A/76/20

United Nations

Report of the Committee on the Peaceful Uses of Outer Space

Sixty-fourth session
(25 August–3 September 2021)

General Assembly
Official Records
Seventy-sixth Session
Supplement No. 20

General Assembly
Official Records
Seventy-sixth Session
Supplement No. 20

Report of the Committee on the Peaceful Uses of Outer Space

Sixty-fourth session
(25 August–3 September 2021)

United Nations • New York, 2021

Note

Symbols of United Nations documents are composed of letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

[13 September 2021]

Contents

Chapter I

Introduction

1. The Committee on the Peaceful Uses of Outer Space held its sixty-fourth session in Vienna from 25 August to 3 September 2021, in a hybrid format (in person and online). The officers of the Committee were as follows:

Chair	Marius-Ioan Piso (Romania)
First Vice-Chair	Francis Chizea (Nigeria)
Second Vice-Chair/Rapporteur	Nicolás Botero Varón (Colombia)

A. Meetings of subsidiary bodies

2. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-eighth session in Vienna from 19 to 30 April 2021, in a hybrid format, with Natália Archinard (Switzerland) as Chair. The report of the Subcommittee was before the Committee (A/AC.105/1240).

3. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space held its sixtieth session in Vienna from 31 May to 11 June 2021, also in a hybrid format, with Aoki Setsuko (Japan) as Chair. The report of the Subcommittee was before the Committee (A/AC.105/1243).

B. Adoption of the agenda

4. At its opening meeting, the Committee adopted the following agenda:

1. Opening of the session.
2. Adoption of the agenda.
3. Statement by the Chair.
4. General exchange of views.
5. Ways and means of maintaining outer space for peaceful purposes.
6. Report of the Scientific and Technical Subcommittee on its fifty-eighth session.
7. Report of the Legal Subcommittee on its sixtieth session.
8. Space and sustainable development.
9. Spin-off benefits of space technology: review of current status.
10. Space and water.
11. Space and climate change.
12. Use of space technology in the United Nations system.
13. Future role and method of work of the Committee.
14. Space exploration and innovation.
15. “Space2030” agenda.
16. Other matters.
17. Report of the Committee to the General Assembly.

C. Membership

5. In accordance with General Assembly resolutions 1472 A (XIV), 1721 E (XVI), 3182 (XXVIII), 32/196 B, 35/16, 49/33, 56/51, 57/116, 59/116, 62/217, 65/97, 66/71, 68/75, 69/85, 71/90, 72/77 and 74/82 and decisions 45/315, 67/412, 67/528, 70/518 and 73/517, the Committee on the Peaceful Uses of Outer Space was composed of the following 95 States: Albania, Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Belarus, Belgium, Benin, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chad, Chile, China, Colombia, Costa Rica, Cuba, Cyprus, Czechia, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Finland, France, Germany, Ghana, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Lebanon, Libya, Luxembourg, Malaysia, Mauritius, Mexico, Mongolia, Morocco, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Singapore, Slovakia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Venezuela (Bolivarian Republic of) and Viet Nam.

D. Attendance

6. Representatives of the following 76 States members of the Committee attended the session: Algeria, 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, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kenya, Luxembourg, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Oman, Pakistan, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Singapore, Slovakia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Turkey, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay and Venezuela (Bolivarian Republic of).

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. Observers for the Economic and Social Commission for Asia and the Pacific of the Secretariat, the Food and Agriculture Organization of the United Nations, the International Telecommunication Union (ITU), the United Nations Environment Programme, the Office for Disarmament Affairs of the Secretariat and the World Meteorological Organization attended the session.

9. The session was attended by observers for the following intergovernmental organizations having permanent observer status with the Committee: Asia-Pacific Space Cooperation Organization (APSCO), European Organization for Astronomical Research in the Southern Hemisphere, European Space Agency (ESA), European Telecommunications Satellite Organization, Inter-Islamic Network on Space Sciences and Technology and International Organization of Space Communications (Intersputnik).

10. The session was also attended by observers for the following non-governmental organizations having permanent observer status with the Committee: CANEUS International, European Space Policy Institute, For All Moonkind, Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation, International Astronautical Federation (IAF), International Astronomical Union (IAU), International Law Association (ILA), International Organization for Standardization

(ISO), International Space University, Moon Village Association (MVA), National Space Society (NSS), Prince Sultan bin Abdulaziz International Prize for Water (PSIPW), Scientific Committee on Solar-Terrestrial Physics (SCOSTEP), Secure World Foundation, Space Generation Advisory Council (SGAC) and University Space Engineering Consortium-Global (UNISEC-Global).

11. A list of representatives of States members of the Committee, United Nations entities and other organizations attending the session is contained in A/AC.105/2021/INF/1.

E. General statements

12. Statements were made by representatives of the following States members of the Committee during the general exchange of views: Algeria, Argentina, Australia, Austria, Azerbaijan, Belarus, Belgium, Brazil, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechia, Dominican Republic, Egypt, Finland, France, Germany, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Israel, Italy, Japan, Kenya, Luxembourg, Malaysia, Mexico, Netherlands, New Zealand, Nigeria, Norway, Pakistan, Paraguay, Peru, Philippines, Poland, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Singapore, Slovakia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Turkey, Ukraine, United Arab Emirates, United Kingdom, United States and Venezuela (Bolivarian Republic of). The representative of Costa Rica made a statement on behalf of the Group of 77 and China. The representative of the European Union, in its capacity as observer, made a statement on behalf of the European Union and its member States. Further statements were made by the observers for APSCO, the European Telecommunications Satellite Organization, For All Moonkind, the International Astronautical Federation, the Inter-Islamic Network on Space Sciences and Technology, the International Space University, the Moon Village Association, the National Space Society, SGAC, the Secure World Foundation and UNISEC-Global.

13. At the 770th meeting, on 25 August, the Chair delivered a statement in which he stressed the importance of the promotion and further enhancement of the role of the Committee as a forum for fostering dialogue and cooperation. He emphasized that the coronavirus disease (COVID-19) pandemic had influenced all major human activities and affected space-related local and global matters, and that, despite the extraordinary situation, the development of space activities had continued and space had offered effective tools for relief and management. In that regard, the Committee and its Subcommittees had managed to make progress in their collective work.

14. The Chair warmly welcomed the Dominican Republic, Rwanda and Singapore as the newest members of the Committee, which brought the membership of the Committee to 95 member States. The Chair also welcomed the Moon Village Association as the newest international non-governmental organization with observer status with the Committee.

15. At the same meeting, the Director of the Office for Outer Space Affairs made a statement in which she reviewed the work carried out by the Office. She stressed that the situation regarding the COVID-19 pandemic in 2020 and 2021 had led the Office to maximize its capacity in using virtual platforms and alternative outreach mechanisms. The demand for services that the Office provided to Member States continued to expand, from legal advisory services to guidance on space object registration and hands-on capacity-building, through several cross-cutting programmatic activities carried out in close partnership with Member States and other actors. She underlined current and upcoming activities of the Office in partnership with a variety of stakeholders, in particular for the benefit of developing countries.

16. The Committee recalled that 12 April 2021 had marked the sixtieth anniversary of the first-ever human space flight, by the Soviet cosmonaut Yuri Gagarin, which had opened the way for space exploration for the benefit of all humanity. In that connection, the Committee also recalled that the General Assembly, in its

resolution 65/271, had declared 12 April as the International Day of Human Space Flight to celebrate the beginning of the space era for humankind, thereby reaffirming the important contribution of space science and technology to achieving sustainable development goals and increasing the well-being of States and peoples, as well as ensuring the realization of their aspiration to maintain outer space for peaceful purposes.

17. The Committee noted with regret the passing of Raimundo González Aninat of Chile, who had served as Chair of the Committee, First Vice-Chair of the Committee, Second Vice-Chair/Rapporteur of the Committee and Chair of the Legal Subcommittee and had for many years been an active contributor to the work of the Committee as a whole.

18. The Committee heard the following presentations:

(a) "'Sky pollution': how artificial light and satellite networks are impacting our night skies and research", by the representative of Austria;

(b) "The Chilean space programme, opportunities for cooperation and development", by the representative of Chile;

(c) "Interference in global navigation satellite systems and joint solutions", by the representative of China;

(d) "Progress and international cooperation: China manned space programme", by the representative of China;

(e) "Inter-Agency Space Debris Coordination Committee (IADC) activities overview and latest updates of IADC documents", by the representative of Germany;

(f) "Recent Indian space missions", by the representative of India;

(g) "UNISEC-Global initiative on government policies in support of space education", by the observer for UNISEC-Global;

(h) "Artemis Programme, heliophysics science and instruments on Gateway", by the representative of the United States and the observer for ESA;

(i) "Perspectives from the United States on coexistence (and sustainability) of large satellite constellations and (terrestrial) astronomy", by the representatives of the United States.

19. The Committee agreed that, together with its subcommittees and with the support of the Office for Outer Space Affairs, it remained the unique international forum tasked with promoting international cooperation in the exploration and peaceful use of outer space, and that it offered an appropriate environment to discuss matters that had a great impact on the development of States for the betterment of humankind.

20. The Committee noted that space activities had intensified significantly in recent years, with more and more actors entering the space arena and more objects being placed in outer space.

21. Some delegations expressed the view that the international community should make further efforts and explore all possible ways and means of making full use of the benefits of the Committee and its subcommittees in order to achieve the common objectives of all nations on space-related issues.

22. Some delegations expressed the view that cooperation on the construction of the planned international lunar research station initiated by the Russian Federation and China would provide new opportunities for all interested States to further explore outer space and celestial bodies.

23. Some delegations expressed the view that international and private sector cooperation was critically important to the Artemis programme, which planned to land the first woman and the first person of colour on the Moon.

24. Some delegations expressed the view that the challenges caused by the placement of large constellations and megaconstellations in outer space, including the serious congestion of the low Earth orbit which prevented developing countries from having equitable access to that orbit, the over-occupation of frequencies assigned by ITU, the risk of impinging on national sovereignty and regulatory inconsistencies, should be addressed with priority in the work of the Committee.

25. Some delegations expressed the view that a continuous dialogue in a multilateral forum such as the Committee provided the best possibilities for fruitful and effective international cooperation, coordination and information-sharing, which were necessary for ensuring the peaceful use and exploration of outer space.

26. Some delegations expressed the view that developing countries were increasingly engaged in space activities and actively participating in the discussions of the Committee, and while some countries had reached important milestones in space activities, others were only starting to develop their own space programmes and policies. In line with the objective of enhancing international cooperation in outer space activities, it was vital to promote the broader participation of developing countries through active assistance from advanced spacefaring nations and the Office for Outer Space Affairs. Therefore, capacity-building and technical assistance were key factors for expanding the abilities of those working in the field, enabling them to gain expertise and knowledge from more advanced spacefaring nations.

27. Some delegations expressed the view that international cooperation in the peaceful use and exploration of outer space continued to be in the interest of all countries, irrespective of their degree of development, without discrimination of any kind and with due regard for the principle of equality.

28. Some delegations expressed the view that ongoing international collaboration and coordination to develop common practices and standards would be particularly essential and would also contribute to transparency and the building of trust between the various actors in space, thereby reducing the risk of accidents and potential conflicts.

29. The view was expressed that the work of the new Working Group on the Long-term Sustainability of Outer Space Activities could be organized into two workflows, an operational and technical one, and a policy and regulatory one, which could be addressed in a sequential and non-simultaneous manner. The delegation expressing that view also expressed the view that the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee would require enhanced international coordination, for instance, in the areas of information exchange, the uniformization of standards and possible new international mechanisms.

30. The Committee welcomed the publication by the Office for Outer Space Affairs of its *Annual Report 2020*, which contained a comprehensive account of the Office's activities, cooperation and partnership programmes, achievements in 2020 and plans for the future.

31. The Committee noted with appreciation the two exhibitions presented in the Rotunda of the Vienna International Centre in conjunction with its sixty-fourth session: an exhibition organized by the Russian Federation to mark the sixtieth anniversary of Yuri Gagarin's space flight, which was visited by the Minister of Foreign Affairs of the Russian Federation, Sergey Lavrov, on 26 August 2021; and an exhibition on the Artemis Accords, organized by the United States.

32. The Committee expressed its appreciation for the organization of the following events during the session:

(a) "Thematic discussion of astronauts and cosmonauts on the historical aspects and prospects for the development of manned programmes organized by the State Space Corporation 'Roscosmos'", organized by the Russian Federation;

(b) “The Global Expert Group on Sustainable Lunar Activities (GEGSLA): status/perspectives”, organized by the Moon Village Association;

(c) “Promoting Space Sustainability: awareness-raising and capacity-building related to the implementation of the LTS Guidelines”, co-organized by the United Kingdom and the Office for Outer Space Affairs;

(d) “Announcement of opportunity for the second round of the fellowship programme on the Large Diameter Centrifuge Hypergravity Experiment Series (HyperGES)”, co-organized by ESA and the Office for Outer Space Affairs;

(e) “Space4Climate Action”, organized by Austria;

(f) “Space sustainability: stakeholder engagement study”, co-organized by the United Arab Emirates and the Office for Outer Space Affairs;

(g) “Space ecosystem building in emerging space countries”, organized by Slovakia.

F. Adoption of the report of the Committee

33. After considering the various items before it, the Committee, at its 785th meeting, on 3 September 2021, adopted its report to the General Assembly containing the recommendations and decisions set out below.

Chapter II

Recommendations and decisions

A. Ways and means of maintaining outer space for peaceful purposes

34. In accordance with General Assembly resolution 75/92, and paragraph 15 of General Assembly resolution 74/82, the Committee continued its consideration, as a matter of priority, of ways and means of maintaining outer space for peaceful purposes and its consideration of the broader perspective of space security and associated matters that would be instrumental in ensuring the safe and responsible conduct of space activities, including ways to promote international, regional and interregional cooperation to that end.

35. The representatives of Canada, Chile, China, India, Indonesia, Iran (Islamic Republic of), Japan, Mexico, the Russian Federation, Thailand, the United States and Venezuela (Bolivarian Republic of) made statements under this item. During the general exchange of views, statements relating to the item were also made by other member States.

36. The Committee agreed that through its work in the scientific, technical and legal fields, as well as through the promotion of international dialogue and the exchange of information on various topics relating to the exploration and use of outer space, it had a fundamental role to play in ensuring that outer space was maintained for peaceful purposes.

37. Some delegations expressed the view that it was the responsibility of all spacefaring nations to preserve and promote the benefits of outer space for all, through the advances made in space technology and its applications.

38. Some delegations expressed the view that in order to ensure the sustainable and peaceful use of outer space, it was crucial that outer space activities were carried out in accordance with international law, rules, regulations and norms.

39. Some delegations expressed the view that transparency and confidence-building measures were essential to ensuring the peaceful uses of outer space. The same delegations referred to the report of the Group of Governmental Experts on

Transparency and Confidence-Building Measures in Outer Space Activities (A/68/189) of 2013 and encouraged States to implement its recommendations and appropriate measures.

40. Some delegations welcomed the report of the Secretary-General on reducing space threats through norms, rules and principles of responsible behaviours (A/76/77) of 2021, emphasizing the importance of an international dialogue on furthering voluntary measures for responsible operations in outer space.

41. Some delegations expressed the view that the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space were foundational for the safe and responsible use of outer space.

42. Some delegations expressed the view that although the Committee was not a forum dedicated to disarmament in outer space, it still played – and should strengthen – a unique and fundamental role in global governance and international cooperation on outer space. The delegations expressing that view were also of the view that the Committee's work in a wide range of fields ensured the peaceful use of outer space and provided a strong disincentive to risk of an arms race and the militarization of outer space and that therefore the Committee's work complemented and supported other forums for preventing an arms race in outer space.

43. Some delegations reaffirmed that issues specifically associated with the prevention of an arms race in outer space and the use of outer space for national security activities and related matters were more appropriately discussed in forums whose mandates focused on those issues, such as the Conference on Disarmament, the Disarmament Commission and the First Committee of the General Assembly.

44. The view was expressed that all discussion on the peaceful uses of outer space should be conducted within the framework of the 1967 Outer Space Treaty and other principles of international space law, in a context of international cooperation. The same delegation also expressed the view that it welcomed all initiatives and proposals on the exploration and use of outer space in the interest of all humankind.

