



United Nations

**Report of the Committee
on the Peaceful Uses of
Outer Space**

**Sixty-fifth session
(1–10 June 2022)**

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Note

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[30 June 2022]

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Chapter I

Introduction

1. The Committee on the Peaceful Uses of Outer Space held its sixty-fifth session in Vienna from 1 to 10 June 2022, in a hybrid format (in person and online). The officers of the Committee were as follows:

<i>Chair</i>	Omran Sharaf (United Arab Emirates)
<i>First Vice-Chair</i>	Jenni Tapio (Finland)
<i>Second Vice-Chair/Rapporteur</i>	Oleg Ventskovsky (Ukraine)

A. Meetings of subsidiary bodies

2. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-ninth session in Vienna from 7 to 18 February 2022, in a hybrid format, with Juan Francisco Facetti (Paraguay) as Chair. The report of the Subcommittee was before the Committee ([A/AC.105/1258](#)).

3. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space held its sixty-first session in Vienna from 28 March to 8 April 2022, also in a hybrid format, with Nomfuneko Majaja (South Africa) as Chair. The report of the Subcommittee was before the Committee ([A/AC.105/1260](#)).

B. Adoption of the agenda

4. At its 786th meeting, on 1 June, the Committee adopted the following agenda:
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.

C. Election of officers

5. At the 786th meeting of the Committee, on 1 June, Omran Sharaf (United Arab Emirates) was elected Chair of the Committee, Jenni Tapio (Finland) was elected First Vice-Chair, and Oleg Ventskovsky (Ukraine) was elected Second Vice-Chair/Rapporteur for the period 2022–2023.

6. At the same meeting, the Committee endorsed the election of Juan Francisco Facetti (Paraguay) as Chair of the Scientific and Technical Subcommittee and Nomfuneko Majaja (South Africa) as Chair of the Legal Subcommittee for the period 2022–2023.

D. Membership

7. 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](#), [74/82](#), [76/76](#) 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 100 States: Albania, Algeria, Angola, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Bangladesh, 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, Kuwait, Lebanon, Libya, Luxembourg, Malaysia, Mauritius, Mexico, Mongolia, Morocco, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Türkiye, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Venezuela (Bolivarian Republic of) and Viet Nam.

E. Attendance

8. Representatives of the following 84 States members of the Committee attended the session: Algeria, Angola, Argentina, Armenia, Australia, Austria, Azerbaijan, Bangladesh, Belarus, Belgium, Brazil, Bulgaria, Burkina Faso, 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, Kazakhstan, Kenya, Kuwait, Lebanon, Luxembourg, Malaysia, Mauritius, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Türkiye, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay and Venezuela (Bolivarian Republic of).

9. 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](#).

10. At its 786th meeting, the Committee decided to admit Uzbekistan as an observer, at its request, to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.

11. At its 786th meeting, the Committee also decided to admit the Holy See as an observer, at its request, to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.

12. Observers for the Food and Agriculture Organization of the United Nations, the International Atomic Energy Agency, the International Civil Aviation Organization, the International Telecommunications Union and the Office for Disarmament Affairs of the Secretariat attended the session.

13. The session was attended by observers for the following intergovernmental organizations having permanent observer status with the Committee: Asia-Pacific Space Cooperation Organization (APSCO), Committee on Earth Observation Satellites (CEOS), European Organization for Astronomical Research in the Southern Hemisphere, European Space Agency (ESA), European Telecommunications Satellite Organization, International Institute for the Unification of Private Law (UNIDROIT), International Organization of Space Communications (Intersputnik) and Square Kilometre Array Observatory.

14. The session was also attended by observers for the following non-governmental organizations having permanent observer status with the Committee: For All Moonkind, International Astronautical Federation (IAF), International Astronomical Union (IAU), International Institute of Space Law (IISL), International Law Association (ILA), Moon Village Association (MVA), National Space Society (NSS), Open Lunar Foundation, Prince Sultan bin Abdulaziz International Prize for Water (PSIPW), Scientific Committee on Solar-Terrestrial Physics (SCOSTEP), Secure World Foundation, Space Generation Advisory Council (SGAC), University Space Engineering Consortium-Global (UNISEC-Global) and World Space Week Association.

15. At its 786th meeting, the Committee decided to admit the Hague Institute for Global Justice as an observer, at its request, to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.

16. A list of representatives of States members of the Committee, United Nations entities and other organizations attending the session is contained in [A/AC.105/2022/INF/1](#).

