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**Committee on the Peaceful
Uses of Outer Space
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Draft report

Chapter II

Recommendations and decisions

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

1. The Committee considered the agenda item entitled “Spin-off benefits of space technology: review of current status”, in accordance with paragraph 47 of General Assembly resolution 63/90.
2. The representatives of Japan and the United States made statements under the item.
3. The Committee heard a presentation entitled “Science of advanced materials in space with spin-off applications on Earth”, by the representative of Turkey.
4. The following publications were made available to the Committee: *Spinoff: 50 Years of NASA-Derived Technologies (1958-2008)*; *NASA Technologies Enhance Our Lives*; and *Spin-off Cases of Space Technology in Japan (2009)*.
5. The Committee agreed that spin-offs of space technology should be promoted because they advanced economies through the production of innovative technologies, thereby contributing to the improvement of the quality of life.
6. The Committee agreed that spin-offs of space technology constituted a powerful engine for technological innovation and growth in both the industrial and service sectors and could be beneficially applied to achieve social and humanitarian objectives, the development of national communications infrastructure and other projects aimed at achieving the goal of sustainable development.
7. The Committee noted that Governments had successfully involved the private sector and academia in various projects in the area of spin-offs of space technology.



8. The view was expressed that spin-offs of space technology could effectively help developing countries to meet challenges in the areas of health and medicine, public safety, industrial productivity and transport.

9. The Committee agreed to continue its consideration of the item at its fifty-third session, in 2010.

H. Space and climate change

10. The Committee considered a new agenda item entitled “Space and climate change”, in accordance with paragraph 51 of General Assembly resolution 63/90.

11. The representatives of Colombia, Germany, India, Italy, Japan, Malaysia, Nigeria, Pakistan, Saudi Arabia, South Africa, the Syrian Arab Republic and the United States made statements under the item.

12. The Committee heard the following presentations:

(a) “GEOSS for climate: activities and achievements”, by G. Rum of the secretariat of GEO;

(b) “DLR’s Earth observation activities for risk and vulnerability assessment”, by H. Taubenböck of Germany;

(c) “Overview of IBUKI, the greenhouse gases observing satellite”, by K. Miyazaki of Japan;

(d) “Space technology for climate change studies: the Indian perspective”, by D. Gowrisankar of India.

13. The Committee took note of the contributions from the World Meteorological Organization (WMO) and the secretariat of the Global Climate Observing System (A/AC.105/2009/CRP.5) and the Office for Outer Space Affairs (A/AC.105/2009/CRP.6) on climate change-related activities conducted by United Nations entities.

14. The Committee noted that the adverse effects of climate change constituted a threat to communities worldwide and were manifested through a variety of processes – such as increasing global average temperature, sea-level rise and the fragmentation and melting of the polar caps.

15. The Committee also noted that, given the global nature of climate change, global observations were required to monitor the phenomenon more precisely. In that context, the Committee agreed that space-based observations complemented by ground-based observations were well suited to monitoring the different manifestations of climate change and the factors contributing to it.

16. The Committee further noted that space-based observations could be used in support of mitigation and adaptation measures related to climate change.

17. The Committee took note of efforts conducted in various countries regarding the deployment of satellites carrying a variety of instruments to monitor different processes related to climate change and to measure some of the essential climate variables.

18. The Committee also took note of international efforts conducted under the auspices of the United Nations System (UNESCO, the United Nations Framework Convention on Climate Change and WMO), and other international initiatives such as the Committee on Earth Observation Satellites, GEO, the Global Monitoring for Environment and Security and the Intergovernmental Panel on Climate Change, which were also targeting climate change.

19. Some delegations expressed the view that developing countries, which contributed the least to climate change, suffered the most its adverse effects and did not have the resources to cope with its impact and take the appropriate adaptation measures. In that context, those delegations were of the view that the Committee should play a more proactive role in advocating the need to allocate resources to support developing countries.

20. The view was expressed that Africa, which produced the least greenhouse emissions, was the continent that would be most affected by the adverse effects of climate change, owing to a variety of socio-economic factors.

21. The view was expressed that the Office should play an active role in providing advisory and advocacy support and should contribute to linking the work of Member States.