45. The view was expressed that the threat of militarization of outer space underscored the importance of international dialogue and negotiation aimed at creating legally binding norms for transparency and confidence-building because non-legally binding measures did not sufficiently address the threat of an arms race in outer space. The delegation expressing that view also found it fundamental that legally binding measures should focus on reaffirming the shared interest of outer space for peaceful use and purposes, in accordance with the existing principles of international law.

46. Some delegations reaffirmed that it was crucial to prevent an arms race in outer space and the placement of weapons of any kind in outer space, and called upon all States, in particular those with major space capabilities, to contribute actively to the peaceful use of outer space in order to prevent its militarization and to refrain from placing weapons of any kind in outer space or any other action contrary to that objective. The delegations expressing that view were also of the view that the preservation of the outer space environment in the long term required the commitment of the international community to ensuring that no weapons were ever placed in outer space.

47. Some delegations reiterated that the draft treaty on the prevention of the placement of weapons in outer space and of the threat of use of force against space objects, prepared by China and the Russian Federation, should be given more consideration as it paved the way for ensuring the use of outer space for peaceful purposes.

48. Some delegations expressed the view that norms could create the climate of confidence that was necessary to develop future legally binding measures governing space and, in that context, welcomed the report of the Secretary-General on reducing

space threats through norms, rules and principles of responsible behaviours (A/76/77) because it deepened the discussion on space norms.

49. Some delegations expressed the view that safety and security in outer space could be strengthened through the implementation of the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space and the Guidelines for the Long-term Sustainability of Outer Space Activities and welcomed the work of the Working Group on the Long-term Sustainability of Outer Space Activities, established under the Scientific and Technical Subcommittee, to further the discussion on the sustainable use of outer space.

50. The view was expressed that legal frameworks, technology, research and the development of national capacity were important pillars for efficiently tackling the issue of space debris, given the real risk for the daily lives of people and the use of outer space in a safe manner.

51. The view was expressed that participating in the activities of the Inter-Agency Space Debris Coordination Committee (IADC) relating to space debris mitigation, which involved undertaking analysis of space object proximity awareness and collision avoidance, would enhance international cooperation in the peaceful uses of outer space.

52. The Committee noted that the eighth African Leadership Conference on Space Science and Technology for Sustainable Development, on the theme "Prospects and challenges of African space development", had been hosted at the Economic Commission for Africa, in Addis Ababa, from 2 to 4 December 2019. The Congress would in future be held on a biennial basis; the South African National Space Agency would host the next congress in Durban, South Africa, by the end of October 2021.

53. The Committee also noted that the Asia-Pacific Regional Space Agency Forum (APRSAF) meeting, "APRSAF Online 2020", was held in November 2020, on the theme "Sharing space visions beyond distance", at which heads of space agencies shared their visions of space initiatives in the challenging era of the COVID-19 pandemic, and that this year, Viet Nam and Japan would host the twenty-seventh session of APRSAF online from 30 November to 3 December 2021, on the theme "Expand space innovation through diverse partnerships".

54. The Committee noted that, at the fourteenth meeting of the Council of APSCO, in December 2020, the Council had approved the Development Plan of Cooperative Activities of APSCO for the period 2021–2030. The strategic objectives of the Plan were focused on enhancing the capabilities of APSCO member States, as well as other countries in the Asia-Pacific region, in the peaceful uses of outer space, including in the domains of space science, and space technology and its applications.

55. The Committee recommended that, at its sixty-fifth session, in 2022, consideration of the item on ways and means of maintaining outer space for peaceful purposes should be continued, on a priority basis.

B. Report of the Scientific and Technical Subcommittee on its fifty-eighth session

56. The Committee took note with appreciation of the report of the Scientific and Technical Subcommittee on its fifty-eighth session (A/AC.105/1240), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution 75/92.

57. The Committee expressed its appreciation to Natália Archinard (Switzerland) for her able leadership as Chair during the fifty-eighth session of the Subcommittee.

58. The representatives of Algeria, Austria, Chile, China, Germany, Indonesia, Italy, Japan, Mexico, the Russian Federation, Switzerland, the United States and Venezuela (Bolivarian Republic of) made statements under the item. The representative of Costa Rica made a statement on behalf of the Group of 77 and China. During the general

exchange of views, statements relating to the item were also made by other member States.

59. The Committee heard the following presentations:

(a) “Results of the OPS-SAT nanosatellite mission”, by the representative of Austria;

(b) “China geophysical field satellite programme: achievements and prospects”, by the representative of China;

(c) “Space environment effects on spacecraft and how to respond”, by the representative of China;

(d) “IADC activities overview and latest updates of IADC documents”, by the representative of Germany;

(e) “JAXA’s initiative to mitigate space debris for safety satellite operations: RABBIT (risk avoidance assist tool based on debris collision probability)”, by the representatives of Japan;

(f) “ClearSpace-1: On-orbit services to enable a thriving, resilient and sustainable space industry”, by the representative of Switzerland.

1. United Nations Programme on Space Applications

(a) Activities of the United Nations Programme on Space Applications

60. The Committee took note of the discussion of the Subcommittee under the item on the activities of the United Nations Programme on Space Applications, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 40–61).

61. The Committee welcomed the fiftieth anniversary of the United Nations Programme on Space Applications, which was established in 1971, and, in that connection, the Committee recognized the unique and continuous contribution made by the Programme in promoting and supporting the capacity-building activities of Member States, in particular emerging spacefaring nations. The Committee also noted with appreciation the video commemorating the fiftieth anniversary of the Programme.

62. The Committee took note of the activities of the Programme carried out in 2020 and 2021 and those planned for the remainder of 2021, as presented in the report of the Subcommittee (A/AC.105/1240, paras. 57–59).

63. The Committee noted that the Government of Japan, through the Kyushu Institute of Technology, had continued to provide long-term fellowship programme opportunities for students from developing countries under the United Nations/Japan Long-term Fellowship Programme on Nanosatellite Technologies.

64. The Committee noted that the Programme continued to implement the Access to Space for All initiative, which was focused on developing the capacity of Member States to access the benefits of space and which offered to its partners research opportunities to develop the technologies needed to send hardware into space, access to unique ground and orbital facilities for experiments in microgravity and hypergravity, in space exploration and access to space data and training on their use, including the use of astronomical data.

65. The Committee noted the Drop Tower Experiment Series, which was a fellowship programme of the Office for Outer Space Affairs undertaken in collaboration with the Centre of Applied Space Technology and Microgravity and the German Aerospace Center (DLR), in which students could study microgravity by performing experiments in a drop tower. In the seventh cycle of the fellowship programme, a team from Universidad Católica Boliviana, Plurinational State of Bolivia, had been awarded the fellowship through a competitive selection process.

66. The Committee noted the continued collaboration between the Office for Outer Space Affairs and the Government of Japan, in collaboration with the Japan Aerospace Exploration Agency (JAXA), in implementing the United Nations/Japan Cooperation Programme on CubeSat Deployment from the International Space Station Japanese Experiment Module (Kibo), known as "KiboCUBE". The second winner under the Programme, a team from Guatemala, had launched its first CubeSat, Quetzal-1, in April 2020. CubeSats developed by teams from Mauritius, Indonesia and the Republic of Moldova, which had been selected for the third and fourth rounds of the Programme, would be launched after the first two rounds. The final selection for the fifth round had been announced on 10 December 2020, with the Central American Integration System (SICA) selected as the winner.

67. The Committee noted the continued cooperation between the Office for Outer Space Affairs and the Government of China (through the China Manned Space Agency) in implementing the United Nations/China cooperation on the utilization of the China space station initiative under the United Nations Programme on Space Applications and the Human Space Technology Initiative. The first opportunity to conduct scientific experiments on board the China space station had been open to all Member States, in particular developing countries. As an outcome of the application and selection process, nine projects were selected for implementation on board the China space station in the first cycle. The nine projects involved 23 institutions from 17 Member States in the Asia-Pacific region, Europe, Africa, North America and South America.

68. The Committed noted the Hypergravity Experiment Series (HyperGES) fellowship programme, established through a collaboration between the United Nations and ESA under the Access to Space for All initiative. The programme facilitates access to the distinctive infrastructure at the European Space Research and Technology Centre, namely, the Large Diameter Centrifuge Facility. In the first cycle of the programme, a team from Thailand will study the effects of gravity on watermeal in space. Watermeal is the smallest and fastest-growing plant on Earth and could serve as a source of food and oxygen for future space exploration.

69. Some delegations expressed their appreciation to the Office for Outer Space Affairs for the manner in which the activities of the United Nations Programme on Space Applications had been implemented, in particular as the funds available in 2020 were limited. Those delegations were also of the view that the financial resources available to the Programme remained limited, and they appealed to the donor community to support the Programme through voluntary contributions.

70. The Committee requested the Office for Outer Space Affairs to continue to work with the Scientific and Technical Subcommittee on defining the priorities of the Programme.

71. The Committee noted that the Office for Outer Space Affairs continued to closely collaborate with the regional centres for space science and technology education, affiliated to the United Nations, namely the African Regional Centre for Space Science and Technology Education – in English Language, the African Regional Centre for Space Science and Technology – in French Language; the Centre for Space Science and Technology Education in Asia and the Pacific, the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean, the Regional Centre for Space Science and Technology Education for Western Asia and the Regional Centre for Space Science and Technology Education in Asia and the Pacific (China). In that connection, the Committee noted with appreciation that the host countries of the regional centres for space science and technology education, affiliated to the United Nations, were providing significant financial and in-kind support to the centres.

(b) International Satellite System for Search and Rescue

72. The Committee noted with satisfaction that the International Satellite System for Search and Rescue (COSPAS-SARSAT) currently had 43 member States and

2 participating organizations and that other entities were also interested in becoming associated with the programme in the future. The Committee noted with appreciation that the worldwide coverage of emergency beacons, carried on vessels and aircraft and by individual users around the world, had been made possible by the space segment provided by Canada, France, India, the Russian Federation and the United States, along with the European Organization for the Exploitation of Meteorological Satellites and the European Union, as well as by the ground-segment contributions of 30 additional countries. The Committee also noted that in 2019, alert data from the system had helped to save 2,774 lives in at least 1,032 search and rescue events worldwide.

2. Space technology for sustainable socioeconomic development

73. The Committee took note of the discussion of the Subcommittee under the item on space technology for sustainable socioeconomic development, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 67–76).

74. The Committee took note of the report of the Working Group of the Whole of the Scientific and Technical Subcommittee, reconvened under the chairmanship of Umamaheswaran R. (India) as Acting Chair (A/AC.105/1240, annex I).

75. Some delegations expressed the view that space science and technology and their applications were essential to effectively addressing current and future challenges to social and economic development and sustainability, such as natural disasters, food security, climate change and natural resource security, and noted that space activities were crucial to realizing the Sustainable Development Goals, in particular as part of efforts to support sustainable economic growth, improve quality of life and manage the global environment. The delegations expressing that view were also of the view that it was important to ensure that the Office was equipped with the necessary resources to assist a greater number of countries in gaining access to the benefits of space science and technology and their applications.

3. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment

76. The Committee took note of the discussion of the Subcommittee under the item on matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 77–85).

77. The Committee noted that remote sensing data were used at the international and regional levels through initiatives of States to support sustainable socioeconomic development, in particular for the benefit of developing countries.

78. In the course of the discussions, delegations reviewed cooperation programmes at the national and international levels and highlighted key areas in which remote sensing data cooperation programmes played a critical role in well-informed decision-making. Examples included mapping and border security control, land-use planning, property rights identification and related natural resources management, forestry management and hyperspectral mineral and vegetation mapping tools, meteorology and severe weather forecasting, tele-education and tele-health, disaster management, environmental protection, oceanographic monitoring, climate change, air quality monitoring for aerosols and pollutants, including monitoring of essential climate variables and ozone loss, promoting sustainable development, ecosystems management, hydrology, sea surface temperature and level monitoring, glacier mapping and studies, crop and soil monitoring for irrigation and groundwater detection, precision agriculture, space weather monitoring and early warning systems and animal movement monitoring.

79. The Committee noted the strong commitment of many Member States to supporting important initiatives such as the Group on Earth Observations and the

Committee on Earth Observation Satellites, which played an important role in improving the sharing of remote sensing data and worldwide access to data.

4. Space debris

80. The Committee took note of the discussion of the Subcommittee under the item on space debris, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 86–109).

81. The Committee endorsed the decisions and recommendations of the Subcommittee on the item (A/AC.105/1240, paras. 108–109).

82. The Committee 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, was instrumental for the mitigation of space debris, and urged those countries that had not yet done so to consider implementing the Guidelines on a voluntary basis.

83. The Committee noted with appreciation that many States and international intergovernmental organizations were already implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines of the Committee and/or the IADC Space Debris Mitigation Guidelines, and that other States had developed their own space debris mitigation standards based on those guidelines.

84. In addition, the Committee noted that some States were using the Space Debris Mitigation Guidelines of the Committee and/or the IADC Space Debris Mitigation Guidelines, the European Code of Conduct for Space Debris Mitigation, ISO standard 24113:2011 (Space systems: space debris mitigation requirements) and ITU recommendation ITU-R S.1003 (Environmental protection of the geostationary-satellite orbit) as reference points in their regulatory frameworks for national space activities. The Committee also noted that some States had cooperated in the space surveillance and tracking support framework funded by the European Union and in the ESA space situational awareness programme.

85. The Committee also noted that an increasing number of States were adopting concrete measures to mitigate space debris, including the improvement of the design of launch vehicles and spacecraft, the de-orbiting of satellites, passivation, life extension, end-of-life operations and the development of specific software and models for space debris mitigation.

86. The Committee further 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.

87. The Committee took note with concern of the issue of space debris and the challenges that the proliferation of space debris posed to the future exploration and use of outer space.

88. Some delegations expressed the view that the issue of space debris should be addressed in a manner that would not jeopardize the development of the space capabilities of developing countries.

89. Some delegations expressed the view that it was important that new space actors were not burdened as a result of the historical activities of established space actors.

90. Some delegations expressed the view that addressing the challenges posed by the placement of megaconstellations in low Earth orbit, including those related to the sustainable use of orbit and frequencies, should be made a priority in the work of the Committee.

91. The view was expressed that, since orbital debris was the consequence of the past and ongoing operations of major spacefaring nations, those nations should accept the primary responsibility both for alleviating the situation and for assisting the developing and emerging spacefaring nations technically and financially in meeting space debris mitigation guidelines.

92. The view was expressed that transparency in the licensing of space remediation activities, such as on-orbit servicing and orbital debris removal, would contribute to ensuring transparency and confidence-building in space activities.

93. The view was expressed that a worldwide network for the laser ranging of space debris should be developed to improve orbital predictions, as it would be useful for avoidance manoeuvres, conjunction warnings and removal missions.

5. Space-system-based disaster management support

94. The Committee took note of the discussion of the Subcommittee under the item on space-system-based disaster management support, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 110–125).

95. The Committee noted the importance of space-based information for disaster management and emergency response, utilizing remote sensing data and Earth observation satellites for developing multi-hazard early warning systems and disaster impact analysis for all types of natural disasters, including for monitoring the COVID-19 pandemic.

96. The Committee welcomed the activities organized by the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER), which supported the development of capacity to use all types of space-based information in support of the full disaster management cycle. In that regard, the Committee took note of the UN-SPIDER activities carried out in 2020, with the continued support of its network of partners, as well as the benefits of the UN-SPIDER knowledge portal (www.un-spider.org), a web-based platform for information, communication and process support that fostered the exchange of information, the sharing of experiences, capacity-building and technical advisory support and services.

97. The Committee noted that UN-SPIDER had expanded its network of regional support offices by integrating two additional organizations into the network: the Federal University of Santa Maria in Brazil and the Ben-Gurion University of the Negev in Israel. In that regard, the Committee noted with appreciation that the UN-SPIDER regional support offices greatly contributed to the programme's activities in the areas of capacity-building, institutional strengthening and knowledge management.

98. Some delegations expressed the view that in order to strengthen disaster preparedness and emergency response at the national level, the Office for Outer Space Affairs should increase the capacity-building activities of UN-SPIDER by offering more technical advisory missions and training programmes, in particular to developing countries.

99. The Committee noted with appreciation the voluntary contributions made to the Office for Outer Space Affairs and its UN-SPIDER programme by member States, including the cash contributions from China and Germany, and again encouraged other member States and permanent observers to provide to the activities and programmes of the Office, including UN-SPIDER, all necessary support on a voluntary basis, including increased financial support, to enable it to better respond to Member States' requests for assistance and to fully carry out its workplan in the coming years.