F. General statements

17. Statements were made by representatives of the following States members of the Committee during the general exchange of views: Algeria, Angola, Argentina, Armenia, Australia, Austria, Bangladesh, Belarus, Belgium, Brazil, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechia, Dominican Republic, Ecuador, Egypt, Finland, France, Germany, Greece, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Kenya, Luxembourg, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Norway, Pakistan, Paraguay, Peru, Philippines, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Singapore, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, Türkiye, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay and Venezuela (Bolivarian Republic of). The representative of Tunisia made a statement on behalf of the Group of 77 and China. The representative of Egypt made a statement on behalf of the Group of African States. The representative of the European Union, in its capacity as permanent observer, made a statement on behalf of the European Union and its member States. Further statements were made by the observers for APSCO, CEOS, the European Telecommunications Satellite Organization, For All Moonkind, the Hague Institute for Global Justice, IAF, IISL, the National Space Society, the Open Lunar Foundation, SGAC, the Square Kilometre Array Observatory, UNIDROIT, UNISEC-Global and World Space Week Association.

18. The Committee expressed its appreciation to Marius-Ioan Piso (Romania), the outgoing Chair, Francis Chizea (Nigeria), the outgoing First Vice-Chair, and Nicolás Botero Varón (Colombia), the outgoing Second Vice-Chair/Rapporteur, for their excellent work and achievements during their terms of office.

19. At the 786th meeting, on 1 June, the Chair delivered a statement in which he recalled that 2022 had marked the sixty-fifth anniversary of the launch into outer space of the first human-made Earth satellite, Sputnik 1, the fifty-fifth anniversary of the entry into force of the Outer Space Treaty and the fiftieth anniversary of the Land Remote Sensing Satellite (Landsat) programme. He highlighted the importance of strengthening international collaboration, promoting compliance with the United Nations treaties on outer space, fostering fair access to space and encouraging knowledge-sharing initiatives. He also stressed the role of research and development in space science and technology as fundamental for sustainable development on Earth, the protection and preservation of the outer space environment and the exploration of the universe.

20. The Chair warmly welcomed Angola, Bangladesh, Kuwait, Panama and Slovenia as the newest members of the Committee, which brought the membership of the Committee to the milestone number of 100 member States. The Chair also welcomed the Open Lunar Foundation, the Square Kilometre Array Observatory and UNIDROIT as the newest international intergovernmental and non-governmental organizations with observer status with the Committee.

21. Also at the 786th meeting, the Acting Director of the Office for Outer Space Affairs made a statement in which he reviewed the work carried out by the Office. He stressed how the Office had continued to adapt to the challenges posed by the ongoing coronavirus disease (COVID-19) pandemic, adopting and making use of new solutions and applying them across the range of activities to ensure service delivery and a results-driven approach. The demand for the services provided by the Office to Member States continued to expand, and in that context he underlined the current and upcoming activities of the Office, including those conducted in partnership with various stakeholders, in particular for the benefit of developing countries. The Acting Director also announced that he would retire from the Office in the coming months.

22. The Committee expressed its deep appreciation to the Acting Director of the Office for Outer Space Affairs, Niklas Hedman, who had provided valuable long-standing support for the international cooperation in the peaceful uses of outer space, in particular in the role of Secretary of the Committee and its subcommittees for more than a decade and a half.

23. The Committee heard the following presentations:

- (a) “CONAE space plan”, by the representative of Argentina;
- (b) “Projection of the national space system”, by the representative of Chile;
- (c) “BeiDou Navigation Satellite System: sharing of application cases”, by the representative of China;
- (d) “The Iranian CanSat competition”, by the representative of the Islamic Republic of Iran;
- (e) “Progress and plans for deep space human exploration”, by the representative of the United States;
- (f) “The imperative to protect cultural heritage in outer space”, by the observer for For All Moonkind;
- (g) “A united voice for youth in space policy and advocacy: introducing the Space Generation Advocacy and Policy Platform (SGAPP)”, by the observer for SGAC.

