



General Assembly

Distr.: Limited
5 February 2024

Original: English

**Committee on the Peaceful
Uses of Outer Space
Scientific and Technical Subcommittee
Sixty-first session
Vienna, 29 January–9 February 2024**

Draft report

Addendum

VIII. Long-term sustainability of outer space activities

1. In accordance with General Assembly resolution 78/72, the Subcommittee considered agenda item 11, entitled “Long-term sustainability of outer space activities”.
2. The representatives of Australia, Austria, Belarus, Canada, China, Finland, France, India, Indonesia, Japan, Luxembourg, Malaysia, Mexico, New Zealand, the Philippines, the Republic of Korea, the Russian Federation, South Africa, the United Arab Emirates, the United Kingdom and the United States made statements under agenda item 11. Statements were also made by the observers for IAU and SGAC. 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) “A glimpse into long-term sustainability efforts by India in 2023”, by the representative of India;
 - (b) “An overview of United Kingdom activities on space-based solar power”, by the representative of the United Kingdom;
 - (c) “Data-sharing for space traffic management”, by the representative of the United Kingdom;
 - (d) “APSCO student small-satellite activity updates”, by the observer for APSCO;
 - (e) “Challenges to sustainable lunar exploration”, by the observer for For All Moonkind;
 - (f) “United Nations Moon far side science treaty”, by the observer for IAA;
 - (g) “Proposed human research programme for civilians in space flight and space habitation”, by the observers for IAASS;
 - (h) “International standards development activities supporting the Guidelines for the Long-term Sustainability of Outer Space Activities”, by the observer for ISO.



4. The Subcommittee had before it the following:
 - (a) Working paper by the Chair of the Working Group on the Long-term Sustainability of Outer Space Activities containing summaries of implementation experiences, opportunities for capacity-building and challenges ([A/AC.105/C.1/L.410](#));
 - (b) Conference room paper submitted by Canada containing an update on implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities ([A/AC.105/C.1/2024/CRP.4](#));
 - (c) Conference room paper submitted by the United Kingdom containing an update on its reporting approach for the voluntary implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities ([A/AC.105/C.1/2024/CRP.21](#));
 - (d) Conference room paper submitted by the Islamic Republic of Iran on bridging the gap and empowering States in pursuit of space sustainability ([A/AC.105/C.1/2024/CRP.25](#));
 - (e) Conference room paper submitted by India containing a proposal for a new guideline for the long-term sustainability of outer space activities ([A/AC.105/C.1/2024/CRP.32](#));
 - (f) Conference room paper submitted by Portugal containing a report on the technical preparatory symposium of the United Nations/Portugal Conference on Management and Sustainability of Outer Space Activities ([A/AC.105/C.1/2024/CRP.34](#));
 - (g) Conference room paper submitted by the Moon Village Association containing a written contribution for the Working Group on the Long-term Sustainability of Outer Space Activities ([A/AC.105/C.1/2024/CRP.5](#));
 - (h) Conference room paper submitted by SGAC containing information on a proposed intergenerational pact for space sustainability ([A/AC.105/C.1/2024/CRP.13](#));
 - (i) Conference room paper submitted by EAS, ESO, For All Moonkind, IAU, the Open Lunar Foundation, SKAO and SWF containing information on the protection of astronomy and science on the Moon ([A/AC.105/C.1/2024/CRP.14](#));
 - (j) Conference room paper submitted by COSPAR, For All Moonkind, IAU and SGAC, also on behalf of the Lunar Policy Platform, containing information on promoting the long-term sustainability of lunar activities through good practices encouraging due regard for lunar science and ethics ([A/AC.105/C.1/2024/CRP.15](#));
 - (k) Non-paper by India containing a proposal for a way ahead for the Working Group on the Long-term Sustainability of Outer Space Activities;
 - (l) Non-paper by the United Kingdom containing a proposal for a potential approach to understanding challenges and developing recommendations on the long-term sustainability of outer space activities;
 - (m) Non-paper by the Chair of the Working Group on the Long-term Sustainability of Outer Space Activities containing possible decisions to be taken by the Working Group at the sixty-first session of the Subcommittee.
5. The Subcommittee reaffirmed the interconnection between the growing number of objects being launched into outer space, the increasing complexity of space operations and the continuing importance of its work addressing the long-term sustainability of outer space activities.
6. In accordance with General Assembly resolution 78/72, the Working Group on the Long-term Sustainability of Outer Space Activities was reconvened at the present session, with Umamaheswaran R. (India) as Chair.
7. Pursuant to the agreement reached by the Subcommittee in 2023 ([A/AC.105/1279](#), para. 309), and in accordance with the multi-year workplan of the Working Group ([A/AC.105/1258](#), annex II, appendix, para. 18), the Working Group held a workshop on 6 February 2024.

8. The Subcommittee noted with satisfaction that the workshop had raised awareness of the long-term sustainability of outer space activities, supported capacity-building and provided an opportunity to collect views from entities that might not normally participate directly in the work of the Working Group. The Subcommittee also noted that a report on the workshop would be made available following its sixty-first session.