6. Recent developments in global navigation satellite systems

100. The Committee took note of the discussion of the Subcommittee under the item on recent developments in global navigation satellite systems (GNSS), as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 126–146).

101. The Committee noted with appreciation the work of the International Committee on Global Navigation Satellite Systems (ICG), the latest developments in the field of GNSS technologies and new GNSS applications.

102. The Committee noted the work of ICG aimed at creating an interoperable, multi-GNSS space service volume, which would enable improved navigation for future operations beyond geosynchronous earth orbit (GEO) to lunar missions.

103. The Committee noted with appreciation the efforts by the Office for Outer Space Affairs in promoting the use of GNSS through its capacity-building and information dissemination initiatives, in particular in developing countries, as well as the role of the Office as the executive secretariat of ICG in coordinating the planning of meetings of ICG and its Providers' Forum, in conjunction with sessions of the Committee and its subsidiary bodies, and encouraged the Office to strengthen discussion and cooperation on the protection of the GNSS spectrum from harmful interference.

104. The Committee noted that the fifteenth meeting of ICG and the twenty-fourth meeting of the Providers' Forum would be hosted by the Office for Outer Space Affairs and be held in Vienna from 27 September to 1 October 2021.

7. Space weather

105. The Committee took note of the discussion of the Subcommittee under the item on space weather, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 147–165).

106. The Committee noted that space weather, which was caused by solar variability, was an international concern owing to the potential threat it posed to space systems, human space flight and ground- and space-based infrastructures upon which society increasingly relied. As such, it needed to be addressed in a global manner, through international cooperation and coordination, in order to be able to predict potentially severe space weather events and mitigate their impact to guarantee the long-term sustainability of outer space activities.

107. The Committee noted a number of national and international activities undertaken in the fields of research, training and education to improve the scientific and technical understanding of the adverse effects of space weather and thus strengthen global resilience to it.

108. The Committee noted with appreciation that the Expert Group on Space Weather of the Scientific and Technical Subcommittee had held meetings on the margins of the fifty-eighth session of the Subcommittee, in 2021, as well as during the intersessional period. The Committee welcomed and looked forward to the Expert Group submitting a draft final report for consideration at the fifty-ninth session of the Subcommittee, to be held in 2022.

8. Near-Earth objects

109. The Committee took note of the discussion of the Subcommittee under the item on near-Earth objects, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 166–184).

110. The Committee noted with appreciation the work done by the International Asteroid Warning Network (IAWN) and the Space Mission Planning Advisory Group (SMPAG) with a view to ensuring that all nations, in particular developing countries with limited capacity to predict and mitigate an impact of a near-Earth object, were aware of potential threats.

111. The Committee noted the importance of national efforts and activities aimed at developing capabilities in the discovery, observation, early warning and mitigation of potentially hazardous near-Earth objects that contributed to strengthening international collaboration and information-sharing, and in that regard highlighted the importance of contributing to the work of IAWN and SMPAG.

112. The Committee noted that IAWN had conducted a coordinated campaign to observe the potentially hazardous asteroid 99942 Apophis, intended to test global observation and modelling capabilities, with contributions by the signatories to the IAWN Statement of Intent and others, that SMPAG had proposed the idea of performing an exercise aimed at testing its real-world capabilities to support planetary defence in the case of an actual threat, and that the Italian Space Agency would organize a splinter meeting to evaluate the proposal, define timelines for the exercise and identify contributing agencies.

113. The Committee noted that, should a credible threat of impact be identified by the worldwide network of astronomical observatories, the best information available on that threat would be provided by IAWN and disseminated to all Member States through the Office for Outer Space Affairs.

114. The Committee noted that further information on the meetings of IAWN and SMPAG, to which the Office for Outer Space Affairs served as the permanent secretariat, had been made available on their web pages, at http://iawn.net and http://smpag.net, respectively.

115. The Committee noted the successful holding of the seventh International Academy of Astronautics (IAA) Planetary Defence Conference, hosted by the Office for Outer Space Affairs, in cooperation with ESA, in a virtual format from 26 to 30 April 2021, and that the eighth IAA Planetary Defence Conference was planned to be hosted by the Office for Outer Space Affairs at the Vienna International Centre in 2023, in cooperation with its partners and the host country, Austria.

116. The Committee noted that the next meeting of the IAWN steering committee was planned to be held in October 2021, in a virtual format, and that the next meeting of SMPAG was planned to be held on 13 and 14 October 2021, also in a virtual format.

9. Long-term sustainability of outer space activities

117. The Committee took note of the discussion by the Subcommittee under the item on the long-term sustainability of outer space activities, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 185–211).

118. The Committee noted the continued collaboration between the Office for Outer Space Affairs and the Government of the United Kingdom in implementing the project “Promoting Space Sustainability: awareness-raising and capacity-building related to the implementation of the LTS Guidelines”.

119. The Committee had before it the following:

(a) Conference room paper by Australia, Belgium, Canada, France, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Nigeria and the United States containing a proposal for the terms of reference, methods of work and workplan for the establishment of the new Working Group on the Long-term Sustainability of Outer Space Activities of the Scientific and Technical Subcommittee (A/AC.105/2021/CRP.10);

(b) Conference room paper by China containing a proposal for the terms of reference, methods of work and workplan for the newly established Working Group on the Long-term Sustainability of Outer Space Activities (A/AC.105/2021/CRP.17);

(c) Conference room paper by the Chair of the Working Group on the Long-term Sustainability of Outer Space Activities containing a proposal for the terms of reference, methods of work and workplan for the Working Group on the Long-Term Sustainability of Outer Space Activities of the Scientific and Technical Subcommittee (A/AC.105/2021/CRP.18);

(d) Non-paper by the Chair of the Working Group on the Long-term Sustainability of Outer Space Activities entitled “Elements for the terms of reference, methods of work and workplan of the Working Group on the Long-term Sustainability of Outer Space Activities”;

(e) Non-paper by the Chair of the Working Group on the Long-term Sustainability of Outer Space Activities entitled “Terms of reference, methods of work and workplan of the Working Group on the Long-Term Sustainability of Outer Space Activities of the Scientific and Technical Subcommittee as of 30 August 2021 (a.m.)”;

(f) Non-paper by the Chair of the Working Group on the Long-term Sustainability of Outer Space Activities entitled “Draft text to ensure continuity of work”.

120. The Committee welcomed the election, at the fifty-eighth session of the Subcommittee, of Umamaheswaran R. (India) as the Chair of the Working Group on the Long-term Sustainability of Outer Space Activities (A/AC.105/1240, para. 195).

121. The Committee noted that the Working Group had met both formally, with the benefit of interpretation services, and informally during the present session.

122. The Committee noted that the Working Group had agreed that a list of Working Group points of contact should be established to facilitate faster and more effective dissemination of information, to be used in addition to formal means of communication, and requested the Secretariat to send a formal request, following the present session, to States members of the Committee to nominate points of contact, preferably before the end of September 2021.

123. The Committee also noted that the Working Group had agreed that it would hold online informal consultations from 22 to 24 November 2021 to advance discussions on its terms of reference, methods of work and workplan and requested the Chair and the Secretariat to make the necessary arrangements for such informal consultations.

124. The Committee further noted that the Working Group had agreed that it would hold an intersessional meeting on 3 and 4 February 2022 to further advance agreement on its terms of reference, methods of work and workplan and requested the Chair and the Secretariat to make the necessary arrangements for such a meeting.

125. The Committee noted that the Working Group had agreed that any comments on the proposal contained in conference room paper A/AC.105/2021/CRP.18 that were submitted to the Chair and the Secretariat by 18 October 2021 would be consolidated into a draft document, which would form the basis of discussion at the informal consultations in November 2021. That document would be available in English only and would be shared with Working Group members by no later than 1 November 2021. The Chair, with the support of the Secretariat, was requested to have the document resulting from the informal consultations in November 2021 translated into all the official languages of the United Nations for further consideration at the intersessional meeting in February 2022.

10. Future role and method of work of the Committee

126. The Committee took note of the discussion of the Subcommittee under the item on the future role and method of work of the Committee, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 212–233).

127. The Committee recalled its decision, made at its sixty-second session, to introduce a regular item entitled “Future role and method of work of the Committee” on the agendas of both Subcommittees to allow for discussion of cross-cutting issues (A/74/20, para. 321 (h)).

128. The Committee endorsed the decisions and recommendations of the Subcommittee on the item (A/AC.105/1240, para. 233, and annex I).

11. Use of nuclear power sources in outer space

129. The Committee took note of the discussion of the Subcommittee under the item on the use of nuclear power sources in outer space, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 234–246).

130. The Committee endorsed the report and recommendations of the Subcommittee and the Working Group on the Use of Nuclear Power Sources in Outer Space, reconvened under the chairmanship of Sam A. Harbison (United Kingdom), including the Working Group’s multi-year workplan, which was extended by one year (A/AC.105/1240, para. 246, and annex II).

131. The Committee acknowledged that some States and an international intergovernmental organization were developing, or considering developing, legal and regulatory instruments on the safety of the use of nuclear power sources in outer

space, taking into account the contents and requirements of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space and of the Safety Framework for Nuclear Power Source Applications in Outer Space.

132. The Committee stressed the value and importance of voluntarily implementing the Safety Framework for Nuclear Power Source Applications in Outer Space, which had been developed by the Subcommittee together with the International Atomic Energy Agency.

133. The view was expressed that, given the renewed interest in the use of nuclear power sources in outer space, there should be an ongoing mechanism for a structured exchange on the topic at the multilateral level, and that the Working Group on the Use of Nuclear Power Sources in Outer Space should be maintained, as it served as an important forum for information and international exchange on the use of such technology.

134. The view was expressed that the use of nuclear energy sources in Earth orbit was inadmissible in the light of the reported failures and possible collisions that pose a threat to humanity and the Earth's environment; and that the Safety Framework was not sufficient for clearly establishing responsibilities and for addressing any critical situation arising from irresponsible practices.

135. The Committee noted that an informal meeting of the Working Group had been held under the chairmanship of Mr. Harbison on 1 September 2021, on the margins of the sixty-fourth session of the Committee, to advance the work of the Working Group under the extended multi-year workplan.

136. The Committee also noted that the Working Group would hold a virtual intersessional meeting mid-October 2021 and requested the Chair and the secretariat to make the necessary arrangements for that intersessional meeting.

137. The Committee further noted that documents, to be prepared by the delegation of the United States and ESA, would be made available for consideration by the Working Group at its intersessional meeting to be held in October 2021, containing considerations to advance the safety of space nuclear power source applications, including draft terms of reference for a proposed international expert group to be established by and composed of representatives of Member States and other relevant international governmental organizations. Once established, the expert group could meet on the margins of sessions of the Scientific and Technical Subcommittee and provide the Subcommittee with updates on its work, with no financial implications for the budget of the United Nations.

138. The Committee further noted that further discussions were planned for the intersessional meeting of the Working Group to be held in October 2021 on document A/AC.105/C.1/L.390, entitled “Updated preliminary analysis of how the Principles Relevant to the Use of Nuclear Power Sources in Outer Space contribute to the safety of space nuclear power source applications”, related to the second objective of its current workplan.

12. Space and global health

139. The Committee took note of the discussion of the Subcommittee under the item on space and global health, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 247–256).

140. The Committee endorsed the recommendations and decisions on the item made by the Subcommittee and its Working Group on Space and Global Health, convened under the chairmanship of Antoine Geissbühler (Switzerland), including the recommendations regarding policies, experiences and practices in the use of space science and technology for global health (A/AC.105/1240, para. 256, and annex III).

141. The Committee noted the broad array of activities relevant to space and global health and acknowledged the contribution of space science, space technology and space applications to the prevention and control of diseases, the promotion of human

health and welfare, the addressing of global health issues, the advancement of medical research, the advancement of health practices and the provision of health-care services to individuals and communities, including in rural areas with limited access to health care.

142. The Committee noted the vital role of space science, space technology and space applications in addressing the COVID-19 pandemic, and their critical role in support of contact tracing, the identification of affected areas, modelling the spread of the disease and monitoring its transmission, connectivity for remote working, tele-health and communication, as well as methods of coping with social isolation.

13. 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

143. The Committee took note of the discussion of the Subcommittee under the item on the 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 ITU, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 257–269).

144. Some delegations expressed the view that the geostationary orbit was a limited natural resource that was at risk of becoming saturated, thereby threatening the sustainability of space activities in that environment, that its use should be rationalized, and that it should be made available to all States, under equitable conditions, irrespective of their current technical capabilities, taking into particular account the needs of developing countries and the geographical position of certain countries.

14. Draft provisional agenda for the fifty-ninth session of the Scientific and Technical Subcommittee

145. The Committee took note of the discussion of the Subcommittee under the item on the draft provisional agenda for its fifty-ninth session, as reflected in the report of the Subcommittee (A/AC.105/1240, paras. 270–274).

146. The Committee endorsed the recommendations and decisions on the item made by the Subcommittee (A/AC.105/1240, paras. 273–274).

147. On the basis of the deliberations of the Subcommittee at its fifty-eighth session, the Committee agreed that the following items should be considered by the Subcommittee at its fifty-ninth session:

1. Adoption of the agenda.
2. Election of the Chair.
3. Statement by the Chair.
4. General exchange of views and introduction of reports submitted on national activities.
5. United Nations Programme on Space Applications.
6. Space technology for sustainable socioeconomic development.
7. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth’s environment.
8. Space debris.

9. Space-system-based disaster management support.

10. Recent developments in global navigation satellite systems.

11. Space weather.

12. Near-Earth objects.

13. Long-term sustainability of outer space activities.

14. Future role and method of work of the Committee.

15. Use of nuclear power sources in outer space.

(Work for 2022 as reflected in the extended multi-year workplan of the Working Group on the Use of Nuclear Power Sources in Outer Space (A/AC.105/1240, para. 246, and annex II, para. 5)

16. Space and global health.

(Work for 2022 as reflected in the multi-year workplan of the Working Group on Space and Global Health (A/AC.105/1202, annex III, para. 5, and appendix I))

17. 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.

(Single issue/item for discussion)

18. Draft provisional agenda for the sixtieth session of the Scientific and Technical Subcommittee.

19. Report to the Committee on the Peaceful Uses of Outer Space.

148. The Committee agreed that, in accordance with the agreement reached at the forty-fourth session of the Scientific and Technical Subcommittee, held in 2007 (A/AC.105/890, annex I, para. 24), the industry symposium to be organized by the Office for Outer Space Affairs at the fifty-ninth session of the Subcommittee should be on the topic of dark and quiet skies.

C. Report of the Legal Subcommittee on its sixtieth session

149. The Committee took note with appreciation of the report of the Legal Subcommittee on its sixtieth session (A/AC.105/1243), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution 75/92.

150. The representatives of Algeria, Austria, China, Finland, Germany, Greece, Indonesia, Italy, Japan, Luxembourg, Mexico, the Russian Federation, the United States and Venezuela (Bolivarian Republic of) made statements under the item. Statements were also made by the representative of Costa Rica on behalf of the Group of 77 and China. During the general exchange of views, statements relating to the agenda item were also made by other member States.

151. The Committee expressed its appreciation to Aoki Setsuko (Japan) for her able leadership as Chair during the sixtieth session of the Subcommittee.

1. Information on the activities of international intergovernmental and non-governmental organizations relating to space law

152. The Committee took note of the discussion of the Subcommittee under the item entitled “Information on the activities of international intergovernmental and

non-governmental organizations relating to space law", as reflected in the report of the Subcommittee (A/AC.105/1243, paras. 35–45).

153. The Committee noted the important role of intergovernmental and international non-governmental organizations and their contribution to its endeavours to promote the development, strengthening and furtherance of understanding of international space law.

154. The Committee also noted that it was important to continue to exchange information among the Subcommittee and intergovernmental and international non-governmental organizations on recent developments in the area of space law. It endorsed the recommendation of the Subcommittee that such organizations should again be invited to report on their activities relating to space law to the Subcommittee at its sixty-first session.

2. Status and application of the five United Nations treaties on outer space

155. The Committee took note of the discussion of the Subcommittee under the item on the status and application of the five United Nations treaties on outer space, as reflected in the report of the Subcommittee (A/AC.105/1243, paras. 46–58).

156. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, which had been reconvened under the chairmanship of Bernhard Schmidt-Tedd (Germany) (A/AC.105/1243, annex I, paras. 10–14).

157. The view was expressed that while the five United Nations treaties on Outer Space were the cornerstone of international space law, they needed to be further developed and complemented to be able to respond to new developments.