24. The Committee noted that space activities had continued to intensify in recent years, with increasingly more actors entering the space arena and significantly more objects being launched into outer space.
25. The Committee agreed that, together with its subcommittees, and with the support of the Office for Outer Space Affairs, the Committee remained the unique international forum tasked with promoting international cooperation in the exploration and peaceful use of outer space.
26. The Committee agreed that the increasing number of States becoming members of the Committee in recent years was a clear signal of the international recognition of the value of the work of the intergovernmental body.
27. Some delegations expressed the view that a rules-based international system, with the United Nations at its core, and a multilateral approach to international affairs should be supported, and that the Committee contributed to that system, including through the development of international space law, international norms and standards, guidelines, best practices and other transparency and confidence-building measures.
28. The view was expressed that, with a view to addressing the challenges arising from the continuous development of outer space activities, it was imperative to uphold an international order in outer space based on international law, with the United Nations at its core.
29. 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 Committee and its subcommittees to achieve the common objectives of all nations on space-related issues.
30. Some delegations expressed the view that universal and equal access to outer space for all countries without discrimination, equitable and rational use of outer space for the benefit and in the interests of all humankind, the principle of non-appropriation of outer space, including the Moon and other celestial bodies, international cooperation in the development of space activities, and the prevention of an arms race in outer space and placement of weapons of any kind in outer space were the most important principles that should govern the activities in outer space.
31. Some delegations expressed the view that while some countries had reached important milestones in space activities, others were only starting to develop their own space programmes and policies and that it was crucial that developing countries not be left behind or unfairly disadvantaged by space exploration efforts. 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.
32. Some delegations underlined the contribution of the Space Climate Observatory in the evaluation of space data to respond to climate change. It was noted that the Space Climate Observatory was available to participate in the deliberations for preparing the Committee's contribution to the Summit of the Future.
33. Some delegations expressed the view that the use and exploration of outer space were to be carried out exclusively for peaceful purposes, with a view to realizing a shared vision for the future, for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and in conformity with the body of applicable international law.
34. Some delegations expressed the view that the Committee should give more dedicated consideration to addressing the challenges posed by the placement of megaconstellations in low Earth orbit, including those considerations related to the sustainable and equitable use of orbits and frequencies as well as accessibility of outer space.

35. Some delegations expressed the view that the Scientific and Technical Subcommittee and the Legal Subcommittee should work more closely with each other, in particular on overlapping and interrelated subject matters.
36. Some delegations noted with regret one State's decision to conduct the intentional destruction of its own spacecraft with a direct-ascent anti-satellite missile, resulting in debris that threatened human and robotic space flight, noted the need to implement the Space Debris Mitigation Guidelines of the Committee and debris-related Guidelines for the Long-term Sustainability of Outer Space Activities to their fullest extent, and welcomed commitments to refrain from destructive direct-ascent anti-satellite missile testing.
37. The view was expressed that the Committee and its secretariat should continue initiatives and study ways to further enable closer coordination and engagement on the work of the two subcommittees, and with bodies that were closely interlinked with the mandate of the Committee, such as other United Nations bodies and other international organizations, when applicable, as this would ensure coordinated, relevant and timely resolution of cross-cutting issues.
38. Some delegations expressed the view that the growing support for the Artemis Accords on the Principles for Cooperation in the Civil Exploration and Use of the Moon, Mars, Comets, and Asteroids for Peaceful Purposes demonstrated the value of the Accords as an operational framework to ensure that the peaceful exploration of space remained transparent, safe and sustainable.
39. Some delegations expressed the view that cooperation on the international lunar research station initiated by China and the Russian Federation was advancing and provided new opportunities for space exploration for all interested partners.
40. Some delegations reiterated their opposition to the establishment of a new regional centre for space science and technology education in the Eurasian region, affiliated to the United Nations, hosted by the Roscosmos Corporate Academy, as proposed by the Government of the Russian Federation. Those delegations were also of the view that although the General Assembly, in its resolution [76/76](#), had noted with satisfaction the progress in the establishment of the regional centre, in the light of recent developments, they were not in a position to accept any affiliation of that regional centre to the United Nations.
41. The view was expressed that the Committee, at its sixty-fourth session, had noted that the evaluation mission on the proposed establishment of the regional centre had resulted in a recommendation to accept the offer of the Russian Federation to establish the regional centre, that the Committee had welcomed the progress on the establishment of the regional centre, and that therefore no additional agreement was required by the Committee. The delegation expressing that view also informed the Committee that the centre was already operational and providing services. Over 100 applicants from various countries in the region have been successfully accepted by the Centre as students.
42. Some delegations called for refraining from adding a political dimension to space technologies or services, in particular by naming a launcher after a region involved in a conflict.
43. The view was expressed that spacefaring nations possessing advanced space launch technologies preserve the full right to name their space launch vehicles and spaceships as they find appropriate.
44. The Committee welcomed the publication by the Office for Outer Space Affairs of its *Annual Report 2021*, which contained a comprehensive account of the Office's activities, cooperation, partnership programmes and achievements in 2021.
45. The Committee noted with appreciation the exhibitions presented in the Rotunda of the Vienna International Centre in conjunction with its sixty-fifth session: an exhibition on the E.T.PACK project, a technological solution for the space debris proliferation problem, organized by Spain; an exhibition on the Artemis Accords,

organized by the United States; and an exhibition entitled “Inspiring stars”, on the concept of inclusion, organized by IAU.

