noted that the workplan for implementation of that initiative in the period 2007-2008 was in the process of being finalized.

29. The Committee took note with appreciation of the reports by Member States and by the Spaceweek International Association on the promotion and organization of public outreach activities in celebration of World Space Week.

30. The Committee noted with appreciation that a report on the international celebration of World Space Week in 2005, prepared by the Spaceweek International Association in cooperation with the Office for Outer Space Affairs, had been made available in a special publication (ST/SPACE/29).

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

[*Text to be submitted under a separate document symbol (A/AC.105/L.266/Add.3).*]

D. Report of the Legal Subcommittee on its forty-fifth session

31. The Committee took note with appreciation of the report of the Legal Subcommittee on its forty-fifth session (A/AC.105/871), which contained the results of its deliberations on the items assigned to it by the General Assembly in its resolution 60/99.

32. The Committee expressed its appreciation to the outgoing Chairman of the Legal Subcommittee, Sergio Marchisio (Italy), for his able leadership and contribution. The Committee also expressed its appreciation to Raimundo González Aninat (Chile) for his able leadership during the forty-fifth session of the Subcommittee.

33. At the 554th meeting, on 9 June 2006, the Chairman of the Legal Subcommittee made a statement on the work of the Subcommittee at its forty-fifth session.

34. The representatives of China, the Czech Republic, India, Iran (Islamic Republic of), Italy, Japan, Nigeria, the Republic of Korea, Thailand and the United States made statements under the item. During the general exchange of views, statements relating to the item were also made by the representatives of the following member States: [...].

1. Status and application of the five United Nations treaties on outer space

35. The Committee noted that, in accordance with General Assembly resolution 60/99, the Legal Subcommittee had considered, as a regular item of its agenda, the status and application of the five United Nations treaties on outer space. The Committee took note of the discussion of the Subcommittee under that agenda item, as reflected in the report of the Subcommittee (A/AC.105/871, paras. 32-54).

36. The Committee noted that the Subcommittee had reconvened its Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, under the chairmanship of Vassilios Cassapoglou (Greece), and that the mandate of the Working Group included the status of the United Nations treaties on outer space, review of their implementation and obstacles to their universal acceptance, as well as the promotion of space law, especially through the United Nations Programme on Space Applications (A/AC.105/763 and Corr.1, para. 118) and any new, similar issues that might be raised in discussions in the Working Group, provided that those issues fell within its existing mandate (A/AC.105/787, paras. 138 and 140).

37. The Committee noted that the Subcommittee had endorsed the recommendation of the Working Group that member States provide information on any action that might have been taken at the national level as a result of receiving the letter from the Secretary-General encouraging participation in the outer space

treaties (A/AC.105/871, para. 52). The Committee also endorsed the recommendation.

38. The Committee noted with satisfaction that the Working Group had agreed on the text of a document on the advantages of adhering to the Convention on International Liability for Damage Caused by Space Objects. The Committee endorsed the recommendation of the Working Group that the Office for Outer Space Affairs send that document to all States that had not yet become parties to the Convention (A/AC.105/871, annex I, para. 8, and appendix).

39. The Committee also noted with satisfaction that the Working Group had agreed on a programme of work for the forty-sixth session of the Legal Subcommittee in 2007 (A/AC.105/871, annex I).

40. The Committee approved the endorsement by the Subcommittee of the report of the Working Group (A/AC.105/871, para. 51 and annex I) and of the recommendation by the Working Group to extend the mandate of the Working Group for one additional year, to 2007. The Committee noted that the Subcommittee had agreed that, at its forty-sixth session, it would review the need to extend the mandate of the Working Group beyond that period.

41. The Committee welcomed the information provided by some delegations on the current status of the five United Nations treaties on outer space in their respective States and on the further action that those States intended to take in order to accede to or ratify those treaties. The Committee noted with satisfaction the reports on the progress made by member States in developing their national space law.

42. The Committee expressed its appreciation to the Office for Outer Space Affairs for the informational material provided on national space legislation and international treaties, as well as for the informative website concerning the work of the Committee and its subcommittees.

43. The Committee agreed that member States should regularly provide the Office for Outer Space Affairs with information on their national space legislation and policy in order for the Office to maintain an up-to-date database on that subject.

44. Some delegations expressed the view that the United Nations treaties on outer space had established a comprehensive legal framework that encouraged the exploration of outer space and supported increasingly complex activities in outer space by both government and private entities, with benefits to both spacefaring and non-spacefaring nations. Those delegations advocated further adherence to the outer space treaties.

45. Other delegations expressed the view that, owing to developments in space activities, such as the commercialization of space and the involvement of the private sector, there was a need to consider a new, comprehensive convention on outer space law to further strengthen the international legal regime covering outer space activities. Those delegations were of the view that a single, comprehensive convention could regulate all aspects of outer space activities.

