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Committee on the Peaceful

Uses of Outer Space

Scientific and Technical Subcommittee

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Draft report

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

1. In accordance with General Assembly resolution 57/116, the Subcommittee considered implementation of the recommendations of UNISPACE III. Pursuant to paragraph 19 of resolution 57/116, the Subcommittee requested the Working Group of the Whole, established at the 584th meeting of the Subcommittee, on 19 February, to consider the issue.
2. At its [...] meeting, on [...] February 2003, the Subcommittee endorsed the recommendations of the Working Group of the Whole concerning implementation of the recommendations of UNISPACE III, as contained in the report of the Working Group of the Whole (see annex [...]).
3. The representatives of China, the Czech Republic, France, Hungary, India, Iran (Islamic Republic of), Italy, Malaysia, Portugal, the United Kingdom and the United States made statements under this item. The observers for the Committee on Earth Observation Satellites (CEOS) and the Spaceweek International Association (SIA) also made statements.
4. The Subcommittee heard a presentation by the observer for the International Astronomical Union (IAU) on “International Astronomical Union and Spaceguard Foundation work on near Earth objects”.
5. The Subcommittee noted with satisfaction that, at the invitation of the Subcommittee (A/AC.105/786, annex II, para. 19), the observer for CEOS, on behalf of the Integrated Global Observing Strategy Partnership (IGOS-P), made a presentation on the activities of the Partnership.



6. The Subcommittee noted that the Plan of Implementation of the World Summit on Sustainable Development¹ reflected the commitment of States to reduce the factors that were an obstacle to sustainable development. The Subcommittee also noted that space technologies could make important contributions to achieving those objectives, in particular through the implementation of those recommendations of UNISPACE III which had been identified as priorities by the Committee and for the implementation of which action teams had been established.
7. The Subcommittee noted with satisfaction that through the presentations made by national and international space agencies and organizations at the World Summit on Sustainable Development, the usefulness of space applications in advancing sustainable development had been demonstrated. That accomplishment was supportive of the recommendations of UNISPACE III, namely, those seeking to increase awareness among decision makers and the general public of the importance of space activities; to promote sustainable development by applying results of space research; to increase the use of space-related systems and services by the entities of the United Nations system and by the private sector; and to improve the management of the Earth's natural resources.
8. The Subcommittee noted with appreciation the efforts made by the chairpersons and members of the 11 action teams established by the Committee at its forty-fifth session² in making progress in the implementation of the recommendations of UNISPACE III for which they were responsible. The Subcommittee noted with satisfaction the substantial progress achieved by many action teams. The Subcommittee agreed that a clear definition of actions or pilot projects was an important expected output to be obtained through the work of the action teams.
9. The Subcommittee noted that the recommendations of UNISPACE III were being implemented by Member States through both national programmes and bilateral cooperation, as well as international cooperation facilitated by the Committee and its subcommittees at the regional or global levels, such as the work of the action teams.
10. The Subcommittee noted that CEOS would continue to contribute to the work of the action teams and that following the World Summit on Sustainable Development CEOS had established a follow-up programme to address the following five areas: (a) education, training and capacity-building; (b) water resource management; (c) disaster management and conflicts; (d) climate change; and (e) global mapping, land-use monitoring and geographic information systems (GIS).
11. The Subcommittee had before it the annual report of the international celebration of World Space Week for the year 2002, prepared by SIA (A/AC.105/C.1/2003/CRP.3). The Subcommittee expressed its appreciation to the Governments of Austria and the Libyan Arab Jamahiriya for their financial contributions and to other member States, their space agencies and non-governmental organizations for their in-kind contributions in support of activities of the Office for Outer Space Affairs for the celebration of World Space Week. The Subcommittee noted that SIA had encouraged governmental and non-governmental organizations to make World Space Week the central timeframe of their annual

outreach and education programmes and to support the coordination of events relating to World Space Week at the global and regional levels.

