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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 General Assembly resolution 65/97.
2. The representatives of Germany, India, Japan, the Russian Federation and the United States made statements under the item.
3. The Committee heard the following presentations:
 - (a) “Chilean Space Agency: activities and international cooperation 2010-2011”, by the representative of Chile;
 - (b) “RESOURCESAT-2: continuing global services in Earth observation”, by the representative of India.
4. The publication *Spinoff 2010*, submitted by the National Aeronautics and Space Administration (NASA) of the United States, was made available to the Committee.
5. The Committee took note of the information provided by States on their national practices regarding spin-offs of space technology that had resulted in the introduction of strategies for the management of regional economic development, as well as useful innovations in numerous scientific and practical areas of civil society, such as medicine, biology, chemistry, astronomy, agriculture, aviation, land transport, firefighting, the protection of nature and energy.



6. The Committee also took note of the projects being implemented on board the International Space Station aimed at the development of various practical applications for civil society, such as medications to treat AIDS and hepatitis, semiconductors and products for agriculture.

7. 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 that they could be beneficially applied to achieve social and humanitarian objectives and the development of national communications infrastructure, and be applied in projects aimed at achieving the goal of sustainable development.

8. The Committee agreed that spin-offs of space technology should be promoted because they fostered innovative technologies, thus advancing economies and contributing to the improvement of the quality of life.

9. 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.

G. Space and water

10. The Committee considered the agenda item entitled “Space and water”, in accordance with General Assembly resolution 65/97.

11. The representatives of Austria, Germany, India, Indonesia, Japan, Nigeria and Poland made statements under the item. During the general exchange of views, statements relating to that item were also made by other member States and by the representative of Colombia on behalf of the Group of Latin American and Caribbean States. The observer for the International Astronautical Federation also made a statement under this item.

12. The Committee heard the following presentations:

(a) “Monitoring of 2010 floods in Pakistan using space-based assets”, by the representative of Pakistan;

(b) “Space and water: benefiting agriculture in India”, by the representative of India;

(c) Invitation for nominations for the fifth award of the Prince Sultan bin Abdulaziz International Prize for Water, by the observer for the Prize.

13. In the course of the discussions, delegations reviewed national and cooperative water-related activities, giving examples of national programmes and bilateral, regional and international cooperation.

14. The Committee noted with satisfaction that the General Assembly, in its resolution 58/217, had proclaimed the period 2005-2015 as the International Decade for Action, “Water for Life”, which reflected the growing awareness of and concern for water-related issues. It was also noted that conservation and proper utilization of water resources were of paramount importance for sustaining life on Earth. In that connection, space-derived data could enhance the various links that existed between the state of natural resources and livelihood opportunities.

15. The Committee noted that space-derived data were used extensively in water management and that space technology and applications, combined with non-space technologies, played an important role in addressing most water-related issues, including the understanding and observation of global water cycles and the monitoring and mitigation of the effects of flood, drought and earthquake disasters, as well as in improving the timeliness and accuracy of forecasts.

16. The Committee noted the large number of space-borne platforms that addressed water-related issues, including those that provided input for the planning and theoretical stages. Data gathered by such platforms had great potential for expanding the use of applications of space technology to address water-related issues on Earth.

17. The Committee also noted the success of the second United Nations International Conference on the Use of Space Technology for Water Management, held in Buenos Aires from 14 to 18 March 2011, which was jointly organized by the United Nations Programme on Space Applications, the European Space Agency and the Prince Sultan bin Abdulaziz International Prize for Water and hosted by the Government of Argentina. It was noted that the next conference in that series was planned for 2013.

18. The Committee agreed to include the special theme of “space and ecosystem management” for consideration under this item at its fifty-fifth session, in 2012, in order to embark on deliberations on the positive impact of cooperation between providers of space-related technologies, services and data and those governmental, intergovernmental and non-governmental institutions responsible for the protection and sustainable use of marine and coastal ecosystems.

H. Space and climate change

19. In accordance with paragraph 51 of General Assembly resolution 63/90, the Committee addressed this issue under the item entitled “Space and climate change”.

20. The representatives of Brazil, Colombia, Germany, India, Indonesia, Japan, Portugal, the Republic of Korea, Saudi Arabia, the United States and South Africa made statements under this item. During the general exchange of views, statements relating to the item were also made by representatives of other member States and by the representative of Colombia on behalf of the Group of Latin American and Caribbean States.

21. The Committee heard the following presentations:

- (a) “Global space system of the seismic activity monitoring”, by the representative of Ukraine;
- (b) “Contribution to monitoring climate change through JAXA’s Earth observation missions”, by the representative of Japan;
- (c) “The climate regional readiness review (Climate R3)”, by the representative of Australia.