46. The view was expressed that the lack of awareness of the benefits deriving from adherence to the United Nations treaties on outer space needed to be addressed by the Legal Subcommittee in order to broaden the participation of Member States.

47. Some delegations expressed the view that the working paper submitted by a number of States entitled "Questionnaire on possible options for future development of international space law", to be discussed by the Working Group during the forty-sixth session of the Legal Subcommittee, was of particular interest and could assist the Subcommittee in reaching constructive conclusions about the future orientation of its work.

48. The view was expressed that in the context of a universal, comprehensive convention on space law, for which the current international legal regime would serve as a guide, regard should be given to the relevant practice of States in space activities and to the regime and principles in the United Nations Convention on the Law of the Sea¹ that might be usefully applied, mutatis mutandis, to outer space, as well as to the lessons learned from drafting that Convention.

49. The view was expressed that the advantages of adherence to the Convention on International Liability for Damage Caused by Space Objects, listed in the appendix to the report of the Working Group (A/AC.105/871, annex I, appendix), were only illustrative and not exhaustive and that it was up to each State to decide on the advantages of its becoming a party to a treaty.

50. The Committee noted with appreciation that a workshop on space law hosted by the Government of Nigeria, through its National Space Research and Development Agency, had been held in Abuja from 21 to 24 November 2005. The Committee welcomed the announcement that the Government of Ukraine would host the next workshop on space law, to be held in Kiev from 6 to 9 November 2006.

2. Information on the activities of international organizations relating to space law

51. The Committee noted that, in accordance with General Assembly resolution 60/99, the Legal Subcommittee had considered information on the activities of international organizations relating to space law as a regular item of its agenda. The Committee took note of the discussion of the Subcommittee under that item, as reflected in the report of the Subcommittee (A/AC.105/871, paras. 55-76).

52. The Committee noted with appreciation the positive results of the Space Law Conference on the theme "Bringing space benefits to the South-East Asian region", organized jointly by the International Institute of Space Law (IISL) of IAF, ISRO and the Astronautical Society of India in Bangalore, India, from 26 to 29 June 2005.

3. Matters relating to: (a) the definition and delimitation of outer space; and (b) the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union

53. The Committee noted that, in accordance with General Assembly resolution 60/99, the Legal Subcommittee had continued to consider, as a regular item of its agenda, matters relating to: (a) the definition and delimitation of outer space; and (b) the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of ITU. The Committee took note

¹ United Nations, *Treaty Series*, vol. 1833, No. 31363.

of the discussion of the Subcommittee under that item, as reflected in the report of the Subcommittee (A/AC.105/871, paras. 77-96).

54. The Committee noted the progress made by the Working Group on the Definition and Delimitation of Outer Space, which had been reconvened during the forty-fifth session of the Legal Subcommittee, under the chairmanship of José Monserrat Filho (Brazil). In accordance with the agreement reached by the Legal Subcommittee at its thirty-ninth session, endorsed by the Committee at its forty-third session and subsequently endorsed by the General Assembly in its resolution 60/99, the Working Group was reconvened to consider only matters relating to the definition and delimitation of outer space.

55. Some delegations expressed the view that it was important to further consider this item and the outlined programme of the future work of the Working Group, as contained in the report of the Working Group (A/AC.105/871, annex II).

56. Some delegations expressed the view that the lack of definition or delimitation of outer space brought about legal uncertainty concerning the applicability of space law and air law.

57. The view was expressed that, despite the difficulties in reaching consensus on the question of the definition and delimitation of outer space, member States should continue consultations on the item with a view to maintaining peace and security in outer space and promoting the peaceful use of outer space.

58. The view was expressed that the question of definition and delimitation of outer space was linked to the issue of the geostationary orbit. That delegation also expressed the view that the geostationary orbit was an integral part of outer space and its use should be governed by the provisions of the United Nations treaties on outer space.

59. The Committee noted that the Working Group had expressed its appreciation to the Scientific and Technical Subcommittee for its reply regarding the possibility of preparing a report on the technical characteristics of aerospace objects in the light of the current level of technological advancement. The Committee also noted that the Working Group had agreed to clarify its invitation in the future, taking into account the results of the work on the development of criteria for analysing the replies to the questionnaire on aerospace objects (A/AC.105/871, annex II, para. 11).

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

61. Some delegations expressed the view that in consideration of its special nature and properties, the geostationary orbit should be governed by a special legal regime that would allow equitable access to it, taking into account the specific needs and interests of developing countries and countries in certain geographical positions.

