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Committee on the Peaceful Uses of Outer Space Scientific and Technical Subcommittee Sixtieth session

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Draft report

Addendum

V. Space debris

1. In accordance with General Assembly resolution 77/121, the Subcommittee considered agenda item 7, entitled “Space debris”.
2. The representatives of Belarus, China, France, Germany, India, Japan, Mexico, New Zealand, Pakistan, Slovakia, Spain, Thailand, the United Kingdom and Venezuela (Bolivarian Republic of) made statements under agenda item 7. During the general exchange of views, statements relating to the item were also made by representatives of other member States.
3. The Subcommittee heard the following scientific and technical presentations:
 - (a) “CanX-7 re-entry”, by the representative of Canada;
 - (b) “2022 space debris in France”, by the representative of France;
 - (c) “The threat of space debris to the safety of spacecraft in orbit and countermeasures”, by the representative of China;
 - (d) “Space situational awareness activities of the Republic of Korea”, by the representative of the Republic of Korea;
 - (e) “United States space debris environment and activity updates”, by the representative of the United States;
 - (f) “IADC annual report 2022”, by the observer for ESA;
 - (g) “SGAC review of the COPUOS compendium of space debris mitigation standards: what’s next?”, by the observer for SGAC.
4. The Subcommittee had before it information on research on space debris, the safety of space objects with nuclear power sources on board and problems relating to the collision of such objects with space debris, contained in replies received from Member States and international organizations ([A/AC.105/C.1/123](#), [A/AC.105/C.1/2023/CRP.14](#) and [A/AC.105/C.1/2023/CRP.23](#)).
5. The Subcommittee noted with satisfaction that the endorsement by the General Assembly, in its resolution [62/217](#), of the Space Debris Mitigation Guidelines of the



Committee on the Peaceful Uses of Outer Space had proved vital in controlling the space debris problem for the safety of future space missions.

6. The Subcommittee also noted with satisfaction that many States and international intergovernmental organizations were implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines and the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee and/or the Space Debris Mitigation Guidelines of the Inter-Agency Space Debris Coordination Committee (IADC), and that a number of States had harmonized their national space debris mitigation standards with those guidelines.

7. The Subcommittee noted that some States were using the Space Debris Mitigation Guidelines and the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee, the Space Debris Mitigation Guidelines of IADC and ISO standards as reference points in their regulatory frameworks for national space activities.

8. The Subcommittee also noted that, in the area of space debris, some States were cooperating under the space surveillance and tracking support framework funded by the European Union, integrating data, on-ground sensors and services in order to monitor space debris.

9. The Subcommittee expressed concern at the increasing amount of space debris and encouraged States, agencies, industries and academic institutions that had not yet done so to consider voluntarily implementing the Space Debris Mitigation Guidelines and the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee and to work to preserve the space environment.

10. The Subcommittee noted that the compendium of space debris mitigation standards adopted by States and international organizations was being continuously updated. The Subcommittee further noted that the compendium, initiated by Canada, Czechia and Germany, could be consulted on the website of the Office for Outer Space Affairs, and encouraged Member States to continue to provide contributions and updates to it.

11. The Subcommittee agreed that Member States and international organizations having permanent observer status with the Committee should continue to be invited to provide reports on research on space debris, the safety of space objects with nuclear power sources on board, problems relating to the collision of such space objects with space debris and the ways in which debris mitigation guidelines were being implemented.

12. The Subcommittee noted that IADC, whose initial work had served as the basis for the Space Debris Mitigation Guidelines of the Committee, had updated its own Space Debris Mitigation Guidelines in 2021 and published a document that supported the IADC Guidelines and a statement on large constellations of satellites in low Earth orbit in order to reflect the evolving understanding of the situation regarding space debris.

13. The Subcommittee noted with appreciation that States had undertaken a number of actions to mitigate space debris, such as improving the design of launch vehicles, engines and spacecraft, developing special software, passivation, life extension, end-of-life operations and disposal. The Subcommittee noted the evolving technologies related to the in-orbit robotic servicing of satellites, the extension of satellite lifespans and active space debris removal.

14. The Subcommittee noted the development and application of new technologies and ongoing research related to space debris mitigation; protecting space systems from space debris; limiting the creation of additional space debris; re-entry and collision avoidance techniques; measuring, characterizing, continuous monitoring and modelling of space debris; prediction, early warning and notification of space debris re-entry and collision; and space debris orbit evolution and fragmentation.

15. Some delegations expressed the view that work was necessary to ensure that sufficient normative frameworks, including space debris remediation measures, were identified and developed at the international level for those purposes.
 16. Some delegations expressed the view that the increase in space debris posed a serious risk to the safety, security and sustainability of space activities, and that international and national activities were necessary.
 17. Some delegations expressed the view that international cooperation was necessary to reduce the barriers and risks relating to feasible orbital debris removal missions, and that greater international agreement on the appropriate internationally accepted framework for such missions would be essential for ensuring that States could make positive, transparent contributions to the sustainability of the space environment.
 18. Some delegations expressed the view that the global challenge of space traffic management needed to be addressed through the development of capabilities, regulatory aspects and partnerships. In that regard, multilateral discussions in the context of the United Nations would be necessary.
 19. Some delegations expressed the view that there was a need for developing countries to have access to technologies and methodologies for the measurement, monitoring and characterization of space debris and other space objects.
 20. Some delegations expressed the view that it was necessary to strengthen international cooperation in the exchange and transfer of knowledge, data and technology for effective monitoring and mitigation of the space debris environment.
 21. The view was expressed that although active debris removal was of great importance for addressing current risks in the space environment, international efforts in the area of active debris removal should not detract from efforts to advance international cooperation on space debris mitigation.
 22. The view was expressed that the ability to predict and warn satellite operators of potential collisions in real time through space surveillance and tracking was key to reducing the risk posed by debris to satellites during their operational missions.
 23. The view was expressed that the increase in dangerous passages and collision avoidance manoeuvres during the past year was a matter of concern. The impact of solid particles on spacecraft had led to emergency situations.
 24. The view was expressed that addressing the issue of space debris was a complex matter, and that the increase in the number of missions as a result of the creation of megaconstellations would likely worsen the situation.
 25. The view was expressed that, in particular in the areas of space debris and space traffic management, common solutions to the space-related problems for which countries had common but differentiated responsibilities should be found in the context of the Committee, in cooperation with other relevant United Nations bodies, and in that regard, the role and responsibility of the Subcommittee in finding common ground in those areas was stressed.
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