22. The Committee noted that the adverse effects of climate change affected all regions of the world and were manifested through a variety of processes such as

global warming, reduction in the summertime sea ice coverage, reduction in the ice mass of the Greenland ice sheet and in the ice mass in glaciers, sea-level rise, changes in large-scale current systems in oceans, more intense or extreme weather events such as storms, tropical cyclones and droughts and unusual dust storms in North Africa and South-West Asia.

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

24. The Committee took note of cooperative efforts between space agencies of several countries to launch satellites to monitor the impact of climate change and climate change-related parameters and to share data gathered from several satellites to advance the understanding of the impact of climate change.

25. The Committee noted efforts conducted by various countries regarding the deployment of satellites carrying a variety of instruments to monitor greenhouse gases and aerosols; to track deforestation, land degradation and subsequent changes in forest biomass; and to monitor atmospheric processes such as precipitation, clouds and global water circulation changes.

26. Some delegations were of the view that, given the global nature of climate change, international cooperation in space-based observations of oceans, the atmosphere, land and solar-terrestrial interactions had a fundamental contribution in addressing the challenges posed by climate change.

27. Some delegations were of the view that climate change posed a threat to human security through its impacts on agriculture, which led to food insecurity, the contamination of coastal freshwater reserves, impacts on nurseries and spawning grounds of fish species, and the alteration of the extent and state of natural resources.

28. Some delegations described their efforts to support climate change-related activities conducted by the Group on Earth Observations, the Committee on Earth Observation Satellites, the Global Earth Observation System of Systems and the Global Climate Observing System.

29. Some delegations were of the view that the Committee should play a more proactive role in advocating international cooperation regarding the deployment and use of satellites to track the effects of climate change and its impacts through disasters.

30. The view was expressed that the use of space-based information had enabled Governments to refine environmental management policies and supported the enforcement of legislation targeting illegal deforestation, poaching activities and illegal harvesting of endangered fish species.

I. Use of space technology in the United Nations system

31. The Committee continued its consideration of the agenda item entitled “Use of space technology in the United Nations system”, in accordance with General Assembly resolution 65/97.

32. The representatives of Chile, Germany and Switzerland made statements under the item. During the general exchange of views, statements relating to that item were also made by representatives of other member States.

33. The Director of the Office for Outer Space Affairs made a statement on behalf of the Office of the United Nations High Commissioner for Refugees, which chaired the thirty-first session of the United Nations Inter-Agency Meeting on Outer Space Activities, held in Geneva from 16 to 18 March 2011, to inform the Committee about the outcomes of that meeting.

34. The Committee had before it the report of the Inter-Agency Meeting on Outer Space Activities on its thirty-first session (A/AC.105/992) and recalled that at its thirty-second session, in 2012, the Meeting would consider a report of the Secretary-General on the coordination of space-related activities within the United Nations system and directions and anticipated results for the period 2012-2013.

35. The Committee welcomed with appreciation the special report of the Inter-Agency Meeting on Outer Space Activities on the use of space technology within the United Nations system to address climate change issues (A/AC.105/991), prepared under the leadership of the World Meteorological Organization and the Office for Outer Space Affairs, with contributions from United Nations entities.

36. The view was expressed that the special report could have benefited from reflecting the wider use of satellites in early warning efforts; expanding the information on the role of several United Nations entities, including the United Nations Environment Programme; and elaborating on the use of space technology not only to monitor climate change and its impact but also to promote and address the effects of mitigation and adaptation measures.

37. The Committee noted that a joint session of the Inter-Agency Meeting and the United Nations Geographical Information Working Group, held on 16 March 2011, resulted in the establishment of a special task group with the objective of providing a substantive contribution to the United Nations Conference on Sustainable Development, to be held in Rio de Janeiro, Brazil, in 2012, reflecting the views of a wider group of United Nations entities on the increasing role that the use of space-derived geospatial data had in achieving sustainable development.

38. The Committee noted that the eighth open informal session for States members and observers of the Committee, on the theme “Space and climate change”, had been held immediately following the thirty-first session of the Inter-Agency Meeting, on 18 March 2011. The Committee agreed that those open informal sessions provided an opportunity to increase awareness and share views on topics related to the use of space technology in the United Nations system and encouraged member States to more actively participate in those informal sessions.

39. The Committee noted that the Office for Outer Space Affairs, as secretariat of the Inter-Agency Meeting, was coordinating with the World Food Programme for

the hosting of the thirty-second session of the Inter-Agency Meeting, to be held in Rome in March 2012.

40. The Committee 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 thirty-first 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, were available on that website.