158. The Committee welcomed the completion of the guidance document under UNISPACE+50 thematic priority 2, "Legal regime of outer space and global governance: current and future perspectives", in the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space and thanked the chair for his efforts in that regard.

159. The view was expressed that the five United Nations treaties on outer space and related principles and instruments of the General Assembly constituted the cornerstone of international space law.

160. Some delegations expressed the view that new legal challenges arising from the continuous development of space science and technology, such as those relating to space resource exploitation, large constellations, space debris remediation and the emergence of new space actors, had to be addressed on a multilateral basis.

161. Some delegations expressed the view that the five United Nations treaties on outer space, together with the relevant principles endorsed by the General Assembly, were to be considered the multilateral foundation of international space law.

162. The view was expressed that the five United Nations treaties on outer space should be strongly supported and promoted in order to achieve their universal application and that the treaties provided a solid framework for outer space activities. The delegation expressing that view also expressed the view that new legally binding instruments developed by the Committee should not impose an undue burden on States in the conduct of their space activities.

163. Some delegations expressed the view that the Artemis Accords would guide exploration of the Moon and Mars and beyond. The delegations expressing that view also expressed the view that the Artemis Accords were entirely grounded in the Outer Space Treaty and that they demonstrated that signatories were committed to behaving responsibly and transparently as they expanded the human presence beyond the Earth.

3. Matters relating to the definition and delimitation of outer space and the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union

164. The Committee took note of the discussion of the Subcommittee under the agenda item on matters relating to the definition and delimitation of outer space and the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of ITU, as reflected in the report of the Subcommittee (A/AC.105/1243, paras. 59–89).

165. The Committee endorsed the recommendations of the Subcommittee and its Working Group on the Definition and Delimitation of Outer Space, reconvened under the chairmanship of André João Rypl (Brazil) as Acting Chair in the absence of the Chair, José Monserrat Filho (Brazil) (A/AC.105/1243, paras. 61–62, and annex II, para. 9).

166. Some delegations expressed the view that the lack of a definition or delimitation of outer space brought about legal uncertainty concerning the applicability of space law and air law and that matters concerning State sovereignty and the boundary between airspace and outer space needed to be clarified in order to reduce the possibility of disputes among States.

167. Some delegations expressed the view that the geostationary orbit, as a limited natural resource clearly in danger of saturation, needed to be used rationally and should be made available to all States, irrespective of their current technical capacities. That would give States access to the geostationary orbit under equitable conditions, taking into account, in particular, the needs and interests of developing countries and the geographical position of certain countries and taking into account the processes of ITU and relevant norms and decisions of the United Nations.

168. Some delegations expressed the view that the geostationary orbit was not to be subject to national appropriation, by means of use, repeated use or occupation or by any other means, and that its utilization was to be governed by applicable international law.

169. The view was expressed that the geostationary orbit should be viewed as a specific area and special part of outer space that needed specific technical and legal governance and thus should be regulated by a sui generis regime.

4. National legislation relevant to the peaceful exploration and use of outer space

170. The Committee took note of the discussion of the Legal Subcommittee under the item on national legislation relevant to the peaceful exploration and use of outer space, as reflected in the report of the Subcommittee (see A/AC.105/1243, paras. 90–102).

171. The Committee noted with satisfaction that some States members of the Committee continued to implement, or were considering initiating the implementation of, the recommendations on national legislation relevant to the peaceful exploration and use of outer space contained in General Assembly resolution 68/74 entitled “Recommendations on national legislation relevant to the peaceful exploration and use of outer space”.

172. The Committee noted various activities of member States to review, strengthen, develop or draft national space laws and policies, as well as establish or reform their governance of national space activities.

173. The Committee agreed that the general exchange of information on national legislation relevant to the peaceful exploration and use of outer space allowed States to gain an understanding of existing national regulatory frameworks and to share experiences on national practices, and that the results achieved under the agenda item

were highly useful for both developing and developed States when establishing or improving their national regulatory frameworks.

174. In that connection, the Committee took note of the working paper on the status of the national space legislation of countries of the APRSAF National Space Legislation Initiative (A/AC.105/C.2/L.318), submitted by Australia, India, Indonesia, Japan, Malaysia, the Philippines, the Republic of Korea, Thailand and Viet Nam, and expressed appreciation for the efforts by the study group.

5. Capacity-building in space law

175. The Committee took note of the discussion of the Subcommittee under the item on capacity-building in space law, as reflected in the report of the Subcommittee (see A/AC.105/1243, paras. 103–118).

176. The Committee endorsed the recommendation of the Subcommittee on this agenda item (see A/AC.105/1243, para. 118).

177. The Committee agreed that, in order to build the national capacity necessary to ensure that the increasing number of participants in space activities complied with international space law, international cooperation in research, training and education in space law was essential.

178. The Committee noted with appreciation that a number of national, regional and international efforts to build capacity in space law were being undertaken by governmental and non-governmental entities.

179. The Committee noted with satisfaction that the Space Law for New Space Actors project was aimed at providing support to enhance capacity in developing national space law and policy. In that context, the Chilean technical advisory mission held online from 13 to 16 October 2020 and the introductory technical advisory mission focusing on Africa and space, held online on 7 December 2020, were welcomed.

180. The Committee noted with appreciation the United Nations/Turkey/APSCO Conference on Space Law and Policy held in Istanbul, Turkey, from 23 to 26 September 2019 and the United Nations/Economic Commission for Africa Conference on Space Law and Policy held online from 8 to 10 December 2020. It noted that those events had contributed to capacity-building in space law by connecting space law experts, practitioners and representatives of government, industry and civil society.

181. The Committee noted that the APSCO/ESA/China Institute of Space Law workshop on regional cooperation schemes on space law and policy would be held from 6 to 8 September 2021 in Hainan Province, China.

6. Future role and method of work of the Committee

182. The Committee took note of the discussion of the Subcommittee under the item on the future role and method of work of the Committee, as reflected in the report of the Subcommittee (A/AC.105/1243, paras. 119–141).

183. The Committee noted that the regular item entitled “Future role and method of work of the Committee” was also being considered by the Scientific and Technical Subcommittee.

7. General exchange of information and views on legal mechanisms relating to space debris mitigation and remediation measures, taking into account the work of the Scientific and Technical Subcommittee

184. The Committee took note of the discussion of the Legal Subcommittee under the item on the general exchange of information and views on legal mechanisms relating to space debris mitigation and remediation measures, taking into account the work of the Scientific and Technical Subcommittee, as reflected in the report of the Legal Subcommittee (A/AC.105/1243, paras. 142–174).

185. The Committee endorsed the decisions of the Subcommittee as reflected in its report (A/AC.105/1243, para. 174).

186. The Committee noted with satisfaction that the endorsement by the General Assembly, in its resolution 62/217, of the Space Debris Mitigation Guidelines of the Committee was a crucial step in providing guidance on ways to mitigate the problem of space debris, and urged all Member States of the United Nations to consider voluntary implementation of the Guidelines.

187. The Committee noted with satisfaction that some States had taken measures to implement internationally recognized guidelines and standards relating to space debris through relevant provisions in their national legislation.

188. The view was expressed that it was necessary to strengthen space debris mitigation measures through the elaboration of procedures to be carried out in the conduct of space activities such as launching, de-orbiting and surveillance, and by integrating the Guidelines into binding national legislation for addressing space debris.

189. The view was expressed that detailed discussion in the framework of the Legal Subcommittee was necessary both to develop more detailed guidelines and to address new developments, such as space debris remediation through on-orbit servicing and the risk of large constellations generating space debris.

190. The Committee welcomed recent updates and additions to the compendium of space debris mitigation standards adopted by States and international organizations and encouraged States and relevant organizations to contribute to the compendium.

8. General exchange of information on non-legally binding United Nations instruments on outer space

191. The Committee took note of the discussion within the Subcommittee under the item on the general exchange of information on non-legally binding United Nations instruments on outer space, as reflected in the report of the Subcommittee (A/AC.105/1243, paras. 175–191).

192. The Committee took note of the compendium on mechanisms adopted by States and international organizations in relation to non-legally binding United Nations instruments on outer space, which the Office had made available on a dedicated web page, and invited States members of the Committee and international intergovernmental organizations having permanent observer status with the Committee to continue to submit responses to the Secretariat for inclusion in the compendium.

193. The Committee noted the importance of the development of non-legally binding United Nations instruments that complemented and supported the existing United Nations treaties on outer space, were responsive to new developments in space activities and contributed to ensuring safety and security in outer space. In that regard, the Committee noted the importance of the Guidelines for the Long-Term Sustainability of Space Activities of the Committee and the work of the new Working Group on the Long-term Sustainability of Outer Space Activities.

194. Some delegations recalled the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries, noting that it was an important instrument for the promotion of international cooperation with a view to maximizing the benefits of the utilization of space applications for all States, and called on all spacefaring nations to contribute to promoting and fostering international cooperation on an equitable basis.

9. General exchange of views on the legal aspects of space traffic management

195. The Committee took note of the discussion of the Subcommittee under the item entitled “General exchange of views on the legal aspects of space traffic

management", as reflected in the report of the Subcommittee (A/AC.105/1243, paras. 192–216).

196. The Committee endorsed the recommendation by the Legal Subcommittee to continue to consider the item, in particular in view of the increasingly complex and congested space environment resulting from the growing number of objects in outer space, the diversification of actors in outer space and the increase in space activities, which were phenomena that posed a challenge to the safety and sustainability of space activities.

197. The view was expressed that space traffic management could be considered with a view to developing and implementing a set of technical and regulatory provisions to promote safe access to outer space, the safety of operations in outer space, and the safe return from outer space, free from physical or radio frequency interference. The delegation expressing this view was also of the view that analysis of both the legal and technical aspects of space traffic management was important, as was the need for strengthened coordination between the Scientific and Technical and Legal Subcommittees on space traffic management and interrelated topics.

198. Some delegations expressed the view that the international community must strive towards a legally binding instrument for space traffic management negotiated within the framework of the United Nations, and that both private and public stakeholders should be included in the development of any related strategies and regulatory frameworks.

199. The view was expressed that the Legal Subcommittee was the right forum to contribute to the shaping of an international intergovernmental space traffic management regime, that a starting point for discussions could be the analysis of different international legal instruments with a view to their usefulness for future space traffic management, and that, in this connection, a multi-tiered hybrid system of binding and non-binding rules could be promoted.

200. The view was expressed that the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space should be supported in the context of discussions on a space traffic management framework, accompanied by an emphasis on efforts to share information and coordinate internationally to increase space situational awareness on a global scale.

10. General exchange of views on the application of international law to small-satellite activities

201. The Committee took note of the discussion of the Subcommittee under the item entitled "General exchange of views on the application of international law to small-satellite activities", as reflected in the report of the Subcommittee (A/AC.105/1243, paras. 217–232).

202. The Committee noted with satisfaction that the item continued to be on the agenda of the Subcommittee and agreed that its inclusion helped to address and raise awareness of issues relating to the use of small satellites by various actors.

203. The Committee noted that activities involving small satellites, regardless of the size of those satellites, should be carried out in compliance with the existing international regulatory framework, which included international space law.

204. Some delegations expressed the view that an ad hoc legal regime or any other mechanism that could impose limitations on the design, building, launch or use of space objects should not be created.

205. Some delegations expressed the view that the elaboration of provisions on small satellites, including the possibility of an ad hoc legal regime, could be considered. Such provisions could address the operations of small satellites, including the consideration of ways and means of ensuring the rational and equitable use of the low Earth orbit and frequency spectrum.

206. Some delegations expressed the view that further consideration should be given to how to register satellites in megaconstellations and small satellites.

11. General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources

207. The Committee took note of the discussion of the Subcommittee under the item entitled "General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources", as reflected in the report of the Subcommittee (A/AC.105/1243, paras. 233–258).

208. The Committee welcomed the establishment of a working group under this agenda item of the Subcommittee and congratulated the Chair, Andrzej Misztal (Poland), and the Vice-Chair, Steven Freeland (Australia), on their election in that regard.

209. The view was expressed that greater interaction with the Scientific and Technical Subcommittee was of utmost importance given that pressing regulatory topics, in particular in the exploration, exploitation, and utilization of space resources, had technical aspects that must be taken into account when developing appropriate governance approaches and instruments.

210. Some delegations expressed the view that the development of space resource activities should be guided by universally accepted international rules, in particular the basic principles of international space law established under the Outer Space Treaty, and that, together with the other United Nations treaties and instruments that make up the international legal regime applicable to States with regard to space activities, the current legal framework needed to be taken into account by the new working group established under that agenda item of the Legal Subcommittee.

211. Some delegations expressed the view that the exploration, exploitation and utilization of space resources was to be coordinated at the international, multilateral level in order to ensure the continued peaceful and sustainable use of outer space and to ensure that such activities were carried out in accordance with international law and for the benefit and in the interests of all States.

212. The view was expressed that the dynamic emergence of the private sector in outer space activities was an undeniable fact that created new challenges to be addressed at the multilateral level. The delegation expressing that view also expressed the view that it was essential to mitigate legal risk and uncertainty for such private sector actors, that a specific international legal framework would be a decisive factor in encouraging the substantial investment needed to ensure the viability of large commercial projects that would be indispensable for the exploration and utilization of space resources, and that, in that regard, a well-defined scope of work and timeline for the working group on space resources would signal an important step forward in providing the legal certainty needed by the private sector to pursue those activities.

213. The view was expressed that equitable access and collaboration on the exploration, exploitation and utilization of space resources was essential to ensuring that developing countries were not left behind spacefaring nations. The delegation expressing that view also expressed the view that the multilateral approach to the regulation of space resource activities should be focused on avoiding conflicts between actors, should be inclusive of all States and should go into effect prior to the actual exploration, exploitation and utilization of space resources.

214. The view was expressed that rules and norms for activities in the exploration and utilization of space resources should ensure the sustainability of future space exploration missions by all players, including industry, and should ensure that such activities were consistent with existing international norms. The delegation expressing that view also expressed the view that discussions should evolve in a way that reflected current technology, the economic realities and needs of industry and national space exploration programmes.

215. The view was expressed that all actors should have equitable access to the resources of space without discrimination and within a framework of mutually agreed rules and standards, and that the Subcommittee was the most appropriate forum to develop an appropriate legal framework in that regard.

216. Some delegations expressed the view that, in developing a framework for the exploration, exploitation and utilization of space resources, the working group on space resources could consider existing work that had been done in that area, such as the building blocks for the development of an international framework on space resource activities developed by the Hague International Space Resources Governance Working Group, available as a working paper in all official languages of the United Nations (A/AC.105/C.2/L.315).

217. The view was expressed that the development of an international framework for the exploration, exploitation and utilization of space resources should include a discussion of the full range of issues related to the development of an independent international regime to govern such activities. The delegation expressing that view also expressed the view that it was particularly relevant to take into account the principles of the Outer Space Treaty, including the principle that the Moon and other celestial bodies were to be used for exclusively peaceful purposes and the prohibition on national appropriation of any part of the Moon or other celestial bodies, which should form the basis for discussion on the issues related to the governance of space resource activities.

218. The view was expressed that the development of an international framework for the exploration, exploitation and utilization of space resources should take into consideration how the framework would apply to all actors involved in such activities. The delegation expressing that view also expressed the view that such a framework must be guided by the goals of ensuring the predictability and legal security of such activities, serving as a tool for fostering investments and constituting a research-friendly environment, and that sustainability and benefit-sharing must play a central role in the development of a potential new legal model.

219. The view was expressed that a priority of the working group established under the agenda item was to develop a set of principles for the exploration, exploitation and utilization of space resources, and that that set of principles could form the basis of an international treaty or treaties on the issue, should an appropriate decision be made to develop such an instrument.

220. At its sixtieth session, the Legal Subcommittee requested the Chair and Vice-Chair of the working group under the agenda item on the general exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources to continue consultations in the intersessional period on the mandate, terms of reference and method of work of the working group so that the Committee could further consider those matters at its sixty-fourth session (see A/AC.105/1243, para. 257).

221. At the sixty-fourth session, the working group held four formal and informal meetings, the results of which were endorsed by the Committee at its 782nd meeting and are set out in annex III to the present report.

12. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its sixty-first session

222. The Committee took note of the discussion of the Subcommittee under the item on proposals to the Committee for new items to be considered by the Legal Subcommittee at its sixty-first session, as reflected in the report of the Subcommittee (A/AC.105/1243, paras. 259–274).