62. Some delegations expressed the view that, as the issue of definition and delimitation of outer space and the character and utilization of the geostationary

orbit were of crucial importance, this item should be retained in the agenda of the Subcommittee.

4. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space

63. The Committee noted that, in accordance with General Assembly resolution 60/99, the Legal Subcommittee had continued its consideration of the review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space (Assembly resolution 47/68) as a single issue/item for discussion.

64. The Committee noted that an exchange of views had taken place in the Legal Subcommittee on the review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, as reflected in the report of the Subcommittee (A/AC.105/871, paras. 97-104), in which reference was made to the work currently being undertaken by the Scientific and Technical Subcommittee under the item entitled "Use of nuclear power sources in outer space".

5. Examination and review of the developments concerning the draft protocol on matters specific to space assets to the Convention on International Interests in Mobile Equipment

65. The Committee noted that, in accordance with General Assembly resolution 60/99, the Legal Subcommittee had considered a single issue/item for discussion entitled "Examination and review of the developments concerning the draft protocol on matters specific to space assets to the Convention on International Interests in Mobile Equipment". The Committee took note of the discussion of the Subcommittee under that item, as reflected in the report of the Subcommittee (A/AC.105/871, paras. 105-127).

66. The Committee noted that the third session of the International Institute for the Unification of Private Law (Unidroit) committee of governmental experts for the consideration of the preliminary draft protocol was tentatively scheduled to be held in Rome from 11 to 15 December 2006 and that member States of the Committee would be invited to attend.

67. The view was expressed that as the draft space assets protocol would promote financing for space assets by establishing international security interests in them and would have a positive effect on commercial activities, it would be an interesting subject for discussion.

68. Some delegations expressed the view that the agreement by the Legal Subcommittee to continue examination of this agenda item at its forty-sixth session, in 2007, was welcome. Those delegations attached great significance to the following: that the Convention on International Interests in Mobile Equipment and the Protocol to the Convention on International Interests in Mobile Equipment on Matters specific to Aircraft Equipment (Aircraft Protocol) had entered into force; that the International Civil Aviation Organization (ICAO) had assumed the role of Supervisory Authority under the Aircraft Protocol and published the Regulations and Procedures for the International Registry. The view was expressed that those developments were convincing evidence that an appropriate organization

in the United Nations system could assume the important role of supervisory authority for international registries envisaged by the Convention and its relevant protocols. The view was also expressed that those developments clarified the practical functioning of the system established by the protocols to the Convention.

69. The view was expressed that the wording of this agenda item was wide enough to allow a meaningful discussion on all aspects relating to the draft space assets protocol.

70. The view was expressed that the deliberations and recommendations arising from the Government/Industry Forum, recently convened under the auspices of Unidroit in London, would serve to facilitate discussions at the next meeting of governmental experts.

71. The view was expressed that a thorough analysis needed to be undertaken of the compatibility between the private law and the public international law implications of the future protocol, paying careful attention to the possible contradictions and conflicts that might arise in practice. That delegation expressed the view that the international responsibility of States needed to be clearly defined when non-governmental entities of those States were engaged in commercial activities in space. That delegation further expressed the view that, with regard to the relationship between the future protocol and the legal regime on outer space, the principles of public international law contained in the outer space treaties should prevail.

6. Practice of States and international organizations in registering space objects

72. The Committee noted that, in accordance with General Assembly resolution 60/99, the Legal Subcommittee had considered the practice of States and international organizations in registering space objects in accordance with the workplan adopted by the Committee at its forty-sixth session. The Committee took note of the discussion of the Subcommittee under that agenda item, as reflected in the report of the Subcommittee (A/AC.105/871, paras. 128-145).

73. The Committee noted that the Subcommittee had reconvened its Working Group on the Practice of States and International Organizations in Registering Space Objects, under the chairmanship of Kai-Uwe Schrogl (Germany).

74. The Committee noted with appreciation the compilation of elements provided in the note by the Secretariat (A/AC.105/C.2/L.262) on the benefits of becoming a party to the Convention on Registration of Objects Launched into Outer Space (General Assembly resolution 3235 (XXIX), annex).

75. The Committee agreed that it was important to urge greater adherence to the Registration Convention, which would lead to more States registering space objects, and also to encourage international organizations to declare their acceptance of the rights and obligations under the Convention.

76. The Committee agreed that the set of elements in paragraph 8 of the report of the Working Group (A/AC.105/871, annex III) could constitute the basis for consensus on specific recommendations and conclusions to be included in the report to be prepared by the Subcommittee at its forty-sixth session, in 2007.