46. The Committee noted with appreciation the donation by the Government of Poland to the permanent exhibit of the Office for Outer Space Affairs of a painting of Manfred Lachs, the first Chair of the Legal Subcommittee and one of the most influential scholars in international space law.

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

(a) “Advancing #GenderEquality in Space”, organized by the Republic of Korea and the Office for Outer Space Affairs;

(b) “Emerging Space@COPUOS 2022”, organized by Slovakia;

(c) “Awareness-raising and capacity-building related to the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities (LTS Guidelines): stakeholder study report”, organized by the United Kingdom and the Office for Outer Space Affairs;

(d) “Youth space exchanges and opportunities”, organized by the United States and the Office for Outer Space Affairs;

(e) “Progressing lunar policy: a round table”, organized by Moon Village Association, the Open Lunar Foundation, the Secure World Foundation and SGAC;

(f) “Access to Space for All: opportunities for Member States”, organized by the Office for Outer Space Affairs;

(g) “Virtual briefing for COPUOS delegates: what is UNOOSA and why is it relevant for you?”, organized by the Office for Outer Space Affairs.

G. Adoption of the report of the Committee

48. After considering the various items before it, the Committee, at its 801st meeting, on 10 June 2022, 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

49. In accordance with General Assembly resolution [76/76](#), 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.

50. The representatives of Brazil, Canada, China, India, Indonesia, Iran (Islamic Republic of), Japan, Mexico, the Netherlands, the Republic of Korea, the Russian Federation, the United Arab Emirates, the United States and Venezuela (Bolivarian Republic of) made statements under this item. A statement was also made by the observer for the Secure World Foundation. During the general exchange of views, statements relating to the item were also made by other member States.

51. The Committee heard the following presentations:

(a) “Micro-space debris detection with ADLER-1”, by the representative of Austria;

(b) “Mapping collision risk in low Earth orbit”, by the representative of the United States;

(c) “Opportunities and practices to enhance space safety and sustainability”, by the representative of the United States;

(d) “Safety norms for space security: how the development of norms can strengthen the peaceful purposes principle”, by the observer for SGAC.

52. 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.

53. 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.

54. 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.

55. 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.

56. Some delegations expressed the view that although the Committee was not a forum dedicated to disarmament in outer space, it still played a fundamental and unique role in global governance and international cooperation on outer space and should strengthen that role.

57. Some delegations expressed the view that the Committee’s work in a wide range of fields ensured the peaceful use of outer space and was a key factor in preventing the 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.

58. 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.

59. 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) and the work of the open-ended working group on reducing space threats through norms, rules and principles of responsible behaviours because it deepened the discussion on space norms.

60. Some delegations expressed the view 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 delegations 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.

61. 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.

62. Some delegations reiterated that more consideration should be given to 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, as it paved the way for ensuring the use of outer space for peaceful purposes.

63. Some delegations expressed the view that the intentional destruction of space objects generating large amounts of space debris indiscriminately increased the risk of collisions of on-orbit space objects and was an irresponsible behaviour that would undermine the sustainable and stable use of outer space.

64. Some delegations expressed concern about anti-satellite tests that generated space debris and emphasized that States should refrain from using or testing those capabilities. The delegations expressing that view were also of the view that the recent announcement by the United States, followed by Canada, committing not to conduct destructive direct-ascent anti-satellite missile testing was a positive step towards formulating norms of responsible behaviour in outer space.

65. The view was expressed that it was doubtful that such an initiative was effective for maintaining space for peaceful purposes. The same delegation expressed the view that the commitment not to test certain types of anti-satellite weapons did not mean a commitment not to use them.

66. The view was expressed that the Committee should remain a platform for non-politicized discussions and should promote the development of doctrinal guidelines of States and intergovernmental organizations aimed at preserving outer space for peaceful purposes, thereby maintaining international peace and security and strengthen international cooperation and mutual understanding.