223. On the basis of the deliberations of the Subcommittee at its sixtieth session, the Committee agreed that the following substantive items should be considered by the Subcommittee at its sixty-first session:

Regular items

1. Adoption of the agenda.
2. Election of the Chair.
3. Statement by the Chair.
4. General exchange of views.
5. Information on the activities of international intergovernmental and non-governmental organizations relating to space law.
6. Status and application of the five United Nations treaties on outer space.
7. Matters relating to:
   (a) The definition and delimitation of outer space;
   (b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union.
8. National legislation relevant to the peaceful exploration and use of outer space.
9. Capacity-building in space law.
10. Future role and method of work of the Committee.

Items under workplans

11. General exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources.

    (see para. 221 and annex III to the present report)

Single issues/items for discussion

12. General exchange of information and views on legal mechanisms relating to space debris mitigation and remediation measures, taking into account the work of the Scientific and Technical Subcommittee.
13. General exchange of information on non-legally binding United Nations instruments on outer space.
14. General exchange of views on the legal aspects of space traffic management.
15. General exchange of views on the application of international law to small-satellite activities.

New items

16. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its sixty-second session.

224. The Committee agreed that the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space and the working group established under the agenda item entitled “General exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources” should be reconvened at the sixty-first session of the Subcommittee.

225. The Committee endorsed the agreement reached by the Subcommittee that the International Institute of Space Law and the European Centre for Space Law should again be invited to organize a symposium, to be held during the sixty-first session of the Subcommittee.

D. Space and sustainable development

226. The Committee considered the agenda item entitled “Space and sustainable development”, in accordance with General Assembly resolution 75/92.

227. The representatives of China, Egypt, France, Germany, India, Indonesia, Iran (Islamic Republic of), Italy, Japan, Kenya, Mexico, the Russian Federation, South Africa, Sri Lanka, the United Arab Emirates, the United Kingdom and the United States made statements under the item. The observers for the Economic and Social Commission for Asia and the Pacific and CANEUS International also made statements. During the general exchange of views, representatives of other member States also made statements relating to the item.

228. The Committee had before it the following:

(a) Report on the United Nations/Austria World Space Forum: “Access to Space4All”, held in Vienna from 18 to 22 November 2019 (A/AC.105/1219);

(b) Report on the United Nations/United Arab Emirates World Space Forum: “Space for our future”, held online on 9 and 10 December 2020 (A/AC.105/1235).

229. The Committee heard the following presentations under the item:

(a) “SAOCOM Mission and international cooperation”, by the representative of Argentina;

(b) “Space-based information for emergency management in China”, by the representative of China;

(c) “Copernicus in support of conflict prevention in the Sahel: environment-related transhumance patterns and the risk for farmer-herder conflicts”, by the representatives of Germany;

(d) “Update on India’s Earth observation systems”, by the representative of India;

(e) “The European Union Space Programme: overview”, by the observer for the European Union;

(f) “A global initiative to integrate indigenous knowledge with frontier and space technology-based solutions for building a diverse and resilient food system”, by the observer for CANEUS International;

(g) “It is time for commercial/civil space solar power”, by the observer for the National Space Society;

(h) “Challenge accepted: unlocking the power of virtual events and digital tools for capacity-building amongst the global space generation”, by the observer for SGAC.

230. The Committee reiterated its acknowledgement of the significant role of space science and technology and their applications in the implementation of the 2030 Agenda for Sustainable Development, in particular for the Sustainable Development Goals, in the realization of the Sendai Framework for Disaster Risk Reduction 2015–2030 and in the fulfilment by States parties of their commitments to the Paris Agreement on climate change.

231. The Committee noted the value of space technology and applications, as well as of space-derived data and information, to sustainable development, including by helping in improving the formulation and implementation of policies and programmes of action relating to environmental protection, land and water management, urban and rural development, marine and coastal ecosystems, health care, climate change, disaster risk reduction and emergency response, energy, infrastructure, navigation, seismic monitoring, natural resources management, snow and glaciers, biodiversity, agriculture and food security.

232. The Committee noted with satisfaction the holding of the series of World Space Forums, organized by the Office for Outer Space Affairs in cooperation with the Governments of Austria and the United Arab Emirates.

233. The Committee took note of the information provided by States on their efforts to integrate cross-sectoral activities at the national, regional and international levels and to incorporate space-derived geospatial data and information into all sustainable development processes and mechanisms.

234. The Committee took note of the information provided by States on their actions and programmes aimed at increasing awareness and understanding in society of the applications of space science and technology for meeting development needs.

235. The Committee noted the continued role played by the International Space Station in scientific research for sustainable development.

236. The Committee noted with satisfaction the large number of outreach activities carried out by States at the regional level to build capacity through education and training in using space science and technology applications for sustainable development.

237. The Committee noted with appreciation the role played in space-related education by the regional centres for space science and technology education affiliated to the United Nations.

238. Some delegations expressed the view that the issue of space and sustainable development was multifaceted and included such aspects as the long-term sustainability of outer space activities and sustainability in space programs and economy.

239. Some delegations expressed the view that it was necessary to improve access to high-resolution Earth observation satellite data and facilitate capacity-building and institutional strengthening in all countries for the increased use of such data for sustainable development.

240. The view was expressed that the Office for Outer Space Affairs should consider hosting more international symposiums, workshops and networking events in developing countries in order to foment more discussion on the potential of space technologies in creating solutions contributing to the growth of the economy and to addressing socioeconomic challenges.

241. The Committee noted the interest expressed by the Government of Kenya to host the World Space Forums to be held from 2022 to 2024.

E. Spin-off benefits of space technology: review of current status

242. The Committee considered the agenda item entitled “Spin-off benefits of space technology: review of current status”, in accordance with General Assembly resolution 75/92.

243. The representatives of India, Mexico, the Russian Federation, the United States and Venezuela (Bolivarian Republic of) made statements under the item.

244. The Committee heard a presentation entitled “Educational satellite kit: space technology benefits”, by the representative of Egypt.

245. The Committee took note of the information provided by States on their national practices regarding spin-offs from space technology involving various actors, including the private sector and academia.

246. The Committee noted that the publication “Spinoff 2021”, issued by NASA, was available on the NASA website. The Committee expressed its gratitude to NASA for the “Spinoff” publication series, which had been made available to delegations every year since the forty-third session of the Committee, in 2000.

247. The Committee took note of innovations in numerous areas, such as health, medicine, the environment, education, electronics, communication, transport, safety, biology, chemistry, geomatics, geophysics and materials science. It further noted that many of the technologies developed for space applications and licensed by space agencies had been transferred to industries and had led to practical applications in society, in particular in the light of the COVID-19 pandemic and technology transfer with regard to relevant medical devices.

248. Some delegations expressed the view that technology transfer programmes of space agencies, in which technical know-how was transferred to relevant industries, allowed innovations to be made available to entrepreneurs, companies, academia and government agencies. The delegations expressing that view also expressed the view that those programmes had contributed to technological self-reliance, industrial growth and national development through spin-off benefits.

249. Some delegations expressed the view that remote sensing and Earth observation programmes, in particular images, data and analysis, were important for urban and agricultural planning, health, energy, food safety, the management of socio-natural risks, border surveillance, the control of illicit crops and illicit mining, logistics, the construction industry, tourism and ecology. The delegations expressing that view also expressed the view that those programmes were important for sustainable projects and helped to inform the decisions of entities affected by climate change.

250. The view was expressed that, at present, there was a significant divide between countries that had made great progress in technological development in space matters and those working to create or strengthen the sector, which was why it was necessary to further promote international cooperation, the exchange of information and research and technology transfer within the Committee.

F. Space and water

251. The Committee considered the agenda item entitled “Space and water”, in accordance with General Assembly resolution 75/92.

252. The representatives of Argentina, Canada, France, India, Indonesia, Iran (Islamic Republic of), Japan, Mexico, the Russian Federation, South Africa and the United States made statements under the item. During the general exchange of views, other member States also made statements relating to the item.

253. The Committee heard a presentation entitled “The use of satellite information in solving problems of ensuring water security”, by the representative of the Russian Federation.

254. In the course of the discussion, delegations reviewed water-related cooperation activities, giving examples of national programmes and bilateral, regional and international cooperation that demonstrated the beneficial effect of international cooperation and policies on the sharing of remote sensing data.

255. The Committee noted that water and related issues had become one of the most critical environmental problems of the twenty-first century. The Committee also noted that in order to contribute to the Sustainable Development Goals it was important to make use of space technologies, applications, practices and initiatives for space-borne observations of water.

256. The Committee noted that a large number of space-borne platforms addressed water-related issues and that space-derived data were used extensively in water management. The Committee also noted that space technology and applications, combined with non-space technologies, played an important role in addressing many water-related issues, including the observation and study of oceans and changing coastal features; global water cycles and unusual climate patterns; the mapping of surface water bodies, watercourses and transboundary basins; water volume levels in dam reservoirs; the estimated values for water quality parameters; the estimation of

snowmelt run-offs; the monitoring of ground water resources; the planning and management of reservoirs and irrigation projects; the monitoring and mitigation of the effects of floods, droughts, cyclones and lake outbursts; the monitoring of soil moisture; the reuse of agricultural drainage water; the harvesting of rain; the improvement of the timeliness and accuracy of forecasts; and the identification of emergency situations such as fires, pollution, salinization, water blooms, pipeline accidents and oil spills.

257. Some delegations expressed the view that climate change had become a crucial issue for a stable water management because it had caused serious droughts and water-related disasters at a global level.

258. The Committee took note of the holding of the United Nations/Islamic Republic of Iran Workshop on the Space Technology Applications for Drought, Flood and Water Resources Management, which was hosted by the Iranian Space Agency from 9 to 11 August 2021.

259. Some delegations expressed the view that there was a need for policy development, capacity-building, knowledge exchange, transfer of technology, access to space-based data and in situ data, and interdisciplinary thinking on the Sustainable Development Goals in order to build capacity among stakeholders to use space-based information and promote innovation to empower communities to deal with emerging risks related to water resources.

G. Space and climate change

260. The Committee considered the agenda item entitled “Space and climate change”, in accordance with General Assembly resolution 75/92.

261. The representatives of Argentina, Austria, Canada, China, Egypt, Finland, France, India, Indonesia, Japan, Mexico, the Republic of Korea, the United Kingdom and the United States made statements under the item. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

262. The Committee heard the following presentations:

(a) “The role of space in understanding climate change and informing decisions”, by the representative of the United States;

(b) “The Philippine Space Agency: using space technology in response to the changing climate”, by the representative of the Philippines;

(c) “United Arab Emirates climate change international efforts”, by the representative of the United Arab Emirates;

(d) “African development satellite: an initiative of climate change detection in Africa”, by the representative of Egypt.

263. The Committee underscored the importance of continued commitment by the global community to tackling climate change, which was one the most pressing global challenges. In that regard, the Committee noted the growing value of space-based technology in providing critical climate data to better understand and mitigate climate change and monitor implementation of the Paris Agreement, as well as the importance of space-based observations for understanding climate change. The Committee also noted the importance of space-based observations to the achievement of Sustainable Development Goal 13, on climate action.

264. The Committee noted the importance of multi-stakeholder partnerships and actions to tackle climate change taken at the national, international and multilateral levels, as well as the importance of international and regional organizations working together to understand their comparative advantages and avoid duplication. In that regard, the Committee also noted the 2019 Climate Action Summit, convened by the Secretary-General, at which Member States were expected to present specific and

realistic plans to reduce greenhouse gas emissions over the following decade with the goal of reaching zero emissions by 2050. The Committee further noted the United Nations/Austria symposium on the theme “Space applications for Sustainable Development Goal 13: climate action”, held in Graz, Austria, from 1 to 3 September 2020, as well as the upcoming United Nations/Austria World Space Forum on the theme “Space 4 climate action”, to be held from 6 to 9 December 2021 in Vienna, hosted by the Office for Outer Space Affairs.

265. The Committee also noted that the twenty-sixth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, under the presidency of the United Kingdom and in partnership with Italy, would be held from 31 October to 12 November 2021 in Glasgow, United Kingdom, with the presidency working with partner organizations and specialized bodies, such as the secretariat of the United Nations Framework Convention on Climate Change, the Group on Earth Observations and the Committee on Earth Observation Satellites, to ensure that the importance of space-based climate action was underscored at the session.

266. The Committee further noted the establishment of the Space Climate Observatory – the creation of which had been proposed by the National Centre for Space Studies of France (CNES) and approved by more than 20 space agencies in the Paris Declaration adopted at the One Planet Summit on 11 December 2017, and for which a joint declaration of interest had been signed at Le Bourget, France, on 17 June 2019 – to facilitate the mobilization of space tools for climate action and support the implementation of Paris Agreement. In that regard, the Committee noted that the main objective of the Space Climate Observatory was to produce and distribute adequate, timely and reliable data, as well as information on the impacts of climate change at the national and regional levels using space technologies, targeted measures and relevant models cross-referenced with socioeconomic indicators, in order to define and implement climate change mitigation and adaption.

267. The Committee noted that international partner agencies and organizations, including the Office for Outer Space Affairs, planned to sign the Space Climate Observatory international charter at the twenty-sixth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change.

268. The Committee also noted the proposal by Austria for the “Space 4 climate action” initiative, focused on space-based approaches to climate change and aimed at promoting, strengthening and delivering targeted capacity-building and technical advisory activities, facilitating multi-stakeholder collaboration and cooperation and promoting efforts to encourage the use of space for climate action from the local to the national and international levels. In that regard, the Committee welcomed the proposal and further noted that the initiative would bring together Member States, space agencies, United Nations entities and private sector and academic institutions to tackle climate change mitigation, adaptation and resilience. It was proposed that the initiative be implemented by the Office for Outer Space Affairs in supporting Member States in the achievement of Sustainable Development Goal 13, on climate action.

269. The Committee further noted the usefulness of satellite observations and Earth observation applications for monitoring essential climate variables and noted the benefits of using Earth observations to track changes in sea level, carbon dioxide concentrations, sea ice depletion and terrestrial snow mass and to gather data on remote areas such as deserts, oceans, the polar caps and glaciers.

270. The Committee noted a number of bilateral partnerships in climate change-related activities in the area of Earth observation, as well as space programmes at the national level that made it a high priority to build, launch and operate Earth-observation satellite systems to track the manifestations and effects of climate change.

271. The Committee also noted that it was important to support international cooperation for Earth observation, including through long-established organizations

such as WMO, the Committee on Earth Observation Satellites, the Coordination Group for Meteorological Satellites, the Global Climate Observing System, the Group on Earth Observations and APSCO.

H. Use of space technology in the United Nations system

272. The Committee considered the agenda item entitled “Use of space technology in the United Nations system”, in accordance with General Assembly resolution 75/92.

273. The representatives of Austria, Germany, India, Indonesia, Mexico and the Russian Federation made statements under the item. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

274. The Committee had before it the following:

(a) Report of the Secretary-General on coordination of space-related activities within the United Nations system: directions and anticipated results for the period 2020–2021 – megatrends and realization of the Sustainable Development Goals (A/AC.105/1230);

(b) Conference room paper containing the report on the evaluation mission to Roscosmos Corporate Academy (A/AC.105/2021/CRP.16).

275. The Committee heard the following presentations under the item:

(a) “ITU WRC-23: protection of radar frequencies”, by the representative of Germany;

(b) “Centre for space science and technology education in the Eurasian region, affiliated to the United Nations”, by the representatives of the Russian Federation.

276. The Committee noted that the thirty-ninth session of Inter-Agency Meeting on Outer Space Activities (UN-Space) had been held on 28 October 2019 at United Nations Headquarters in New York. The Committee also noted that the fifteenth open session of UN-Space had been held on 20 November 2019 as an integral part of the United Nations/Austria World Space Forum: “Access to Space4All”.

277. The Committee noted that the next report on the coordination of space-related activities within the United Nations system could focus on the use of space technologies to support climate action, mapping existing activities in the United Nations system, the mandates of the respective bodies, and identifying possible future synergies and avoiding duplication, and that the Office for Outer Space Affairs would bring this to the attention of UN-Space for the development of such a report.

278. The Committee noted with satisfaction that an evaluation mission facilitated by the Office for Outer Space Affairs to the Roscosmos Corporate Academy in Moscow took place from 10 to 13 August 2021, in accordance with the proposal by the Russian Federation to establish a centre for space science and technology education in the Eurasian region (A/AC.105/1240, para. 61). The Committee also noted that the evaluation mission had resulted in the recommendation to accept the offer of the Russian Federation to establish the regional centre hosted by the Roscosmos Corporate Academy. The Committee welcomed the progress on the establishment of the regional centre.