12. The Subcommittee welcomed the establishment by the Committee at its forty-fifth session of a working group under the chairmanship of Niklas Hedman (Sweden) to prepare a report of the Committee to the General Assembly at its fifty-ninth session of the progress made in the implementation of the recommendations of UNISPACE III.³ The Subcommittee contributed to the work of the working group of the Committee by providing inputs for the report through the work of the Subcommittee and its Working Group of the Whole.

VIII. Space debris

13. In accordance with General Assembly resolution 57/116, the Subcommittee continued to consider the item on space debris in accordance with the work plan adopted at its thirty-eighth session (A/AC.105/761, para.130).

14. The representatives of China, the Czech Republic, France, Germany, India, Italy, Japan, Mexico, the Russian Federation and the United States of America made statements on this item.

15. The Subcommittee heard the following scientific and technical presentations on the subject of space debris:

(a) “Inter-Agency Space Debris Coordination Committee space debris mitigation guidelines”, by the representatives of the United Kingdom of Great Britain and Northern Ireland and the Inter-Agency Space Debris Coordination Committee (IADC);

(b) “Space debris research in the United States”, by the representative of the United States;

(c) “Space debris research at the European Space Agency”, by the representative of the European Space Agency.

16. The Subcommittee had before it a note by the Secretariat entitled “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.105/789). The Subcommittee invited member States and regional space agencies to continue to provide reports on this issue in future years.

17. The Subcommittee noted with satisfaction that, in accordance with its work plan on space debris, IADC had presented its proposals on debris mitigation (A/AC.105/C.1/L.260), based on consensus among the IADC members. According to its work plan, the Subcommittee began its review of the IADC proposals and discussed means of endorsing their utilization.

18. The Subcommittee thanked IADC for its proposals on debris mitigation and placed on record its deep appreciation for the efforts of IADC.

19. The Subcommittee requested and encouraged all member States of the Committee to study the IADC proposals and to provide their comments to the Office

for Outer Space Affairs before the forty-first session of the Subcommittee, to be held in February 2004.

20. The Subcommittee noted that, based on the scope of the comments received, it might consider the formation of a formal working group at its forty-first session to review the comments and consider further progress on the subject, including continuing discussions on means of endorsing utilization of the guidelines.

21. The Subcommittee agreed that member States should pay more attention to the problem of collisions of space objects, including those with nuclear power sources on board, with space debris and to other aspects of space debris. It noted that the General Assembly, in its resolution 57/116, had called for the continuation of national research on the question, for the development of improved technology for the monitoring of space debris and for the compilation and dissemination of data on space debris. The Subcommittee agreed that national research on space debris should continue and that member States and international organizations should make available to all interested parties the results of that research, including information on practices adopted that had proved effective in minimizing the creation of space debris.

22. The Subcommittee noted that, although adequate attention was being paid by member States and space agencies to the above-mentioned issues, further research would be needed to determine whether identified mitigation measures were cost-effective and could minimize the short-term cost while maximizing the long-term benefit for the space environment.

23. The Subcommittee noted that a detailed presentation on Germany's consolidated national project entitled "Space Debris End-to-End Service" would be made at the forty-first session of the Scientific and Technical Subcommittee.

24. Some delegations expressed the view that the guiding principles in the IADC proposals should be implemented expeditiously on a voluntary basis through national mechanisms and that there were no international legal impediments to that process.

25. The view was expressed that, in parallel to the Subcommittee's work on fine-tuning the debris mitigation guidelines, the Subcommittee should analyse ways of implementing the guiding principles in the IADC proposals on a voluntary basis. Such an analysis should also be made at the national level.

26. The view was expressed that design and operation of space debris mitigation measures did not necessarily have a great cost impact if they were considered and implemented early in the process of the space system design. First indications gave a value of about 1 to 3 per cent of the cost of the mission. Only when measures had to be taken for de-orbit or re-orbit manoeuvres might the costs increase up to nearly 10 per cent.

27. The view was expressed that the protection of the space environment was a collective responsibility and that as measures to mitigate the effects of space debris were costly, it was necessary to share resources through cooperation and coordination among all spacefaring nations.

