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**Committee on the Peaceful
Uses of Outer Space
Scientific and Technical Subcommittee
Sixtieth session
Vienna, 6–17 February 2023**

Draft report

I. Introduction

1. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space held its sixtieth session at the United Nations Office at Vienna from 6 to 17 February 2023, in a hybrid format (in person and online), with Juan Francisco Facetti (Paraguay) as Chair.
2. The Subcommittee held [...] meetings.

A. Attendance

3. Representatives of the following [...] States members of the Committee attended the session: Algeria, Angola, Argentina, Armenia, Australia, Austria, Azerbaijan, Belarus, Belgium, Brazil, Bulgaria, Canada, Chile, China, Colombia, Costa Rica, Cuba, Cyprus, Czechia, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Finland, France, Germany, Ghana, Greece, Guatemala, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Luxembourg, Malaysia, Mexico, Mongolia, Morocco, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Türkiye, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay and Venezuela (Bolivarian Republic of).
4. At its 975th and 977th meetings, on 6 and 7 February, the Subcommittee decided to invite observers for Côte d'Ivoire and Honduras, at their request, to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.
5. Also at its 975th meeting, the Subcommittee decided to invite the observer for the Sovereign Order of Malta, at its request, to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.



6. Observers for the Office for Disarmament Affairs of the Secretariat, the Food and Agriculture Organization of the United Nations, the International Atomic Energy Agency (IAEA), the International Civil Aviation Organization (ICAO), the International Telecommunication Union (ITU), the United Nations Environment Programme (UNEP), the United Nations Industrial Development Organization (UNIDO), the United Nations Institute for Disarmament Research (UNIDIR) and the World Meteorological Organization attended the session.
7. The session was attended by representatives of the European Union, in its capacity as permanent observer of the Committee and in accordance with General Assembly resolutions [65/276](#) and [73/91](#).
8. The session was attended by observers for the International Asteroid Warning Network (IAWN) and the Space Mission Planning Advisory Group (SMPAG), in accordance with the agreement of the Subcommittee at its fifty-third session ([A/AC.105/1109](#), para. 182).
9. The session was attended by observers for the following non-governmental organizations having permanent observer status with the Committee: CANEUS International, Committee on Earth Observation Satellites (CEOS), Committee on Space Research (COSPAR), European Space Policy Institute (ESPI), For All Moonkind, the Hague Institute for Global Justice, Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation, International Association for the Advancement of Space Safety (IAASS), International Astronautical Federation (IAF), International Astronomical Union (IAU), International Organization for Standardization (ISO), International Society for Photogrammetry and Remote Sensing (ISPRS), International Space University (ISU), Moon Village Association, National Space Society, Open Lunar Foundation, Prince Sultan bin Abdulaziz International Prize for Water (PSIPW), Secure World Foundation (SWF), Scientific Committee on Solar-Terrestrial Physics (SCOSTEP), Space Generation Advisory Council (SGAC), University Space Engineering Consortium-Global (UNISEC-Global) and World Space Week Association.
10. At its 975th and 977th meetings, the Subcommittee decided to invite observers for ASTM International, the International Genetically Engineered Machine Foundation (iGEM) and the International Space Environment Service (ISES) at their request, to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.
11. A list of the representatives of States, United Nations entities and other international organizations attending the session is contained in document [A/AC.105/C.1/2023/INF/50](#).

B. Adoption of the agenda

12. At its 975th meeting, on 6 February, the Subcommittee adopted the following agenda:
 1. Adoption of the agenda.
 2. Statement by the Chair.
 3. General exchange of views and introduction of reports submitted on national activities.
 4. United Nations Programme on Space Applications.
 5. Space technology for sustainable socioeconomic development.
 6. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment.

7. Space debris.
8. Space-system-based disaster management support.
9. Recent developments in global navigation satellite systems.
10. Space weather.
11. Near-Earth objects.
12. Long-term sustainability of outer space activities.
13. Future role and method of work of the Committee.
14. Space and global health.
15. Use of nuclear power sources in outer space.
16. Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union.
17. General exchange of views on dark and quiet skies for science and society.
18. Draft provisional agenda for the sixty-first session of the Scientific and Technical Subcommittee.
19. Report to the Committee on the Peaceful Uses of Outer Space.

C. General statements

[To be inserted]

D. National reports

13. The Subcommittee took note with appreciation of the reports by Member States (see [A/AC.105/1271](#), [A/AC.105/1271/Add.1](#) and [A/AC.105/1271/Add.2](#)) and the conference room paper (A/AC.105/C.1/2023/CRP.5) submitted for its consideration under agenda item 3, entitled “General exchange of views and introduction of reports submitted on national activities”. The Subcommittee recommended that the Secretariat continue to invite Member States to submit annual reports on their space activities.

E. Symposium

14. Pursuant to the agreement reached by the Subcommittee at its forty-fourth session, in 2007 ([A/AC.105/890](#), annex I, para. 24), and by the Committee on the Peaceful Uses of Outer Space at its sixty-fifth session (see [A/77/20](#), para. 192), a symposium organized by COSPAR covering different space applications supporting climate action and related data-driven decision-making was held on 14 February 2023.