279. The view was expressed that it was important to ensure that no harmful interference would be caused by sharing with international mobile telecommunication systems X-band frequencies that were allocated to Earth observation satellites using radar sensing/monitoring. The delegation expressing that view encouraged States members of the Committee to conduct their own sharing and compatibility studies with a view to providing a basis for making informed decision at the next World Radiocommunication Conference.

280. The Committee noted that the fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific was scheduled to be held in October 2022, in Bali, Indonesia.

I. Future role and method of work of the Committee

281. The Committee considered the agenda item entitled “Future role and method of work of the Committee”, in accordance with General Assembly resolution 75/92.

282. The representatives of Brazil, Canada, Chile, China, France, Germany, Indonesia, Israel, Japan, Mexico, the Russian Federation, Spain, Switzerland, the United Kingdom, the United States and Venezuela (Bolivarian Republic of) made statements under the item. The observer for the European Union made a statement. The observer for IAU also made a statement. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

283. The Committee had before it a note by the Secretariat on the governance and method of work of the Committee on the Peaceful Uses of Outer Space and its subsidiary bodies (A/AC.105/C.1/L.384).

284. The Committee recalled the deliberations on the item as reflected in the report of the Committee on its sixty-second session (A/74/20, paras. 312–323), the report of the Scientific and Technical Subcommittee on its fifty-eighth session (A/AC.105/1240, paras. 212–233) and the report of the Legal Subcommittee on its sixtieth session (A/AC.105/1243, paras. 119–141).

285. Some delegations expressed the view that decision-making based on consensus and the “Vienna spirit” should be maintained.

286. The view was expressed that the development and implementation of future procedures that allow debate on topics of interest and decision-making would make it possible to achieve greater efficiency and dynamics in the work of the Committee.

287. The view was expressed that it was necessary for the Committee to improve and enrich its working methods, strengthen its own leading role and adopt more effective means to interact with non-governmental processes within the framework of the rules of procedure and existing practices in order to adapt to changing realities and needs.

288. The view was expressed that attempts to transfer the discussion of important topics on the space agenda to parallel platforms with limited membership would undermine the international authority of the Committee.

289. The view was expressed that the Committee should increase its interaction with the main committees of the United Nations system to allow for greater advice and cooperation on issues such as nuclear energy sources, disarmament and law.

290. Some delegations expressed the view that issues associated with both the prevention of an arms race in outer space and the use of outer space for national security activities were more appropriately discussed in forums with mandates specifically focused on those issues, such as the Conference on Disarmament, the Disarmament Commission and the Disarmament and International Security Committee (First Committee) of the General Assembly.

291. The view was expressed that consideration of the legal aspects of the practical implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee should be included in the agenda of the Legal Subcommittee to ensure the involvement of legal experts of States.

292. The view was expressed that the intergovernmental status of the Committee should be preserved and that any interference by non-governmental entities in the work of the Committee should be avoided.

293. The view was expressed that expert inputs through organized symposiums and technical presentations would provide a valuable contribution to the work of the Committee.

294. The view was expressed that it was necessary to support the work of the regional centres for space science and technology education affiliated to the United Nations and to strengthen exchanges and collaboration between different regional centres to build the capacity of developing countries, giving special consideration to emerging spacefaring countries and developing countries.

295. The view was expressed that informal meetings of working groups should be conducted in an online or hybrid format more often to facilitate intersessional progress.

296. Some delegations expressed the view that the hybrid format of the current session, which had included live webcasting of plenary meetings with interpretation in the six official languages of the United Nations, had allowed the greater participation of countries in the work of the Subcommittees and that such a hybrid format could be maintained for the future sessions of the Committee and its Subcommittees.

297. Some delegations expressed the view that a single issue/item for discussion entitled "General exchange of views regarding satellite system effects upon terrestrial-based astronomy" should be included on the agenda of the Scientific and Technical Subcommittee at its fifty-ninth session, in 2022.

298. The view was expressed that the inclusion of such item on the agenda of the Scientific and Technical Subcommittee should be evaluated by the Subcommittee at its fifty-ninth session, in 2022, with a view to determining the best way forward for the consideration of the issue.

299. The Committee noted that an agreement on how to procedurally address the above-mentioned matter could possibly be reached in the intersessional period before the fifty-ninth session of the Subcommittee.

300. The view was expressed that a procedure to follow in cases of force majeure should be established to ensure the continuity of the work of the Committee in crisis situations, such as the COVID-19 pandemic.

J. Space exploration and innovation

301. The Committee considered the agenda item entitled "Space exploration and innovation", in accordance with General Assembly resolution 75/92.

302. The representatives of Argentina, Canada, China, India, Indonesia, Israel, Italy, Japan, Luxembourg, Mexico, the Russian Federation and the United States made statements under the item. During the general exchange of views, other statements relating to the agenda item were also made by other member States.

303. The Committee heard the following presentations under the item:

(a) "International lunar research station guide for partnership", by the representative of China;

(b) "Progress and future of China's space science missions", by the representative of China;

(c) "Kibo-ABC activities on the International Space Station 'Kibo' for STEM education and contribution to the Sustainable Development Goals in the Asia-Pacific region", by the representative of Japan;

(d) "Highlights of the Indian space science exploration programme", by the representative of India;

(e) “United Arab Emirates space exploration efforts”, by the representative of the United Arab Emirates;

(f) “Moon Village Association’s contribution to peaceful and sustainable lunar activities”, by the observer for Moon Village Association;

(g) “History ignites exploration and innovation”, by the observer for All Moonkind;

(h) “The Scientific Committee on Solar-Terrestrial Physics (SCOSTEP) and its Predictability of the Solar-Terrestrial Coupling (PRESTO) programme”, by the observer for the Scientific Committee on Solar-Terrestrial Physics.

304. The Committee recalled the origin of this agenda item and the work of the Action Team on Exploration and Innovation, which had produced and the first-ever United Nations report emphasizing the importance of human space exploration beyond low Earth orbit (see A/AC.105/1168).

305. The Committee welcomed the surge in space exploration and innovation developments and successes that had taken place since its sixty-second session in 2019 and which had furthered space exploration and innovation objectives.

306. The Committee noted that delegations had, at the present session, shared updates on space exploration and innovation, including details on national activities and programmes, as well as examples of bilateral, regional and multilateral international cooperation.

307. The Committee noted the importance of collaboration between all stakeholders in outer space activities, including Governments and government agencies, non-governmental entities, academic institutions, industry and the private sector, to advance the peaceful exploration and use of outer space and the safe, secure and sustainable development of outer space activities for the benefit of all humankind.

308. The Committee noted that, in the course of the discussions, information had been provided on, inter alia, research and development; human space flight programmes; activities and cooperation opportunities related to the International Space Station and the China space station; various missions to the Moon, Mars, Venus and asteroids; satellite-, lander-, rover- and helicopter-based experiments to explore the solar system; samples returned to the Earth; the planned international lunar research station; the planned Gateway lunar outpost; the forthcoming launch of a telescope that will detect the light from the first galaxies that formed in the early universe after the Big Bang; a mission to characterize the atmosphere of selected known exoplanets; a mission to study solar activities and their effects on space weather; the use of a satellite as a multi-wavelength observatory; a deep-space antenna which provides communication and navigation services for interplanetary probes; a pressurized crewed rover to be used as a means of transportation; a highly autonomous robotic system that will use cutting-edge software to perform tasks without human intervention; multipurpose medical and research platforms to address risks associated with human space flight; a space exploration innovation hub; an integrated Mars analogue field mission in the Negev desert; a rover operations control centre and its Mars terrain simulator; CubeSats that demonstrate small spacecraft technology; developments in global navigation satellite systems; achievements of observatories on Earth, including the first image of a supermassive black hole; the development of national space strategies, plans and commissions; commitments made between Governments on a common framework to guide space exploration cooperation; public consultations on a framework for space exploration activities; the open sharing of satellite imagery and data; efforts to build synergies between space agencies and the broader scientific community, including through sharing facilities and laboratories; activities to disseminate information on space exploration and innovation via multimedia communications and education at the primary, secondary and scientific academy levels, as well as to the general public; and increasing resources being committed to space exploration.

309. The Committee noted that space exploration endeavours provided opportunities to benefit humanity by contributing to the development of science and technology and advancing sustainable socioeconomic development on Earth.

310. The Committee also noted that space exploration activities frequently resulted in life-changing innovations and spin-off benefits.

311. The Committee further noted that, since it had held its last session, in 2019, space innovations had contributed to fighting the global COVID-19 pandemic, including by using communications services to provide telemedicine to patients in remote areas.

312. The Committee noted the increasing role and value of industry and the private sector in space exploration and innovation activities.

313. The Committee also noted that space exploration and innovation often inspired and encouraged young people to pursue studies and careers in science, technology, engineering and mathematics ("STEM subjects"), as well as in legal, policy and communications fields.

314. The Committee further noted the increasing awareness of the important role of women in space exploration and innovation activities.

315. The Committee noted the desirability of integrating developing countries into space exploration efforts to ensure that space exploration activities became open and inclusive on a global scale.

K. "Space2030" agenda

316. The Committee considered the agenda item entitled "'Space2030' agenda", in accordance with General Assembly resolution 75/92, as an agenda item under a multi-year workplan.

317. The representatives of Chile, China, Indonesia, Japan, Kenya, Mexico, Sri Lanka, the Republic of Korea, the United Arab Emirates, the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

318. Pursuant to General Assembly resolution 75/92, the decision taken by written procedure by the Committee (A/75/20, paras. 30–32) and on the basis of the mandates derived from General Assembly resolution 73/6, the Committee at its 770th meeting, on 25 August, convened its Working Group on the "Space2030" Agenda under the chairmanship of the Bureau, comprising the Chair, Mu'ammar Kamel Haddadin (Jordan), and the Vice-Chairs, Alessandro Cortese (Italy) and Dumitru-Dorin Prunariu (Romania).

319. The Committee had before it a working paper submitted by the Bureau of the Working Group on the "Space2030" Agenda (A/AC.105/L.321) containing a consolidated draft of the "Space2030" agenda and implementation plan, for further negotiations during the meetings of the Working Group at the sixty-fourth session of the Committee.

320. The Working Group held five meetings and met in informal consultations. At its 4th meeting, on 31 August 2021, the Working Group agreed on the final consolidated draft "Space2030" agenda and implementation plan and submitted it to the Committee for its endorsement.

321. At its 781st meeting, on 1 September, the Committee endorsed the "Space2030" Agenda: space as a driver of sustainable development and the implementation plan, contained in annex II to the present report. At that same meeting, the Committee also endorsed the report of the Working Group, contained in annex I to the present report.

322. The Committee noted with appreciation the work by the Bureau of the Working Group, assisted by the Secretariat, in completing its work.

323. The Committee noted that the “Space2030” Agenda and implementation plan, as endorsed, would be submitted in a draft resolution to the General Assembly at its seventy-sixth session, in 2021, for adoption by the Assembly under the agenda item entitled “Space as a driver of sustainable development”.

324. The Committee noted the significance of the “Space2030” Agenda and implementation plan as a forward-looking and comprehensive document for reaffirming and strengthening the contribution of space activities and space tools to the achievement of sustainable development, highlighting the role of space and the broad societal benefits that it brought and serving as an inspirational tool for the broader international community by promoting the use of space technologies and applications and space-derived data to further economic growth and prosperity.

325. The Committee also noted the emphasis of the “Space2030” Agenda on strengthened partnerships and cooperation among Member States, United Nations entities, intergovernmental and non-governmental organizations, industry and private sector entities to ensure that, through joint efforts and by taking advantage of the practical experiences and contributions of different stakeholders, the benefits of space would be brought to everyone, everywhere. In that regard, the Committee noted the important role of the “Space2030” Agenda in guiding the work of the Committee and its subcommittees, supported by the Office for Outer Space Affairs, as unique platforms for international cooperation in the exploration and use of outer space for peaceful purposes, for fostering dialogue among spacefaring and emerging space nations and for promoting the increased involvement of all countries in space activities, including through capacity-building initiatives.

326. Some delegations expressed the view that in the implementation of the “Space2030” Agenda, States should avoid any measures that could hamper its implementation, in particular for developing countries.

327. Some delegations expressed the view that unilateral coercive measures were illegal, immoral and unfair and contrary to the Charter of the United Nations and international law, and made it difficult for countries to have equal conditions for the achievement of their goals, including the objectives that had been proposed in the “Space 2030” Agenda.

328. Some delegations expressed the view that discussions on sanctions were inappropriate in the Committee and should be reserved for discussions within United Nations bodies focused on security issues.

329. Some delegations expressed the view that in the implementation of the “Space2030” Agenda particular attention should be given to bridging the capacity gaps between countries in the use of space technology and applications and to enabling technology transfer to enable countries to develop local solutions to global problems.

330. The view was expressed that the “Space2030” Agenda and implementation plan provided a comprehensive and strategic vision for future cooperation in outer space and that all space actors were expected to implement the Agenda faithfully. The delegation that expressed that view voiced its concern on a revisionist approach to General Assembly resolution 73/6 that had emerged during the discussions in the Working Group on the “Space2030” Agenda and called upon States members of the Committee to refrain from adopting such an approach and to work constructively towards the full implementation of the “Space2030” Agenda.

331. The view was expressed that access to space-derived data was central to enabling developing countries to harness their potential and enabling them to better plan their infrastructure and address issues such as food security, natural resources and disaster management. That delegation was of the view that there was a need for partnerships and a concerted effort to bridge the gap in the use of space-derived data for planning and decision-making in developing countries.

332. The view was expressed that the utilization of the geostationary orbit was also crucial for the efforts to advance the contribution of space for sustainable development. That delegation was of the view that the "Space2030" Agenda and implementation plan should identify ways to ensure equitable access to the geostationary orbit for all States, including by revitalizing partnerships with other international organizations, taking into account the needs and interests of developing countries, as well as the geographical position of certain countries.

333. The Committee agreed that the agenda item entitled "'Space2030' agenda" was to be retained on the Committee's agenda for each session through 2030 to allow for an exchange among States members of the Committee and its permanent observers on their experiences in implementing the "Space2030" Agenda.

L. Other matters

334. The Committee considered the agenda item entitled "Other matters", in accordance with General Assembly resolution 75/92.

335. The representatives of Austria, China, Iran (Islamic Republic of), Kenya, Mexico, South Africa and the United Kingdom made statements under the item. The observer for PSIPW also made a statement. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

1. Composition of the bureaux of the Committee and its subsidiary bodies for the period 2022–2023

336. Pursuant to the measures relating to the working methods of the Committee and its subsidiary bodies, as endorsed by the General Assembly in its resolution 52/56, the Committee considered the composition of the bureaux of the Committee and its subsidiary bodies for the period 2022–2023.

337. The Committee noted that the General Assembly in its resolution 75/92 had noted that the Eastern European States had nominated Oleg Ventskovsky (Ukraine) for the office of Second Vice-Chair/Rapporteur of the Committee for the period 2022–2023.

338. The Committee noted that the Western European and other States had nominated Jenni Tapio (Finland) for the office of First Vice-Chair of the Committee for the period 2022–2023 (A/AC.105/2021/CRP.20).

339. The Committee urged the African States, the Asia-Pacific States and the Latin American and Caribbean States to nominate their candidates for the offices of Chair of the Legal Subcommittee, Chair of the Committee and Chair of the Scientific and Technical Subcommittee, respectively, in time for the Committee and its subcommittees to elect their officers at their respective sessions in 2022.

2. Membership of the Committee

340. The Committee took note of the application of Angola for membership in the Committee (A/AC.105/2021/CRP.3) and decided to recommend to the General Assembly at its seventy-sixth session, in 2021, that Angola should become a member of the Committee.

341. The Committee took note of the application of Bangladesh for membership in the Committee (A/AC.105/2021/CRP.4) and decided to recommend to the General Assembly at its seventy-sixth session, in 2021, that Bangladesh should become a member of the Committee.

342. The Committee took note of the application of Panama for membership in the Committee (A/AC.105/2021/CRP.5) and decided to recommend to the General Assembly at its seventy-sixth session, in 2021, that Panama should become a member of the Committee.

343. The Committee took note of the application of Slovenia for membership in the Committee (A/AC.105/2021/CRP.6) and decided to recommend to the General Assembly at its seventy-sixth session, in 2021, that Slovenia should become a member of the Committee.