67. The view was expressed that the Committee should focus on the challenges posed by the development of commercial space flight, promote the strengthening of effective national regulations on commercial space participation in military activities, and ensure that space activities of non-governmental entities were consistent with peaceful purposes, and at the same time enhance transparency at the international level. It was also necessary to attach importance to the safety of outer space activities and strengthen research, hold extensive discussions and seek solutions to the safety risks posed by megaconstellations.

68. The Committee noted that Africa Space Week would be held in Nairobi in September 2022 and would provide an innovative platform for African space industry stakeholders to deliberate on expanding Africa's space industry and strengthen efforts to promote and enable intra-Africa and international cooperation on space activities.

69. The Committee noted that the twenty-seventh session of the Asia-Pacific Regional Space Agency Forum, on the theme "Expand space innovation through diverse partnerships", had been held online from 30 November to 3 December 2021.

70. The Committee noted that the fifteenth meeting of the Council of APSCO had been held online from 9 to 11 November 2021. The Council had approved the APSCO project implementation plan for 2021–2025 and the amendment of the rules on cooperative activities of APSCO.

71. The Committee recommended that, at its sixty-sixth session, in 2023, 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-ninth session

72. The Committee took note with appreciation of the report of the Scientific and Technical Subcommittee on its fifty-ninth session ([A/AC.105/1258](#)), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution [76/76](#).

73. The Committee expressed its appreciation to Juan Francisco Facetti (Paraguay) for his able leadership as Chair during the fifty-ninth session of the Subcommittee.

74. The representatives of Australia, Austria, Brazil, Canada, Chile, China, Finland, Germany, Indonesia, Iran (Islamic Republic of), Italy, Japan, the Russian Federation, South Africa, Switzerland, the United Kingdom, the United States and Venezuela (Bolivarian Republic of) made statements under the item. The representative of Morocco made a statement on behalf of the Group of 77 and China. The observer for IAU also made a statement. During the general exchange of views, statements relating to the item were also made by other member States.

75. The Committee heard the following presentations:

(a) “HERA mission: three-dimensional vision processing and visualization methods to analyse the DART impact on Dimorphos”, by the representative of Austria;

(b) “Real-time Earth observation for responsive disaster management”, by the representatives of Austria;

(c) “LEO megaconstellations are deeply influencing space activities of the world”, by the representative of China;

(d) “The impact of the Double Asteroid Redirection Test”, by the representative of the United States.

1. United Nations Programme on Space Applications

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

76. 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.105/1258](#), paras. 54–74).

77. The Committee noted that the priority areas of the Programme were environmental monitoring, natural resource management, satellite communications, disaster risk reduction, the use of global navigation satellite systems (GNSS), the Basic Space Science Initiative, climate change, the Basic Space Technology Initiative, the Human Space Technology Initiative, and biodiversity and ecosystems.

78. The Committee took note of the activities of the Programme carried out in 2021 and planned for 2022, as presented in the report of the Subcommittee ([A/AC.105/1258](#), paras. 59–69).

79. The Committee expressed its appreciation to the Office for Outer Space Affairs for the manner in which the activities of the Programme had been implemented, in particular, in 2021, with the limited funds available. The Committee also expressed its appreciation to the Governments and intergovernmental and non-governmental organizations that had sponsored the activities. The Committee noted with satisfaction that further progress was being made in the implementation of the activities of the Programme for 2022.

80. The Committee expressed its concern that the financial resources available to the United Nations Programme on Space Applications remained limited and emphasized that it was important that the Office was equipped with the necessary resources, including sufficient funding, to assist a greater number of countries in having access to the benefits of space science and technology and its applications in line with the spirit of the Outer Space Treaty as well as the “Space2030” Agenda.

81. The Committee noted that CubeSats developed by teams from Kenya, Guatemala and Mauritius, winners in the first, second and third rounds, respectively, had been deployed from the International Space Station through the United Nations/Japan Cooperation Programme on CubeSat Deployment from the International Space Station Japanese Experiment Module, known as “KiboCUBE”. Teams from Indonesia, the Republic of Moldova and the Central American Integration System (SICA), winners in the third, fourth and fifth rounds, respectively, were currently developing their CubeSats under the programme. The Committee further noted that the KiboCUBE programme had become an essential tool for capacity-building in space science and technology and that, in that regard, the Office for Outer Space Affairs and the Japan Aerospace Exploration Agency (JAXA) had announced the extension of the KiboCUBE programme until the end of December 2024 and had added a new educational opportunity called “KiboCUBE Academy”.

