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**Committee on the Peaceful
Uses of Outer Space
Scientific and Technical Subcommittee
Fifty-eighth session
Vienna, 19–30 April 2021**

Draft report

X. Long-term sustainability of outer space activities

1. In accordance with General Assembly resolution [75/92](#), the Subcommittee considered agenda item 12, entitled “Long-term sustainability of outer space activities”.
2. The representatives of Algeria, Australia, Austria, Brazil, Canada, China, France, Germany, India, Indonesia, Iran (Islamic Republic of), Israel, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, the Russian Federation, South Africa, Spain, Switzerland, the United Arab Emirates, the United Kingdom, the United States and Venezuela (Bolivarian Republic of) made statements under agenda item 12. 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) “ELSA-d: building a stable and sustainable future in space”, by the representative of the United Kingdom;
 - (b) “The For All Moonkind Moon Registry: dynamically advancing the sustainability of lunar activities”, by the observer for For All Moonkind.
4. The Subcommittee had before it the following:
 - (a) Conference room paper entitled “Implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space: Belgium” (A/AC.105/C.1/2021/CRP.12);
 - (b) Conference room paper entitled “United Kingdom: update on our reporting approach for the voluntary implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities” (A/AC.105/C.1/2021/CRP.16);
 - (c) Conference room paper containing a proposal by Australia, Belgium, Canada, France, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Nigeria and the United States on terms of reference, methods of work and a workplan for the establishment of a new working group on the long-term sustainability of outer space activities of the Scientific and Technical Subcommittee (A/AC.105/C.1/2021/CRP.19 and A/AC.105/C.1/2021/CRP.19/Rev.1).



5. The Subcommittee recalled that the Committee, at its sixty-second session, in June 2019, had adopted the Guidelines for the Long-term Sustainability of Outer Space Activities (A/74/20, para. 163 and annex II), had decided to establish, under a five-year workplan, a working group under the agenda item on the long-term sustainability of outer space activities of the Subcommittee (A/74/20, para. 165), and had agreed that the bureau of the working group would be elected at the beginning of the fifty-seventh session of the Subcommittee (A/74/20, para. 166). The Committee had also decided that the working group would agree on its own terms of reference, methods of work and dedicated workplan at the fifty-seventh session of the Subcommittee (A/74/20, para. 167).
6. The Subcommittee also recalled that, at its fifty-seventh session, in February 2020, it had not been able to elect the bureau of the working group under the agenda item on the long-term sustainability of outer space activities, that the working group had therefore not convened meetings at that session, and that the terms of reference, methods of work and workplan had not been developed (A/AC.105/1224, para. 195). At the same session, the delegation of South Africa had expressed its willingness to facilitate informal consultations on the margins of the sixty-third session of the Committee (A/AC.105/1224, para. 197).
7. The Subcommittee further recalled that, owing to extraordinary circumstances, the sixty-third session of the Committee had been cancelled and a decision had been taken by written procedure that the bureau of the working group under the agenda item on the long-term sustainability of outer space activities should be elected at the beginning of the fifty-eighth session of the Subcommittee, and that the working group should also agree on its own terms of reference, methods of work and dedicated workplan at the fifty-eighth session (A/75/20, para. 24).
8. The Subcommittee noted that, taking into consideration the ongoing global coronavirus disease (COVID-19) pandemic and the consequent extraordinary arrangements for the fifty-eighth session of the Subcommittee, South Africa had confirmed to the Secretariat its willingness to continue to facilitate informal consultations on the matter of the bureau and had expressed its desire to engage informally with States members of the Committee in a virtual format in the intersessional period. Informal consultations had therefore been arranged and had been held virtually on 17 December 2020 and on 19 February, 16 and 31 March and 12 April 2021, with Pontsho Maruping (South Africa) as facilitator.
9. The Subcommittee noted that informal consultations on the election of the bureau had also been held during the present session, with Pontsho Maruping again serving as facilitator. The Subcommittee expressed its appreciation to South Africa for facilitating informal consultations both in the intersessional period and during the present session.
10. The Subcommittee agreed on the importance of electing a bureau for the new working group, with a view to enabling the working group to begin its vital task of addressing the substance of the topic of the long-term sustainability of outer space activities.
11. The Subcommittee, recognizing that all nominees that had been put forward for bureau membership were highly qualified, noted with appreciation that, in demonstrations of utmost flexibility and with a view to moving forward with substantive work on the important topic, Japan and Switzerland had, in the intersessional period, and the United Arab Emirates had, during the present session, withdrawn their nominations for the bureau.
12. At its [...] meeting, the Subcommittee elected R. Umamaheswaran (India) as Chair of the Working Group on the Long-term Sustainability of Outer Space Activities and convened the Working Group under agenda item 12.
13. The Subcommittee recommended that the Committee make arrangements that would afford the Working Group on the Long-term Sustainability of Outer Space

Activities the opportunity to meet at the sixty-fourth session of the Committee, with the benefit of interpretation services.