344. The Committee took note of the application of Kuwait for membership in the Committee (A/AC.105/2021/CRP.19) and decided to recommend to the General Assembly at its seventy-sixth session, in 2021, that Kuwait should become a member of the Committee.

3. Observer status

345. The Committee took note of the application of the International Institute for the Unification of Private Law (UNIDROIT) for permanent observer status with the Committee. The application and the relevant correspondence were before the Committee in conference room paper A/AC.105/2021/CRP.7.

346. The Committee decided to grant UNIDROIT the status of permanent observer with the Committee.

347. The Committee took note of the application of the Square Kilometre Array Observatory for permanent observer status with the Committee. The application and the relevant correspondence were before the Committee in conference room paper A/AC.105/2021/CRP.8.

348. The Committee decided to grant the Square Kilometre Array Observatory the status of permanent observer with the Committee.

349. With regard to the applications of non-governmental organizations for the status of permanent observer with the Committee, the Committee recalled its agreement at its fifty-third session, in 2010 (A/65/20, para. 311), that observer status would be granted to non-governmental organizations on a provisional basis, for a period of three years, pending information on the status of their application for consultative status with the Economic and Social Council, that the provisional observer status could be extended for an additional year, if necessary, and that it would grant permanent observer status to such non-governmental organizations upon confirmation of their consultative status with the Council.

350. The Committee took note of the application of the Open Lunar Foundation for permanent observer status with the Committee. The application and the relevant correspondence were before the Committee in conference room paper A/AC.105/2021/CRP.9.

351. The Committee decided to grant the Open Lunar Foundation the status of observer, on a provisional basis, for a period of three years, pending information on the status of their application for consultative status with the Economic and Social Council.

4. Other matters

352. The Committee took note of the proposal for the proclamation of the International Moon Day (A/AC.105/2021/CRP.14) and agreed to recommend to the General Assembly that, at its seventy-sixth session, in 2021, the Assembly proclaim that International Moon Day be observed annually, on 20 July.

353. The Committee took note of the proposal that a text on the important work of the Office for Outer Space Affairs should be included in the ministerial declaration of the High-Level Political Forum on Sustainable Development to be held in July 2022.

354. The Committee took note of the proposals on the issue of equitable access of developing countries to the geostationary orbit as presented at the fifty-eighth session of the Scientific and Technical Subcommittee (A/AC.105/C.1/2021/CRP.26) and the sixtieth session of the Legal Subcommittee (A/AC.105/C.2/2021/CRP.21).

5. Programme 5, “Peaceful uses of outer space”: proposed programme plan for the period 2022 and programme performance for 2020

355. The Committee had before it the following:

(a) A conference room paper entitled Programme 5, “Peaceful uses of outer space”: proposed programme plan for the period 2022 (A/AC.105/2021/CRP.15);

(b) Proposed programme budget for 2022 (A/76/6 (Sect.6)).

356. The Committee noted that the proposed programme plan for the period 2022 had been reviewed by the subsidiary organ of the General Assembly for planning, programming and coordination, the Committee for Programme and Coordination, at its sixty-first session in June 2021, and that the conclusions and recommendations of the Committee for Programme and Coordination under programme 5 were contained in document A/76/16, paras. 104–111.

357. The Committee welcomed the presentation by a representative of the Secretariat on behalf of the Director of the Office for Outer Space Affairs on the proposed programme plan for the period 2022 and the information provided by the Office on key areas of work.

358. The Committee noted that, considering that the Committee for Programme and Coordination had already concluded its work, any inputs agreed by the Committee at the present session would serve to inform future draft programme plans.

359. The Committee noted that the programme plan as contained in document A/76/6 (Sect.6), together with the conclusions and recommendations of the Committee for Programme and Coordination, would serve as the basis for the preparation of the proposed programme plan for the period 2023.

360. The view was expressed that the Office might consider integrating language on strengthening research and cooperation in developing norms and regulations into the paragraph on lessons learned and planned change (para. 6.35) under result 3: a more secure global navigation satellite systems spectrum, in document A/76/6 (Sect.6).

361. The view was expressed that the inclusion of such language would need to be discussed by the International Committee on Global Navigation of Satellite Systems (ICG) and that the description of the support to be provided by the Office to ICG should not be modified.

362. The view was expressed that there was a need for member States of the Committee to work during the seventy-sixth session of the General Assembly to ensure that the Office had adequate resources to implement its programme of work.

6. Draft provisional agenda for the sixty-fifth session of the Committee

363. The Committee recommended that the following items should be considered at its sixty-fifth session, in 2022:

1. Opening of the session.
2. Adoption of the agenda.
3. Election of officers.
4. Statement by the Chair.
5. General exchange of views.
6. Ways and means of maintaining outer space for peaceful purposes.
7. Report of the Scientific and Technical Subcommittee on its fifty-ninth session.
8. Report of the Legal Subcommittee on its sixty-first session.
9. Space and sustainable development.

10. Spin-off benefits of space technology: review of current status.
11. Space and water.
12. Space and climate change.
13. Use of space technology in the United Nations system.
14. Future role and method of work of the Committee.
15. Space exploration and innovation.
16. “Space2030” agenda.
17. Other matters.
18. Report of the Committee to the General Assembly.

M. Schedule of work of the Committee and its subsidiary bodies

364. The Committee agreed on the following tentative timetable for its session and those of its subcommittees in 2022:

	Date	*Location*
Scientific and Technical Subcommittee	7–18 February 2022	Vienna
Legal Subcommittee	28 March–8 April 2022	Vienna
Committee on the Peaceful Uses of Outer Space	1–10 June 2022	Vienna

Annex I

Report of the Working Group on the "Space2030" Agenda of the Committee on the Peaceful Uses of Outer Space

1. At its 770th meeting, on 25 August 2021, the Committee reconvened its Working Group on the "Space2030" Agenda under the chairmanship of the Bureau, comprising the Chair, Mu'ammar Kamel Haddadin (Jordan), and the Vice-Chairs, Alessandro Cortese (Italy) and Dumitru-Dorin Prunariu (Romania).

2. The Working Group recalled the decision taken by written procedure by the Committee (A/75/20, paras. 30–32) to extend the workplan of the Working Group for one year so that the Working Group could submit to the Committee at its sixty-fourth session a final consolidated draft of the "Space2030" agenda and implementation plan for its consideration and submission to the General Assembly at its seventy-sixth session, in 2021.

3. The Working Group recalled that meetings had been held during the sixtieth session of the Legal Subcommittee, in 2021, during which the Working Group had advanced its work, as reflected in the summary report of the Working Group on the "Space2030" Agenda annexed to the final report of the Legal Subcommittee on its sixtieth session (A/AC.105/1243, annex III).

4. The Working Group had before it a working paper submitted by the Bureau of the Working Group on the "Space2030" Agenda (A/AC.105/L.321) containing a consolidated draft of the "Space2030" agenda and implementation plan, for further negotiation during the meetings of the Working Group at the sixty-fourth session of the Committee.

5. In order to finalize its work, the Working Group held five formal meetings, as well as informal consultations, during the sixty-fourth session of the Committee.

6. At its fourth meeting, on 31 August 2021, the Working Group agreed on the final consolidated draft of the "Space2030" agenda and implementation plan, which is attached to the present report and submitted to the Committee for its endorsement.

7. The Working Group recalled that the final "Space2030" Agenda and implementation plan would be made available together with the final report of the Committee on its sixty-fourth session and thereafter submitted as a draft resolution to the General Assembly at its seventy-sixth session, in 2021, for adoption by the Assembly under the agenda item entitled "Space as a driver of sustainable development".

8. The Working Group noted with appreciation the efforts of the Bureau of the Working Group, assisted by the Secretariat, to advance the work on the "Space2030" Agenda and implementation plan, and commended the Bureau for its leadership in conducting the meetings of the Working Group towards completing its work.

9. At its 5th meeting, on 1 September 2021, the Working Group adopted the present report.

Annex II

The “Space2030” Agenda: space as a driver of sustainable development

Part A. Agenda

I. Introduction

1. The United Nations has been at the centre of international cooperation in space activities since the beginning of the space age. The Committee on the Peaceful Uses of Outer Space came into being as a result of the recognition by the General Assembly, in its resolution 1348 (XIII) of 13 December 1958, of the importance of using outer space for peaceful purposes and of the need to promote international cooperation in the conduct of space activities; in its resolution 1472 A (XIV) of 1959, the Assembly permanently established the Committee.

2. Owing to its unique mandate and position at the centre of international cooperation in the peaceful uses of outer space, and the global governance of outer space activities,[1] consistent with international law, the Committee played a key role in the organization of the first three United Nations conferences on the exploration and peaceful uses of outer space, held in 1968, 1982 and 1999.

3. Fifty years after the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE), States Members of the United Nations and representatives of the international space community gathered in Vienna on 20 and 21 June 2018 for the high-level segment of the fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50) to reflect on more than 50 years of achievement in space exploration and use and to strengthen global cooperation in outer space and the use of outer space for sustainable development.

4. The General Assembly, in its resolution 73/6 of 26 October 2018, noted with appreciation that the preparatory process and the high-level segment of UNISPACE+50 had resulted in documents aimed at articulating a comprehensive, inclusive and strategically oriented vision on strengthening international cooperation in the exploration and peaceful uses of outer space, in which space was seen as a major driver of and contributor to the achievement of the Sustainable Development Goals for the benefit of all countries.

5. In that regard, the General Assembly invited the Committee to continue to develop, on the basis of the results of the UNISPACE+50 process, a “Space2030” Agenda and implementation plan and to provide the General Assembly with the outcome of its work for consideration by the Assembly at its seventy-fifth session, in 2020.

6. The “Space2030” Agenda and implementation plan is submitted by the Committee to the General Assembly as a forward-looking strategy for reaffirming and strengthening the contribution of space activities and space tools to the achievement of global agendas,[2] addressing long-term sustainable development concerns of humankind. It also contributes to charting the future contribution of the Committee to the framework for the global governance of outer space activities, consistent with international law.

[1] See A/AC.105/1137.

[2] The 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction 2015–2030 and the Paris Agreement.

II. Strategic vision

7. We, the States Members of the United Nations, acknowledge that the exploration and peaceful uses of outer space have enriched our collective knowledge and revolutionized life on Earth. Space science and technology are now intrinsic to our daily lives and bring an abundance of unique and fundamental benefits to Earth. As the space community moves forward with its space exploration endeavours, space will continue to serve as a source of inspiration and innovation and to provide applications for the benefit of humankind.

8. We emphasize that space tools are highly relevant for the attainment of the global development agendas, in particular the 2030 Agenda for Sustainable Development and its goals and targets, either directly, as enablers and drivers of sustainable development, or indirectly, by providing essential data for the indicators used to monitor the progress towards achieving the 2030 Agenda and the Sendai Framework for Disaster Risk Reduction 2015–2030 and the commitments by States parties to the Paris Agreement. The fulfilment of these global agendas requires improved access to space-based data and applications and space infrastructure, taking into account the particular needs of developing countries.

9. We acknowledge the distinguished historical record of the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee and Scientific and Technical Subcommittee in the establishment and further development of the international legal regime governing outer space activities. Under that regime, outer space activities of States, international intergovernmental organizations and non-governmental entities are flourishing, and as a result, space science and technology and their applications are contributing immeasurably to economic growth and improvements in the quality of life worldwide.

10. We reaffirm the unique role of the Committee, and its subcommittees, supported by the Office for Outer Space Affairs, as unique platforms for international cooperation in the exploration and use of outer space for peaceful purposes, for the global governance of outer space activities, consistent with international law, for developing international space law, for fostering dialogue among spacefaring and emerging space nations, and for promoting the increased involvement of all countries in space activities, including through capacity-building initiatives.

11. We underscore the importance of the Outer Space Treaty as the cornerstone of the international legal regime governing outer space activities. It contains the fundamental principles of international space law and will continue to provide an indispensable framework for the conduct of outer space activities. The universalization and effective implementation of the Outer Space Treaty should be promoted.

12. We encourage the Committee to continue to coordinate efforts to strengthen the implementation of the United Nations treaties and principles on outer space and to complement existing international space law, when appropriate, to respond to emerging issues. The Committee and its subcommittees should continue to demonstrate their relevance and address current and emerging challenges and opportunities, such as the long-term sustainability of outer space activities.

13. We commit to addressing changes in the undertaking of outer space activities at a time when new technologies have emerged and when an increasing number of participants, representing both governmental agencies and non-governmental entities, including industry and the private sector, are becoming involved in ventures to explore and use space and carry out space activities. In that regard, we commit to ensuring that the Committee, and its subcommittees, supported by the Office for Outer Space Affairs, continue, as appropriate, to respond to such changes, in their role as unique platforms for international cooperation in the peaceful uses of outer space.

14. We commit to strengthening international cooperation, for which the Committee continues to provide a unique platform in the exploration and peaceful uses of outer

space and the global governance of outer space activities, consistent with international law, taking into account the particular needs of developing countries. We also recognize the common interest of all humankind in the progress of the exploration and use of outer space for peaceful purposes, and take note of General Assembly resolutions 51/122 of 13 December 1996 and 73/6 of 26 October 2018 and the contribution that their implementation will make to the "Space2030" Agenda.

15. We aim to promote equal opportunities in the space sector by encouraging, in particular, young people and women to consider careers in science, technology, engineering and mathematics.

16. We also aim to leverage to a greater extent new, innovative technologies, such as space technologies and their applications, to contribute to improved delivery of the mandates of the United Nations as a whole.

17. We emphasize that the seven thematic priorities developed by the Committee in the context of UNISPACE+50 constitute a comprehensive approach to addressing key areas and collectively serve to determine the core objectives of the future work of the Committee and its subcommittees and the Office for Outer Space Affairs in the areas of global partnership in space exploration and innovation (thematic priority 1), current and future perspectives of the legal regime of outer space and global governance (thematic priority 2), enhanced information exchange on space objects and events (thematic priority 3), an international framework for space weather services (thematic priority 4), strengthened space cooperation for global health (thematic priority 5), international cooperation towards low-emission and resilient societies (thematic priority 6) and capacity-building for the twenty-first century (thematic priority 7).[3]

18. We also emphasize that, in fulfilling the "Space2030" Agenda and implementation plan, importance is attached to global partnerships and strengthened cooperation among Member States, United Nations entities, intergovernmental and non-governmental organizations, industry and private sector entities, to ensure that, through joint efforts and by taking advantage of the practical experiences and contributions of different stakeholders, the benefits of space will be brought to everyone, everywhere.

III. Objectives

19. We, the States Members of the United Nations, commit to pursuing, based on the above strategic vision, the following objectives. The actions described under each overarching objective could be taken by Member States to realize those objectives. The four overarching objectives are structured around the four pillars of space economy, space society, space accessibility and space diplomacy. Those four pillars are complementary and mutually reinforcing.

Overarching objective 1: Enhance space-derived economic benefits and strengthen the role of the space sector as a major driver of sustainable development

1.1. Raise awareness of the importance of space science and technology and their applications for the achievement of the Sustainable Development Goals.

1.2. Facilitate and promote the integration of the space sector with other sectors, including energy, public health, the environment, climate change, the management of resources and information and communication technology, as well as the development of multi-stakeholder partnerships leading to innovative space-based solutions for social and economic development that can be integrated into mechanisms for implementing the Sustainable Development Goals.

[3] General Assembly resolution 73/6, twenty-fourth preambular paragraph.

1.3. Address issues arising from commercial activities in outer space, including with a view to enabling space activities to better support the achievement of global development agendas and to ensuring the long-term sustainability of outer space activities.

1.4. Promote the development of the space industry, with a particular focus on small and medium-sized enterprises, with a view to increasing investment in the space sector and creating high-quality jobs, and promote the spin-off benefits of space technologies to the non-space sector.

1.5. Enable space activities for all, based on international law, by promoting an international framework that facilitates equal access to space for all, including non-spacefaring nations, and encourages safety and innovation.

1.6. Promote the use of space-based solutions in global efforts to ensure sustainable forest and ocean economies.

1.7. Strengthen the contribution of space technologies and their applications to sustainable fisheries management, agriculture, food safety and security, and nutrition.

1.8. Promote and facilitate collaboration and partnership between the private and public sectors, academic institutions and research and development centres in the field of the utilization of space for achieving the Sustainable Development Goals, as well as in the area of the long-term sustainability of outer space activities.