77. The Committee endorsed the recommendations of the Working Group as contained in paragraphs 1-10 of its report (A/AC.105/871, annex III) and endorsed by the Legal Subcommittee (A/AC.105/871, para. 144). In doing so, the Committee agreed that the Subcommittee at its forty-sixth session, in 2007, should reconvene the Working Group in order to assist the Subcommittee in preparing the report to be submitted to the Committee in accordance with the workplan under the item entitled "Practice of States and international organizations in registering space objects". The Committee also agreed that, to facilitate the work of that report, the Chairman of the Working Group could conduct informal consultations open to all interested member States of the Committee before the forty-sixth session of the Subcommittee, by electronic means or in any other appropriate manner.

7. Draft provisional agenda for the forty-sixth session of the Legal Subcommittee

78. The Committee noted that, in accordance with General Assembly resolution 60/99, the Legal Subcommittee had considered an item entitled "Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its forty-sixth session".

79. The Committee noted that an exchange of views had taken place in the Legal Subcommittee on proposals by member States for new items to be included in the agenda of the Subcommittee and that agreement had been reached on a proposal, to be submitted to the Committee, for the draft provisional agenda for the forty-sixth session of the Subcommittee, in 2007, as reflected in the report of the Subcommittee (A/AC.105/871, paras. 146-155).

80. Some delegations expressed the view that the Legal Subcommittee should actively seek to reach consensus on the inclusion of new items in its agenda, particularly under workplans that provided a practical mechanism for achieving results within designated time frames, with a view to supporting the continuous development of international space law.

81. On the basis of the deliberations of the Legal Subcommittee at its forty-fifth session, the Committee agreed on the following draft provisional agenda for the forty-sixth session of the Subcommittee, in 2007:

Regular items

- 1. General exchange of views.
- 2. Status and application of the five United Nations treaties on outer space.
- 3. Information on the activities of international intergovernmental and nongovernmental organizations relating to space law.
- 4. Matters relating to:
 - (a) The definition and delimitation of outer space;
 - (b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union.

Single issues/items for discussion

- 5. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.
- 6. Examination and review of the developments concerning the draft protocol on matters specific to space assets to the Convention on International Interests in Mobile Equipment.

Items considered under workplans

7. Practice of States and international organizations in registering space objects.

2007: Report to the Committee on the Peaceful Uses of Outer Space.

New items

8. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its forty-seventh session.

82. The Committee endorsed the decision of the Subcommittee to reconvene at its forty-sixth session the working groups on the status and application of the five United Nations treaties on outer space, on matters relating to the definition and delimitation of outer space and on the practice of States and international organizations in registering space objects (A/AC.105/871, para. 152).

83. The Committee agreed that the Subcommittee, at its forty-sixth session, should review the need to extend the mandate of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space beyond that session of the Subcommittee (A/AC.105/871, para. 153).

E. Spin-off benefits of space technology: review of current status

84. In accordance with paragraph 48 of General Assembly resolution 60/99, the Committee resumed its consideration of the item entitled "Spin-off benefits of space technology: review of current status".

85. The representatives of Canada, Japan and the United States made statements under this item.

86. The Committee heard a presentation entitled "JAXA's activities for spin-off", by Hitoshi Yoshino (Japan).

87. The publication *Spinoff 2005*, submitted by the National Aeronautics and Space Administration (NASA) of the United States, was made available to the Committee.

88. The Committee agreed that spin-offs of space technology should be promoted because they advanced economies through the production of new innovative technologies, thereby contributing to improving the quality of life of human populations.

89. In the field of energy, the Committee noted that the same solar technology that was used on the Helios and Pathfinder solar-powered aircraft was being used in

homes across the world. The solar panel spin-off technology had no moving parts, creating pollution-free electricity with no noise and virtually no maintenance.

90. In the field of environmental conservation, the Committee noted that harmful chemical compounds, capable of contaminating soil and groundwater, were being removed from various environmental surroundings using a technology developed to decontaminate areas surrounding launch pads.

91. In the field of resource management, the Committee noted that remote sensing information was being used to develop innovative geospatial products. Such products included a crop prescription service for farmers; a disaster management web-based tool that officials could access when they needed to make decisions in emergency and disaster situations; and a service for young or inexperienced farmers that provided, free of charge, an educational, geospatial-based, precision agriculture application.

92. In the area of insulation, the Committee noted that thermal insulation material used for the H-IIA launch vehicle would be applied as a spray-type heat insulator for buildings.

93. In the area of transportation, the Committee noted that the technology of the blast wave simulation software used during the lift-off of launch vehicles would be applied to the design of front carriages for high-speed trains.

94. The Committee noted that telecommunications by satellite and global navigation services were being used, among other things, for management, mitigation and relief operations during and after a disaster, for search and rescue, for high-definition television and for recreational activities such as fishing and hiking through the use of satellite navigational services.

95. The Committee recommended that it continue its consideration of the item at its fiftieth session, in 2007.