82. The Committee noted that the United Nations Programme on Space Applications 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 access to space data and training on their use, including the use of astronomical data, placing those countries in the international space arena and enabling in-depth capacity-building in space science and technology.

83. 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.

84. The Committee noted with satisfaction that the United Nations Programme on Space Applications had continued to emphasize, promote and foster cooperation with Member States at the regional and global levels to support the regional centres for space science and technology education, affiliated to the United Nations.

85. 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 Education – 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

86. The Committee noted with satisfaction that the International Satellite System for Search and Rescue (COSPAS-SARSAT), which provided worldwide coverage of emergency beacons, carried on vessels and aircraft and by individual users around the world, currently had 43 member States and 2 participating organizations. The Committee also noted that in 2021 the programme had helped to rescue 330 people from potentially life-threatening situations throughout the United States and its

surrounding waters, and since 1982, the start of the programme, COSPAS-SARSAT had supported more than 48,000 rescues worldwide.

2. Space technology for sustainable socioeconomic development

87. 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.105/1258](#), paras. 79–88).

88. The Committee endorsed the decisions and recommendations of the Subcommittee on the item ([A/AC.105/1258](#), para. 88).

89. 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 Prakash Chauhan (India) as Chair ([A/AC.105/1258](#), annex I).

90. 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 and the “Space2030” Agenda, in particular as part of efforts to support sustainable economic growth, improve the 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, including sufficient funding, 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

91. 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.105/1258](#), paras. 89–98).

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

93. In the course of the discussions, delegations were informed of the critical role that remote sensing played in well-informed decision-making and of cooperation programmes at the national and international levels that utilized space-derived data and applications. Examples included services for territorial mapping and border security, land-use planning, management of natural and mineral resources, forestry, the identification and recording of property rights, tools for mapping vegetation, crops and soil and watershed and hydrologic features to support precision agriculture and rural planning, the identification of arable land, irrigation and groundwater detection, meteorology and weather forecasting and early warning of severe storms, disaster management and emergency response, climate change and environmental protection, oceanographic temperature and sea level monitoring, monitoring air quality for aerosols and pollutants, including the monitoring of essential climate variables to contribute to international studies, promoting sustainable development, ecosystems management, glacier and snowfall mapping and studies, crop and soil monitoring for irrigation and groundwater detection, space weather monitoring and early warning systems to protect critical infrastructure and animal movement monitoring.

94. The Committee noted that important initiatives such as the Group on Earth Observations (GEO) and CEOS played an important role in promoting and facilitating the sharing of remote sensing data, and, in this regard, welcomed the continued commitment of many Member States in that area.

4. Space debris

95. 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.105/1258](#), paras. 99–123).

96. The Committee noted with satisfaction that 2022 marked the fifteenth anniversary of the endorsement by the General Assembly, in its resolution [62/217](#), of the Space Debris Mitigation Guidelines of the Committee, and urged those countries that had not yet done so to consider implementing the Guidelines on a voluntary basis.

97. The Committee also noted with satisfaction that many States and international intergovernmental organizations were implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines and the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee ([A/74/20](#), annex II) and that a number of States had harmonized their national space debris mitigation standards with those guidelines.

98. In addition, the Committee noted that some States were using the Space Debris Mitigation Guidelines of the Committee and/or the Space Debris Mitigation Guidelines of the Inter-Agency Space Debris Coordination Committee (IADC), 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 were cooperating under the space surveillance and tracking support framework funded by the European Union and in the space safety programme of ESA.

99. 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.

100. 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 in 2022.

101. 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.

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

103. 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.

104. 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.

105. 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.

106. Some delegations expressed the view that advanced spacefaring countries and other actors, especially those deploying megaconstellations, to pay due regard to the application of the relevant voluntary measures such as the Space Debris Mitigation Guidelines and the Guidelines for the Long-term Sustainability of Outer Space

Activities and underscored the importance of strengthening the capacity of developing countries for the voluntary implementation of those measures.

107. Some delegations expressed the view 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.

108. The view was expressed that in discussing debris mitigation as well as space traffic management, it was necessary to promote transparency and confidence-building measures in space activities to avoid miscalculations and misunderstandings.

5. Space-system-based disaster management support

109. 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.105/1258](#), paras. 124–136).

110. 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 coronavirus disease (COVID-19) pandemic.

111. 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 and capacity-strengthening efforts, including the generation of tailored space-based information for countries in need in 2021 (see [A/AC.105/1250](#)), which were carried out 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.

112. 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.