Overarching objective 2: Harness the potential of space to solve everyday challenges and leverage space-related innovation to improve the quality of life

2.1. Support space science and research, as outer space provides a unique perspective for scientists to observe and study the Earth and the universe.

2.2. Promote the use of space technologies and their applications to enhance scientific knowledge of the natural environment, including oceans and seas, mountainous regions, water cycles and resources, forestry, biodiversity, desertification and land degradation, as well as urbanization, with a view to contributing to the preservation of the natural environment, sustainable resource management and the protection of ecosystems.

2.3. Strengthen the use of integrated space applications to facilitate the observation of the climate and the assessment of disaster risks, improve early warning disaster systems and provide data for the indicators used to track progress in the implementation of the 2030 Agenda for Sustainable Development, the Sendai Framework and commitments by States parties to the Paris Agreement.

2.4. Advance the role of space technologies in highlighting, analysing and addressing climate change and facilitating the transition to low-emission societies, and promote international collaboration in that regard, in line with existing and recognized international mechanisms and organizations.

2.5. Promote the use of space-based technologies in all phases of the disaster management cycle, applicable to both natural and man-made disasters, including prevention, mitigation, preparedness, response, recovery, reconstruction and rehabilitation; monitor and assess elements such as exposure, hazards, disaster risk and damage in different regions of the world; and promote the sharing of disaster monitoring data.

2.6. Strengthen space-related cooperation in support of global health; improve the use and application of space medicine, science and technology, innovations in the global health domain, cooperation and the sharing of information and tools to improve the timeliness and effectiveness of public health and health-care interventions; and enhance capacity-building in space medicine, science and technology.

2.7. Strengthen the use of space technologies and their applications to support the development of socially and environmentally sustainable human settlements and infrastructure, both urban and rural; improve livelihoods; study urbanization and migration patterns; and monitor cultural heritage sites and contribute to their preservation.

2.8. Promote space open data policies and the sharing of data.

Overarching objective 3: Improve access to space for all and ensure that all countries can benefit socioeconomically from space science and technology applications and space-based data, information and products, thereby supporting the achievement of the Sustainable Development Goals

3.1. Leverage the potential of space to inspire youth, increase the involvement of young people in the space sector, support national and international initiatives that inspire the interest of young people in space activities, from elementary school onwards, and strengthen their engagement in science, technology, engineering and mathematics subjects.

3.2. Enhance space exploration as a long-term driver of innovation and strengthen international cooperation in that regard.

3.3. Promote exploration beyond low Earth orbit, as the scientific, technological, economic and inspirational contributions of those missions will benefit humanity.

3.4. Enhance capacity-building, education and training in space science and applications, in particular for developing countries.

3.5. Increase knowledge of outer space, including through enhanced access to astronomical and space science data, for the benefit of humankind.

3.6. Promote and support the use of space technologies to enhance worldwide access to data and broadband technologies, giving special attention to developing countries and areas with less-developed infrastructure.

3.7. Promote inclusiveness and gender equality in space activities, including by strengthening the participation of women in science, technology, engineering and mathematics education.

3.8. Increase awareness of the risks of adverse space weather and mitigate those risks, in order to ensure increased global resilience against space weather effects, and improve the international coordination of space weather-related activities, including outreach, communication and capacity-building, as well as the establishment of an international mechanism to promote increased high-level coordination in relation to space weather and increased global resilience against space weather effects.

3.9. Strengthen international cooperation and preparedness to respond to the threat posed by near-Earth objects.

3.10. Strongly encourage States to strengthen international, multilateral and bilateral cooperation in the exploration and use of outer space for peaceful purposes, including by addressing challenges and obstacles, in particular those that hinder such cooperation, and in this regard urge States to effectively respond to such challenges and obstacles that impede the implementation of the “Space2030” Agenda.

Overarching objective 4: Build partnerships and strengthen international cooperation in the peaceful uses of outer space and in the global governance of outer space activities

4.1. Strengthen the role and activities of the Committee on the Peaceful Uses of Outer Space and its subcommittees, supported by the Office for Outer Space Affairs,

as a unique platform for international cooperation in the exploration and use of outer space for peaceful purposes.

4.2. Promote the implementation by States parties of the United Nations treaties on outer space, as well as the implementation of related principles and General Assembly resolutions, and encourage the Committee and its subsidiary bodies, supported by the Office for Outer Space Affairs, to continue to coordinate efforts in that regard and to complement and develop international law related to outer space, as appropriate, to respond to emerging issues.

4.3. Strengthen capacity-building and technical assistance, including that provided by the Office for Outer Space Affairs, for Member States, in particular in the field of international space law and policy.

4.4. Enhance existing registration practices and information exchange and acknowledge the role of the Office for Outer Space Affairs in maintaining the United Nations Register of Objects Launched into Outer Space to increase transparency and improve the efficiency of the registration mechanism and the timeliness and consistency of the registration of objects, including by providing technical assistance to Member States in this regard.

4.5. Ensure the long-term sustainability of outer space activities and the preservation of the outer space environment for peaceful uses, including through the implementation on a voluntary basis of the adopted preamble and the guidelines for the long-term sustainability of outer space activities and the sharing of experiences in implementing the guidelines, and address new challenges, risks and threats posed to the long-term sustainability of outer space activities.

4.6. Enhance the safety of outer space operations as a contribution to the long-term sustainability of outer space activities.

4.7. Promote international cooperation and exchange information and best practices, within the framework of the Committee, on the supervision of space activities of non-governmental entities, consistent with international law, with a view to enhancing the safety and long-term sustainability of outer space activities while facilitating the development of the space industry.

4.8. Enhance, within the framework of the Committee, the exchange of information on space objects and events, as well as the discussion on the prediction and prevention of potential collisions.

4.9. Strengthen the coordination and interrelationship between the Committee on the Peaceful Uses of Outer Space and its subcommittees, with the assistance of the Office for Outer Space Affairs as the secretariat.

4.10. Encourage strengthened cooperation between the United Nations entities dealing with space, in line with the United Nations system-wide efforts to increase coherency and deliver as one, on interdisciplinary and cross-sectoral space-related matters, in order to promote international cooperation in the peaceful exploration and use of outer space and in the utilization of space science and technology for sustainable development.

Part B. Implementation plan

20. Each Member State will implement the “Space2030” Agenda on a voluntary basis.

I. Partnerships

21. In fulfilling the “Space2030” Agenda and its implementation plan, importance is attached to strengthened partnerships and cooperation among Member States,

United Nations entities, intergovernmental and non-governmental organizations, industry and private sector entities.

22. The Office for Outer Space Affairs serves as a conduit for promoting and facilitating the use of space-based solutions, including in the implementation of the "Space2030" Agenda, and should continue, within its mandate, functions and existing resources to pursue partnerships, including with research institutions, academia, industry and the private sector, to provide broader opportunities to access space for purposes of science, innovation, research and development, education and capacity-building. In that regard, the Office should implement activities to promote the use of space-based applications and technologies to support Member States in meeting the objectives of the global development agendas.

23. In view of implementing the "Space2030" Agenda, the Committee on the Peaceful Uses of Outer Space and the Office for Outer Space Affairs should continue to fulfil their respective mandates and to cooperate and coordinate with other relevant entities within the United Nations system, including through the Inter-Agency Meeting on Outer Space Activities (UN-Space).

II. Tools

24. In implementing the "Space2030" Agenda, Member States could contribute to and benefit from a number of international and regional mechanisms, programmes, projects and platforms that are already in place or are being developed, such as the following:

(a) The seven thematic priorities in the context of UNISPACE+50, undertaken in the agendas and work of the Committee and its subcommittees, and the Office for Outer Space Affairs, in the areas of global partnership in space exploration and innovation, current and future perspectives of the legal regime of outer space and global governance, enhanced information exchange on space objects and events, an international framework for space weather services, strengthened space cooperation for global health, international cooperation for low-emission and resilient societies and capacity-building for the twenty-first century;[4]

(b) The United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER),[5] a programme of the Office for Outer Space Affairs that provides Member States with access to space-based data and services for disaster-risk reduction and emergency response, and through the UN-SPIDER knowledge portal, enables access to space-based resources in all phases of the disaster management cycle;

(c) The regional centres for space science and technology education, affiliated to the United Nations,[6] including the alliance of the regional centres. The regional centres are designed to enhance capacity-building, education and training in space science and applications, as well as space law and policy, in particular for developing countries;

(d) The Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters (also called the International Charter on Space and Major Disasters), as a worldwide collaboration among space agencies and space system operators, through which satellite-derived information and products are made available to support disaster response efforts;

[4] Related documents include A/AC.105/1168, A/AC.105/1169, A/AC.105/1170, A/AC.105/1171, A/AC.105/1172, A/AC.105/1173 and A/AC.105/1174; see also para. 17 above.

[5] See General Assembly resolution 61/110.

[6] See General Assembly resolution 73/91, para. 24.

(e) The Recovery Observatory of the Committee on Earth Observation Satellites, as a means to increase the contribution of satellite data to recovery from natural disasters;

(f) The international Space Climate Observatory, whose main goal is to study and monitor the impacts of climate change, especially at local scales, using satellite-based Earth-observation tools in combination with field data and models, thus providing a tool for decision-making on preparedness, adaptation and resilience to climate change and its impacts, in particular at the local level;

(g) The World Meteorological Organization Integrated Global Observing System, which provides observation data useful for weather analyses, forecasts, advisories and warnings, as well as for climate monitoring and environmental activities;

(h) The International Committee on Global Navigation Satellite Systems,[7] which promotes voluntary cooperation on matters of mutual interest related to civil satellite-based positioning, navigation, timing and value-added services, and encourages and facilitates compatibility, interoperability and transparency between all the satellite navigation systems;

(i) The International Asteroid Warning Network (IAWN) and the Space Mission Planning Advisory Group (SMPAG),[8] which are designed to strengthen preparedness for the threat of potential impacts of near-Earth objects through international cooperation and information-sharing.

25. In addition, several tools and initiatives have been and are being developed by the Office for Outer Space Affairs, as part of the capacity-building for the twenty-first century, and in cooperation with its partners, including:

(a) Access to Space for All initiative,[9] aimed at broadening access to space in support of the achievement of the Sustainable Development Goals through triangular cooperation between spacefaring nations, the United Nations and non-spacefaring or emerging spacefaring nations, with the involvement of the private sector;

(b) The Open Universe initiative, in order to enhance access to astronomical and space science data;[10]

(c) The space solutions compendium, as a tool for supporting Member States in the implementation of the 2030 Agenda for Sustainable Development, linking space solutions with Sustainable Development Goals and targets;[11]

(d) The Space for Women project, aimed at broadening the possibilities for women to pursue space-related education and careers;

(e) The “Space law for new space actors” project, as part of capacity-building and advisory services in response to the needs and requirements of policymakers and legislators in governmental and regulatory authorities of countries that are either entering the space sector for the first time or that are embarking upon new phases of space activities;

(f) The Space4Water portal, as a platform for interdisciplinary knowledge exchange on space technologies and water-related topics;

(g) Space for Youth, to advance Youth 2030: The United Nations Strategy on Youth, the United Nations-wide initiative in the area of space-related activities and projects;

(h) The “Space solutions for the Pacific” project, aimed at offering a range of programmatic services to Pacific island States to enhance their ability to meet

[7] See General Assembly resolution 59/2, para. 11.
[8] See General Assembly resolution 70/82, para. 9.
[9] See A/72/20, para. 326.
[10] See A/AC.105/1175.
[11] See A/AC.105/1174.

Sustainable Development Goals, including in the areas of climate change, illegal fishing, telecommunications, global health and disaster risk reduction;

(i) The World Space Forums on space as a driver for socioeconomic sustainable development aimed at strengthening partnerships and continuous dialogue among the global community on a broad range of space matters and at raising awareness and supporting the implementation of the “Space2030” Agenda through the broad involvement of all relevant space actors.

26. The above lists are not exhaustive, and new initiatives could be developed, including with a view to assisting Member States in implementing the “Space2030” Agenda.

III. Resources

27. Member States are invited to actively undertake bilateral, multilateral, regional and broader international space cooperation in various forms, including capacity-building, the sharing of information and infrastructure and the development of joint projects, and, as appropriate, to integrate space cooperation with economic and development cooperation, in order to promote the fulfilment of the “Space2030” Agenda and its implementation plan.

28. Member States and other donors are invited to provide voluntary extrabudgetary resources to the Office for Outer Space Affairs to advance the implementation of the “Space2030” Agenda, in accordance with the rules and procedures of the United Nations.

29. The Secretary-General is urged to consider the sufficiency of resources provided to the Office for Outer Space Affairs in its role as secretariat to the Committee on the Peaceful Uses of Outer Space and its subcommittees, and to ensure that the Office can fully and effectively implement its mandate, including capacity-building activities for Member States in the field of space science and technology and their applications, as well as in space law and policy, taking into account the “Space2030” Agenda and implementation plan.

IV. Review of progress

30. The Committee on the Peaceful Uses of Outer Space should include an item on its agenda for each session allowing for an exchange among States members of the Committee and its permanent observers on their experiences in implementing the “Space2030” Agenda. In 2025, the Committee should carry out a midterm review of progress made in implementing the “Space2030” Agenda. In 2030, the Committee should carry out a final review of the implementation of the “Space2030” Agenda and report to the General Assembly on the results.

Annex III

Mandate, terms of reference, and workplan and methods of work for the working group established under the Legal Subcommittee agenda item entitled “General exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources”

I. Introduction and background

1. At its sixtieth session, the Legal Subcommittee requested the Chair and Vice-Chair of the working group under the agenda item on the general exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources to continue consultations, in the intersessional period, on the mandate, terms of reference, and workplan and method of work of the working group and recommended that the Committee consider the matter further at its sixty-fourth session (A/AC.105/1243, para. 257).

2. At the sixty-fourth session, the working group held four formal and informal meetings, the results of which are set out in section II below.

II. Mandate, terms of reference and methods of work of the working group under a five-year workplan

A. Mandate

3. The working group shall:

(a) Collect relevant information concerning activities in the exploration, exploitation and utilization of space resources, including with respect to scientific and technological developments and current practices, taking into account their innovative and evolving nature;

(b) Study the existing legal framework for such activities, in particular the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, and other applicable United Nations treaties, also taking into account other relevant instruments, as appropriate;

(c) Assess the benefits of further development of a framework for such activities, including by way of additional international governance instruments;

(d) Develop a set of initial recommended principles for such activities, taking into account the need to ensure that they are carried out in accordance with international law and in a safe, sustainable, rational and peaceful manner, for the consideration of and consensus agreement by the Committee, followed by possible adoption by the General Assembly as a dedicated resolution or other action;

(e) Identify areas for further work of the Committee and recommend next steps, which may include the development of potential rules and/or norms, for activities in the exploration, exploitation and utilization of space resources, including with respect to related activities and benefit sharing.

B. Terms of reference

4. The terms of reference are as follows:

(a) The working group reports to the Legal Subcommittee of the Committee;

(b) The working group and its meetings shall be guided by the rules of procedure, methods of work and established practices of the Committee, including with respect to contributions by permanent observers and non-governmental stakeholders. The working group may decide to hold intersessional meetings in exceptional circumstances, as appropriate;

(c) The working group will be led by a Chair and a Vice-Chair and shall be supported by the Secretariat;

(d) The working group shall be open to all States members of the Committee, and participation of developing and emerging spacefaring countries shall be encouraged;

(e) The working group shall consider submissions from States members of the Committee on the issues related to and arising from its mandate, while also taking into account, as appropriate, those inputs provided in accordance with established practice of the Committee to the working group by permanent observers and all other stakeholders and which the Chair and Vice-Chair, in consultation with the working group, regard as relevant to the work of the working group;

(f) The working group may avail itself of work on the issue of activities in the exploration, exploitation and utilization of space resources, including but not limited to study reports, academic research and papers submitted by any means as may be determined by the working group, which may include through one or more dedicated international conferences convened under the auspices of the United Nations, and open to Governments, invited academic and other stakeholders, subject to the availability of budgetary resources.

C. Workplan and methods of work

5. The workplan and methods of work shall take into account the following, inter alia:

(a) On the basis of the agreed mandate and terms of reference, the working group shall, in 2022, agree on its detailed workplan and methods of work. This shall include appropriate means of coordination with the Scientific and Technical Subcommittee;

(b) The foregoing shall not prevent the working group from undertaking initial administrative, information collection and stocktaking tasks as provided for in its mandate;

(c) The working group shall in its work avail itself of electronic means of communication whenever practicable and/or necessary.