14. 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. Those measures included, inter alia, the review and updating of relevant domestic legislation, including through surveys and national research and working groups; the ratification of relevant international treaties; the issuance of pre-launch notifications; the enhanced registration of space objects; national research and development programmes; continued improvements to government and commercial space situational awareness capabilities to detect, track and identify both active space objects and debris; the activities of start-ups addressing space debris; the investigation by companies of new technologies to accelerate the de-orbiting of satellites; collaboration between universities and industry to develop innovative space debris monitoring and collision mitigation technologies; and new government-private sector partnerships to increase communication, exchange data and establish best practices for autonomous spacecraft collision avoidance.

15. The Subcommittee was also informed of various initiatives linked to the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee, including the Network for Space Object Tracking and Analysis (NETRA) of India; the Australian Space Situational Awareness Roadmap, informed by a technical advisory group that included subject matter experts from government, industry and academia; the Real-time Space Debris Surveillance website of the National Institute of Aeronautics and Space (LAPAN) of Indonesia; the European Union space surveillance and tracking (EU SST) initiative; the collaboration between New Zealand and a commercial radar tracking service provider focused on objects in low Earth orbit to create a space regulatory and sustainability platform; the publication of the *NASA Spacecraft Conjunction Assessment and Collision Avoidance Best Practices Handbook*; the UNISpace Nanosatellite Assembly and Training capacity-building programme of the Indian Space Research Organization (UNNATI); the National Space Legislation Initiative of the Asia-Pacific Regional Space Agency Forum; a workshop co-organized by Finland and Switzerland at the European level on implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities; training and capacity-building opportunities offered through the regional centres for space science and technology education, affiliated to the United Nations; a space sustainability initiative of the Office for Outer Space Affairs, funded by the United Arab Emirates Space Agency; and the project of the Office for Outer Space Affairs entitled “The Promoting Space Sustainability Project: awareness-raising and capacity-building related to the implementation of the LTS Guidelines”, funded by the United Kingdom Space Agency.

16. Some delegations expressed the view that the inability of the Subcommittee to more quickly resolve the purely technical issue of the formation of the bureau of the new Working Group on the Long-term Sustainability of Outer Space Activities had prevented the initiation of important information-sharing on the implementation of the already adopted Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee, not to mention the development of new guidelines.

17. Some delegations expressed the view that the proposal put forth in document A/AC.105/C.1/2021/CRP.19/Rev.1 offered a balanced solution for the terms of reference, methods of work and workplan of the new working group, one that was fully consistent with the mandate provided by the Committee, as the proposal envisaged three workstreams focused on, respectively, the implementation of the adopted Guidelines for the Long-term Sustainability of Outer Space Activities, the identification of possible new guidelines and capacity-building.

18. Some delegations expressed the view that the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee should strengthen capacity-building efforts aimed at bridging the space technology divide between developed and emerging countries.

19. The view was expressed that national implementation of the existing Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee would reinforce the role of the Committee as the most effective multilateral forum for the advancement of practical cooperation in the peaceful uses and exploration of outer space for the benefit of all.
20. The view was expressed that it was now time to “turn paper into practice” by applying and testing the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee to ensure the sharing of best practices, support the capacity-building needs of nations and develop a better understanding of what would be required in the future, so as to ensure that the Committee remained a relevant platform for defining the global governance of outer space activities.
21. The view was expressed that some of the identified challenges of implementing the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee included balancing the implementation of sustainability measures with efforts to maintain commercial viability, and the need for more mature space debris mitigation technology, such as propulsion for small satellites.
22. The view was expressed that experiences and feedback from, and the involvement of, private sector entities in work on the topic would be beneficial, or even essential, for identifying the relevant issues and guaranteeing the greatest possible degree of long-term sustainability of outer space activities.
23. The view was expressed that, as more private actors entered the new space market, it was imperative that States work together to identify challenges to sustainability, and then develop and negotiate solutions, at the same time developing novel approaches, exchanging experiences and developing capacities and capabilities, to ensure that all actors act responsibly, with due regard for the effect of their activities in the present and in the years and decades to come.
24. The view was expressed that the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee should provide sufficient flexibility to guarantee the legitimate right of all States to use space technology as a tool for development.
25. The view was expressed that the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee should be aimed at promoting the safe and sustainable use of outer space, in the interest of all countries, irrespective of their degree of economic or scientific development, without discrimination of any kind and with due regard for the principle of equity, and at highlighting the importance of international cooperation and technology transfer as effective means to promote research programmes and build capacity in countries with emerging space sectors.
26. The view was expressed that inclusive approaches should be taken in work relating to the long-term sustainability of outer space activities, and that related actions should support efforts already under way relating to the African Space Policy.
27. The view was expressed that scientific, technical and legal aspects were all relevant to the safety and sustainability of space activities and there should therefore be close exchange on the topic between the Scientific and Technical Subcommittee and the Legal Subcommittee.