113. The Committee noted the holding of several international conferences recently related to disaster management, such as the Third Multi-Hazard Early Warning Conference, which was held in Bali, Indonesia, on 23 and 24 May, and the ESA Living Planet Symposium, held in Bonn, Germany, from 23 to 27 May, highlighting the use of space technologies in disaster management.

114. The Committee also noted the support that States had been providing to the Working Group on Disasters of CEOS and the international COSPAS-SARSAT programme.

115. The Committee noted with appreciation the financial and staff resource contributions made by China, France and Germany to UN-SPIDER and the in-kind contributions, including the provision of experts, made by some States members of the Committee and by the regional support offices in 2021 in support of the activities conducted by the Office for Outer Space Affairs through UN-SPIDER, as well as their efforts to share experience with other interested countries. In that regard, the Committee 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

116. The Committee took note of the discussion of the Subcommittee under the item on recent developments in global navigation satellite systems, as reflected in the report of the Subcommittee ([A/AC.105/1258](#), paras. 137–157).

117. The Committee had before it the note by the Secretariat entitled “Fifteenth meeting of the International Committee on Global Navigation Satellite Systems” ([A/AC.105/1251](#)).

118. The Committee noted that the International Committee on Global Navigation Satellite Systems (ICG), as an optimal cooperation mechanism, offered the benefit of providing a flexible forum in which GNSS providers and users discussed all matters regarding the use of multiple GNSS signals.

119. The Committee noted the work of ICG aimed at creating an interoperable, multi-GNSS space service volume, which would enable improved navigation for space operations beyond geostationary Earth orbit and that GNSS services were expected to be employed in cislunar space.

120. The Committee noted 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 annual meetings of ICG and its Providers' Forum.

121. The Committee noted that the fifteenth meeting of ICG and the twenty-fourth meeting of the Providers' Forum, organized by the Office for Outer Space Affairs, had been held in Vienna from 27 September to 1 October 2021 and that the sixteenth meeting of ICG would be hosted by the United Arab Emirates and be held in Abu Dhabi, from 9 to 14 October 2022.

7. Space weather

122. 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.105/1258](#), paras. 158–172).

123. 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 was increasingly dependent. 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 so that the long-term sustainability of outer space activities was ensured.

124. 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 its threat, with the goal of facilitating the implementation of the space weather-related guidelines B.6 and B.7 of the Guidelines for the Long-term Sustainability of Outer Space Activities.

125. 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-ninth session of the Subcommittee, in 2022, as well as in the intersessional period. The Committee also noted the document submitted to the Subcommittee entitled “Draft final report of the Expert Group on Space Weather: towards improved international coordination for space weather services” ([A/AC.105/C.1/L.401](#)), which contained six high-level recommendations, and expressed its appreciation to the Rapporteur of the Expert Group, Ian Mann, for his dedicated work.

126. The Committee endorsed the decision that was agreed by the Subcommittee to consider the report (A/AC.105/C.1/L.401) as a final report of the Expert Group and to issue the report under the symbol A/AC.105/C.1/122, as reflected in the report of the Subcommittee (A/AC.105/1258, para. 172).

127. Some delegations expressed the view that it was important for the international space weather community to find a mechanism to coordinate and continue its work.

8. Near-Earth objects

128. 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.105/1258, paras. 173–190).

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

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

131. 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.

132. The Committee noted the launch of the first-ever planetary defence technology demonstration mission, the Double Asteroid Redirection Test (DART) of the National Aeronautics and Space Administration (NASA) of the United States, in November 2021, which would demonstrate the kinetic impact deflection technique. The Committee also noted that, as a follow-up, the Hera mission of ESA was planned to encounter the Didymos asteroid system in 2026 to provide a valuable assessment of the deflection technique test of the DART mission.

133. 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 websites (<http://iawn.net> and <http://smpag.net>).

134. The Committee noted that the seventh International Academy of Astronautics Planetary Defense Conference had been held from 26 to 30 April 2021, hosted by the Office for Outer Space Affairs in cooperation with ESA, and that the eighth Planetary Defense Conference was to be held at the Vienna International Centre from 3 to 7 April 2023, hosted by the Office in cooperation with ESA and the host country, Austria.

9. Long-term sustainability of outer space activities

135. 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.105/1258, paras. 191–209) and endorsed the decisions of the Subcommittee (A/AC.105/1258, paras. 208 and 209) and of the Working Group on the Long-term Sustainability of Outer Space Activities under the chairmanship of Umamaheswaran R. (India) (A/AC.105/1258, annex II, paras. 7–9 and appendix).