9. The Subcommittee was informed of a number of measures that had been or were being undertaken to implement the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee (A/74/20, annex II). Those measures included, inter alia, the development of national space strategies and policies; the creation, review and updating of relevant domestic legislation and regulation; the ratification of relevant international treaties; the enhanced registration of space objects; developments in licencing processes; the establishment of national on-orbit servicing guidelines; an enforcement action against a satellite operator that did not dispose of its satellite in accordance with international guidelines; regional coordination on space traffic management; expanded joint government-commercial as well as international partnerships to increase communications, exchange space situational data and analyses and establish best practices for autonomous spacecraft collision avoidance; the broadening of access to collision avoidance services, alongside fragmentation and re-entry analysis services; innovations by the commercial sector in value-added technologies and services to reduce the risk of collisions; the reduction of the lifetime of rocket bodies in orbit; the improved post-mission disposal of satellites; a project for the 3D printing of algae-based materials to be used in the space industry; the development by a company of an electro-thermal propulsion system for small satellites in low Earth orbit; the development of the Lunar Gateway's crew and science airlock module; preparations for a national debris removal mission; collaboration on a project to demonstrate the commercial removal of debris; and the addition by a space agency of a funding function to enable investment in space technology development by the private sector and academia.

10. The Subcommittee was also informed of various initiatives linked to the Guidelines for the Long-term Sustainability of Outer Space Activities, including their implementation. Those initiatives included the European Union space surveillance and tracking initiative (EU-SST); international cooperation opportunities related to the International Space Station and the China Space Station; the Astra Carta, a framework to shape future responsible and sustainable space exploration, development and cooperation; the Unispace Nanosatellite Assembly and Training capacity-building programme of the Indian Space Research Organization (UNNATI); a workshop on space situational awareness and space traffic management for the academic community; an open access e-learning course on the Guidelines; the publication of a children's book with the objective of positively influencing young people and increasing public awareness of and support for space science, technology, policy and diplomacy activities; capacity-building undertaken through collaboration with APSCO; the capacity-building work of the Asia-Pacific Regional Space Agency Forum; training and capacity-building opportunities offered through the regional centres for space science and technology education, affiliated to the United Nations; and relevant capacity-building projects of the Office for Outer Space Affairs.

11. Some delegations expressed the view that the Committee and its subcommittees served as unique platforms for international cooperation, including in relation to the development of international space law, international guidelines, best practices, and transparency and confidence-building measures related to the long-term sustainability of outer space activities, and that the development of instruments related to the long-term sustainability of outer space activities should be distinct from, but complementary to, work being undertaken to address space threats in other United Nations forums.

12. Some delegations expressed the view that the adoption of the voluntary Guidelines for the Long-term Sustainability of Outer Space Activities had been the

outcome of a multidimensional compromise and a delicate balance, and that the delicate balance should be preserved in the implementation of the workplan of the Working Group, taking into consideration the priorities and concerns of all member States, in particular those of developing countries.

13. Some delegations expressed the view that a periodic review of the implementation of the Guidelines should be encouraged in order to promote the exchange of good practices between States, in particular with regard to how to respond to any difficulties encountered and lessons learned.

14. Some delegations expressed the view that the implementation of the Guidelines was in accordance with member States' respective needs, conditions and capabilities.

15. Some delegations expressed the view that future work on the long-term sustainability of outer space activities should include increased consideration of capacity-building efforts, and that those efforts should go beyond a general exchange of information and instead focus on hands-on, interactive discussions and demonstrations of tools and resources to aid emerging spacefaring nations as they grew their space capabilities.

16. Some delegations expressed the view that space traffic management remained a key issue in connection with the fair and sustainable use of space, and that promoting regional approaches to space traffic management was a pragmatic and bottom-up way to build confidence and establish concrete space traffic management solutions at the global level.

17. The view was expressed that having a means of discussing the scientific and technical aspects of space traffic management within the Committee and its subsidiary bodies would result in the improved implementation of guidelines B.2 and B.3.

18. The view was expressed that all participants in space activities should support the call to develop a United Nations information platform serving the common need to collect and make available to the public information on the monitoring of outer space in the interest of ensuring the safety of space operations.

19. The view was expressed that the involvement of private actors in multilateral processes should be encouraged and that the competitiveness and innovation capacities of companies that provided solutions to the challenges of the long-term sustainability of space activities should be supported.

20. The view was expressed that urgent, universal challenges to the long-term sustainability of outer space activities should be selected and addressed in the drafting of new guidelines, including, for example, ensuring the safety of crewed space flight and space stations, ensuring fair access to low Earth orbit and strengthening the regulation of large constellations.

21. The view was expressed that the considerations contained in conference room paper A/AC.105/2022/CRP.11, which had first been made available in June 2022, could provide a thematic basis for new draft guidelines to address outstanding matters on the safety of space operations.

22. The view was expressed that the IADC report on the status of the space debris environment provided critical insight into the forecast environmental challenges that may be faced on-orbit and continued to serve as a reminder that global dialogue on the sustainability of the space environment was essential and that only through joint action could the outer space environment be preserved for future generations.

23. At its [...] meeting, on [...], the Subcommittee endorsed the report of the Working Group, as contained in annex [...] to the present report.