15. The symposium, entitled “Space observation contributions supporting climate action”, was moderated by Pascale Ehrenfreund, President of COSPAR. The speakers were Ralph Kahn of the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center, Kate Kelvin of NASA, Edward Blanchard Wrigglesworth of the University of Washington (Seattle, United States), Anny Cazenave of the Laboratory of Space Geophysical and Oceanographic Studies, Angelica Tarpanelli of the National Research Council of Italy, C.K. Shum of Ohio

State University, Nancy French of Michigan Technological University and Aneesh Subramaian of the University of Colorado Boulder.

16. The Subcommittee noted with satisfaction that the symposium had contributed to the work of the Subcommittee and to raising awareness of issues concerning space activities supporting climate action.

F. Adoption of the report of the Scientific and Technical Subcommittee

17. After considering the items before it, the Subcommittee, at its [...] meeting, on [...], adopted its report to the Committee on the Peaceful Uses of Outer Space, containing its views and recommendations, as set out in the paragraphs below.

III. Space technology for sustainable socioeconomic development

18. In accordance with General Assembly resolution [77/121](#), the Subcommittee considered agenda item 5, entitled “Space technology for sustainable socioeconomic development”.

19. The representatives of Austria, Brazil, China, France, India, Indonesia, Italy, Japan, Luxembourg, Mexico, Pakistan, the Russian Federation, the United Kingdom and Venezuela (Bolivarian Republic of) made statements under agenda item 5. Statements were also made by the observers for CANEUS International, CEOS and World Space Week Association. During the general exchange of views, statements relating to the item were made by representatives of other member States.

20. The Subcommittee had before it the following:

(a) Report on the United Nations/Republic of Korea Space for Women expert meeting: access and participation of women and girls in the space sector, held in Daejeon, Republic of Korea, from 16 to 19 August 2022 ([A/AC.105/1273](#));

(b) Conference room paper containing the report on the United Nations/Austria World Space Forum 2022 “Sustainability in space for sustainability on Earth” ([A/AC.105/C.1/2022/CRP.25](#)).

21. The Subcommittee heard the following scientific and technical presentations:

(a) “2023 Space4Women expert meeting”, by the representatives of Canada;

(b) “Space technology in Egypt”, by the representative of Egypt;

(c) “Africa-Japan CubeSat Cooperation Workshop and future collaboration in Africa”, by the representative of Japan;

(d) “Space development of Paraguay”, by the representative of Paraguay;

(e) “Millimetron Observatory: the future of millimetre astronomy”, by the representative of the Russian Federation;

(f) “Caucasian Mountain Observatory: a new scientific educational centre of the Lomonosov Moscow State University”, by the representative of the Russian Federation;

(g) “The Lunar Commerce Portfolio report: main results”, by observers for the Moon Village Association;

(h) “What cyberprotection for space technologies? A technical study on safety norms”, by the observer for SGAC;

(i) “World Space Week 2022: space and sustainability—outreach activities for the promotion of space sustainability”, by the observer for the World Space Week Association.

22. The Subcommittee noted the value of space technology and applications, as well as of space-derived data and information, for sustainable development, including in terms of improving the formulation and subsequent implementation of policies and programmes of action relating to environmental protection, land and water management, the development of degraded land and wastelands, urban and rural development, marine and coastal ecosystems, health care, climate change, disaster risk reduction and emergency response, energy, infrastructure, navigation, transport and logistics, rural connectivity, seismic monitoring, natural resources management, snow and glaciers, biodiversity, agriculture and food security.
23. The Subcommittee also noted in that context the information provided by States on their use of space-based platforms and satellite systems in support of sustainable socioeconomic development, as well as actions and programmes aimed at increasing society's awareness and understanding of the applications of space science and technology for meeting development needs, and on cooperation activities aimed at building capacity through education and training on the use of space science and technology applications for sustainable development.
24. The Subcommittee agreed that the Chair of the Subcommittee should provide a contribution, highlighting the contribution of space science, technology and applications to sustainable socioeconomic development, to the high-level political forum on sustainable development to be convened under the auspices of the General Assembly in 2023.
25. [*Text on the proposal by the Chair of the Subcommittee to be inserted*]
26. Some delegations expressed the view that it was necessary to advance the space-related discussions also at the Summit of the Future, to be held in 2024.
27. The view was expressed that it was necessary to increase the sharing and transfer of knowledge and space technology related to socioeconomic development in order to enhance space-related benefits for all humankind, as well as the awareness of youth and the private sector, as a form of inclusiveness.
28. The Subcommittee noted that the Committee and its subcommittees, with the support of the Office for Outer Space Affairs, had a fundamental role to play in promoting international cooperation and capacity-building in support of socioeconomic development.
29. The Subcommittee noted that initiatives that encourage women and girls to pursue education in science, technology, engineering and mathematics ("STEM subjects") and raise awareness with regard to career opportunities and the importance of gender equality and the empowerment of women in the space sector were important and in direct support of the Sustainable Development Goals.
30. In accordance with paragraph 10 of General Assembly resolution [77/121](#), the Working Group of the Whole was reconvened, with Prakash Chauhan (India) as Chair.
31. At its [...] meeting, on [...] February, the Subcommittee endorsed the report of the Working Group of the Whole, which is contained in annex I to the present report.
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