28. Some delegations expressed the view that the timely and systematic provision of official information on the functional status of space objects would offer a better

factual basis for studies of orbital debris. Those delegations expressed the view that the recent report of the Italian Space Agency (A/AC.105/803) and the information provided via the Internet (www.asdc.asi.it/bepposax/reentry/) on the change of the satellite BeppoSAX into space debris and on its expected re-entry into the Earth's atmosphere was an important step in that direction.

29. Some delegations expressed the view that the topic of space debris should be considered by the Legal Subcommittee, either to address specific legal questions or to move towards principles on space debris. Those delegations informed the Scientific and Technical Subcommittee that they would submit a formal proposal in that regard at the forty-second session of the Legal Subcommittee.

30. However, the view was expressed that such a step would not be constructive at the present time. That delegation expressed the view that the fastest way to reduce the space debris population was for space-faring nations to implement immediately the measures contained in the IADC space debris mitigation guidelines.

XI. The use of space technology for the medical sciences and public health

31. In accordance with General Assembly resolution 57/116, the Subcommittee considered a single issue/item for discussion on the use of space technology for the medical sciences and public health.

32. The representatives of Austria, Canada, China, France, Germany, India, Italy, Romania and the United States made statements on this item.

33. The Subcommittee heard the following scientific and technical presentations on the subject of the use of space technology for the medical sciences and public health:

(a) "A novel path to tele-health services in developing countries", by the representative of Canada;

(b) "Space technology and public health", by the representative of France;

(c) "Use of telemedicine in India", by the representative of India;

(d) "Results and methods of research of vestibular function in space useful in clinical practice", by the representative of Slovakia;

(e) "Health Improvement Through Space Technologies and Resources (HISTAR)", by the representatives of the International Space University.

34. The Subcommittee was informed of several initiatives involving the use of space technology for the medical services and public health in areas such as telemedicine, space technology for epidemiology and the control of infectious diseases and medical and pharmacological research in microgravity.

35. The Subcommittee noted that telemedicine could be of great importance in providing medical expertise to remote locations not connected to the terrestrial network.

36. The Subcommittee noted that novel satellite-based telemedicine systems had been developed for use in the case of natural disasters and were being used for high-

speed data transfer of diagnostic data, such as electronic X-ray and computer tomography images, supported by high-quality video conferencing services to facilitate discussion and decision-making by medical experts.

37. The Subcommittee noted that space technologies such as remote sensing and satellite navigation could help to identify and predict outbreaks of diseases such as malaria, dengue fever, Rift Valley fever and West Nile virus.

38. The Subcommittee noted that research in microgravity could increase medical and pharmacological knowledge by using methods that could not be duplicated on Earth.

39. The Subcommittee also noted that many technologies developed in connection with space exploration had terrestrial spin-offs in the area of the medical sciences and public health.

40. For those reasons, the Subcommittee encouraged continued international cooperation in the use of space technology for the medical sciences and public health and expressed the belief that the number of examples and noteworthy successes of the use of space technology in that area would continue to rise.

XII. Draft provisional agenda for the forty-first session of the Scientific and Technical Subcommittee

41. In accordance with General Assembly resolution 57/116, the Scientific and Technical Subcommittee considered proposals for a draft provisional agenda for its forty-first session, in 2004, to be submitted to the Committee on the Peaceful Uses of Outer Space. Pursuant to paragraph 19 of that resolution, the Subcommittee requested the Working Group of the Whole, established at its 584th meeting, on 19 February, to consider the draft provisional agenda for the forty-first session of the Subcommittee.

42. At its [...] meeting, on 28 February 2003, the Subcommittee endorsed the recommendations of the Working Group of the Whole concerning the draft provisional agenda for the forty-first session of the Subcommittee, as contained in the report of the Working Group of the Whole (see annex [...] to the present report).

Notes

¹ *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002* and corrigendum (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 2, annex.

² *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 20* and corrigendum (A/56/20 and Corr.1), paras. 50 and 55.

³ *Ibid.*, *Fifty-seventh Session, Supplement No. 20* (A/57/20), para. 37.