I. Use of space technology in the United Nations system

22. The Committee considered a new agenda item entitled "Use of space technology in the United Nations system", in accordance with paragraph 51 of General Assembly resolution 63/90.

23. The representatives of Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, Mexico and the United States made statements under the item. A statement was also made by the observer for UNESCO. Representatives of other member States also made statements relating to this item during the general exchange of views.

24. The Committee noted that the twenty-ninth session of the Inter-Agency Meeting on Outer Space Activities had been held in Vienna from 4 to 6 March 2009. The Committee had before it the report of the Inter-Agency Meeting on its twenty-ninth session (A/AC.105/939) and the report of the Secretary-General on the coordination of space-related activities within the United Nations system: directions and anticipated results for the period 2009-2010 (A/AC.105/940).

25. The Committee also noted that the Inter-Agency Meeting had endorsed a report on the use of space technology for sustainable development in Africa (A/AC.105/2009/CRP.4). The report had been prepared by the Office for Outer Space Affairs in cooperation with the Economic Commission for Africa and in consultation with other United Nations entities and would be made available at the third African Leadership Conference on Space Science and Technology for Sustainable Development, to be held in Algiers from 30 November to 2 December 2009. The report would also be made available to the Commission on Sustainable Development for its work under the thematic cluster for the period 2010-2011.

26. At the 606th meeting of the Committee, the Chairman of the Inter-Agency Meeting on Outer Space Activities, Francesco Pisano of the UNITAR Operational Satellite Applications Programme, made a statement on the work carried out by the Inter-Agency Meeting at its twenty-ninth session.

27. The Committee noted that the Inter-Agency Meeting had identified the following key issues for coordination:

(a) Strengthening further the Inter-Agency Meeting as the central mechanism of the United Nations for coordination of space-related activities;

(b) Reinforcing the contributions made by United Nations entities to the implementation of the United Nations Spatial Data Infrastructure developed by the United Nations Geographic Information Working Group;

(c) Enhancing the use of space-based assets in support of disaster management;

(d) Reinforcing the contributions made by United Nations entities to GEOSS and making optimal use of the benefits of GEOSS to strengthen the capacity of the United Nations.

28. The Committee noted that United Nations entities continued to actively contribute to the protection of the Earth environment and to the management of natural resources through the operation of global observing systems that relied on space-based data and that the activities of the United Nations in the fields of human security and welfare, humanitarian assistance and disaster management increasingly benefited from the use of space technology and its applications in operational environments. The Committee also noted that several United Nations entities conducted a range of programmes supporting capacity-building, training and education in the area of space-related activities.

29. The Committee noted various cooperation activities involving Member States and United Nations entities aimed at promoting capacity-building and the use of space technology and its applications.

30. The Committee noted that the Inter-Agency Meeting, following its twenty-ninth session, had, on 6 March 2009, held its sixth open informal session for member States and observers of the Committee, on the theme "Space-related activities of United Nations entities in Africa".

31. The Committee also noted with satisfaction that the Secretariat continued to maintain a website on the coordination of outer space activities within the United Nations system (www.uncosa.unvienna.org). The presentations made at the session of the Inter-Agency Meeting and the subsequent open informal session, as well as other information on the current space-related activities of United Nations entities, are available on that website.

32. The Committee noted that the thirtieth session of the Inter-Agency Meeting would be hosted by ITU in Geneva from 10 to 12 March 2010. The open informal session, open to all members and permanent observers of the Committee, would be held on the afternoon of 12 March, on the theme "Space technology for emergency communications".

33. The Committee noted that the initiative of the Chairman reflected in the paper entitled “Towards a United Nations Space Policy” (A/AC.105/2009/CRP.12) was timely and could contribute to further promoting and strengthening the use of space technology and its applications in the United Nations system. The Committee noted that the Chairman would further develop that initiative for the consideration of the Committee at its fifty-third session and that the Office for Outer Space Affairs would assist the Chairman in that process.

J. International cooperation in promoting the use of space-derived geospatial data for sustainable development

34. The Committee considered the agenda item entitled “International cooperation in promoting the use of space-derived geospatial data for sustainable development”, in accordance with paragraph 50 of General Assembly resolution 63/90.

35. The representatives of Belgium, Brazil, Canada, China, Colombia, Hungary, India, Mexico, Nigeria, South Africa, the Syrian Arab Republic and the United States made statements under the item. Other member States made statements related to this item during the general exchange of views. A statement was also made by a representative of the Office for Outer Space Affairs, on behalf of the United Nations Geographic Information Working Group.

36. The Committee heard the following technical presentations under the item:

(a) “Operational use of space-derived geospatial data: the key role of GEOSS”, by a representative of the secretariat of GEO;

(b) “COSMO-SkyMed: potentialities for monitoring and management of the natural environment”, by the representative of Italy.

37. The Committee noted the importance of remote sensing applications and spatial data infrastructures for decisions in the area of socio-economic and environmental management, which relied heavily on the availability of accurate information on natural resources and other geospatial data. Poor-quality data collection, inappropriate organizational and management practices, including the lack of adequate infrastructure and skilled human resources, contributed to poor decision-making, which could have undesirable consequences such as food insecurity, air and water pollution and environmental degradation.

38. The Committee noted that a number of organizations at the regional and global levels, such as CEOS (through its Working Group on Information Systems and Services), the European Umbrella Organisation for Geographic Information, GEO and the Global Spatial Data Infrastructure Association, contributed to capacity-building and to the coordination and promotion of activities related to the use of space-derived geospatial data.

39. The Committee noted the activities being carried out by the United Nations Geographic Information Working Group, currently co-chaired by the Office for Outer Space Affairs and the Economic Commission for Africa, which was addressing common geospatial issues in the United Nations system and working towards implementation of the United Nations Spatial Data Infrastructure. The Committee also noted that national coordination offices established in some

Member States continued to cooperate with the United Nations Geographic Information Working Group and that the tenth plenary meeting of the Working Group would be held in Bonn, Germany, from 19 to 21 October 2009.

40. The view was expressed that easy access to space-derived geospatial data and the development of the required information and communications technology infrastructure were essential for making optimal use of geospatial data for sustainable development. However, the development of national spatial data infrastructure was often neglected in developing countries owing to many other, competing needs and the lack of sufficient resources. To address that issue, United Nations entities and other development partners should make the development of a spatial data infrastructure by countries a condition for supporting project implementation, or else collaborate in building national spatial data infrastructures.

41. The view was expressed that although considerable progress was being made in the worldwide development of GEOSS, special efforts were still required to encourage greater participation, especially that of developing countries, in GEOSS. That delegation was of the view that developing countries could derive considerable benefits from using space-derived geospatial data.

42. The view was expressed that the concept of data democracy played an important role in promoting the use of space-derived geospatial data for sustainable development. Data democracy included unhindered access to Earth observation information, open-source software and open systems such as freely available image-processing software tools and systems, appropriate dissemination models taking into account the reality of bandwidth availability in developing countries, locally initiated cross-border collaborative projects and intensive capacity-building and training programmes.

43. The Committee noted that in response to a request made at its fifty-first session, the Secretariat had prepared a summary of the discussions of the Committee on this agenda item at its fiftieth and fifty-first sessions, in 2007 and 2008, for consideration at its present session (A/AC.105/2009/CRP.3). The summary included information on activities undertaken by entities of the United Nations system that were directly related to the use of space-derived geospatial information for sustainable development.

44. The Committee agreed that the item "International cooperation in promoting the use of space-derived geospatial data for sustainable development" should be included on the agenda of the Committee at its fifty-third session, in 2010, to allow the Committee to finalize its report containing recommendations on ways and means of fostering international cooperation with a view to building up national infrastructure for the use of space-derived geospatial data.

45. The Committee also agreed that Brazil would hold informal intersessional consultations with all interested members of the Committee to reach consensus on a set of draft recommendations. The Committee agreed that, on the basis of those draft recommendations, the information contained in A/AC.105/2009/CRP.3 and the discussion at the present session of the Committee, the Secretariat would prepare a draft report, in the form of a conference room paper, to be submitted to the Committee, at its fifty-third session, in 2010, for its consideration and finalization.