136. The Committee had before it the following:

(a) Conference room paper by the Russian Federation entitled “Implementation of the LTSSA Guideline ‘A.1 Adopt, revise and amend, as necessary, national regulatory frameworks’” (A/AC.105/2022/CRP.9);

(b) Conference room paper by the Russian Federation entitled “Contribution of the Centre for Space Science and Technology Education in the Eurasian Region to strengthening the capacity of COPUOS member States to implement the Guidelines for the Long-Term Sustainability of Outer Space Activities” (A/AC.105/2022/CRP.10);

(c) Conference room paper by the Russian Federation entitled “Considerations on key unresolved tasks of ensuring safety of space operations in the context of the long-term sustainability of outer space activities” (A/AC.105/2022/CRP.11).

137. The Committee recalled with appreciation that, at the fifty-ninth session of the Subcommittee, the Working Group on the Long-term Sustainability of Outer Space Activities had agreed on and adopted its terms of reference, methods of work and workplan (A/AC.105/1258, annex II, para. 7, and appendix).

138. The Committee also recalled that the Working Group would attach equal importance to each of the three elements of the guiding framework (A/AC.105/1258, annex II, appendix, paras. 6 and 7).

139. The Committee further recalled that the Working Group had agreed to hold informal consultations, in a hybrid format, in November 2022 (A/AC.105/1258, annex II, para. 9).

140. The Committee was informed that a number of States members had already either completed, or were currently completing, internal assessments of their implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space.

141. The Committee was also informed of a number of national, regional and international scientific, technical, legal and policy measures and initiatives that had been, or were currently being undertaken, to implement the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee.

142. The Committee was further informed about the continuation of the project of the Office for Outer Space Affairs entitled “Awareness-raising and capacity-building related to the implementation of the LTS Guidelines”, made possible through financial support provided by the United Kingdom, which had, in the second phase of the project, produced a stakeholder study report (see spacesustainability.unoosa.org).

143. Some delegations expressed the view that the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee constituted best practices for the safe and responsible use of outer space and were critical to maintaining outer space for future generations.

144. Some delegations expressed the view that it was important to share experiences and review best practices and lessons learned in the practical national implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee because it would enhance overall communication, international cooperation, awareness-raising and capacity-building.

145. Some delegations expressed the view that it would be useful for the Legal Subcommittee to carry out a review and assessment of the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee.

146. The view was expressed that the Committee on the Peaceful Uses of Outer Space had become a principal forum for space sustainability discussions, setting itself apart from other forums by developing a “bottom-up” approach to addressing safe and sustainable practices with regard to the use of space.

147. The view was expressed that there were multiple parallel platforms considering the subject matter that had been under the purview of the Committee for years, that this included topics that were within the mandate of the Working Group on the Long-term Sustainability of Outer Space Activities, and that this constituted a direct duplication of functions. The delegation expressing that view was also of the view that international work undertaken in accordance with the inviolable principle of consensus was the only way to ensure the long-term sustainability of outer space activities in the interest of the world community as a whole.

148. The view was expressed that the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee were clear, practical and proven, meaning that both their implementation and efficacy had been demonstrated by States and international intergovernmental organizations, and that the Guidelines neither undermined existing legal obligations nor hampered the use of outer space, in particular its use by emerging space actors.

149. The view was expressed that, above all, the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee were a positive indication of efforts to alleviate environmental degradation as they contained recommendations that promoted more environmentally positive practices in the design and operation of space missions.

150. The view was expressed that the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee were the first complete body of rules governing contemporary space activities and that they must be kept up-to-date, or supplemented, in view of current and future challenges posed by the development of economic and scientific activity generated around space resources.

151. The view was expressed that Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee had led to improved domestic conversations on the implications of space sustainability for pursuing national space activities and for the development of stronger regulatory frameworks, along with coordinated national positions.

152. The view was expressed that developing countries should not be left behind or unfairly disadvantaged by space exploration efforts and that the only way to ensure the sustainability of outer space activities was to continue to deliver the benefits derived from those activities to humanity as a whole through enhanced cooperation and collaboration.

153. The view was expressed that, in order to achieve the main objectives of long-term sustainability of outer space activities, it was important for the Scientific and Technical Subcommittee to concentrate on areas such as building and promoting capacities, as well as the transfer of technology to developing countries, all within the framework of international cooperation, and for the full, effective and non-discriminatory operationalization of the Guidelines for the Long-term Sustainability of Outer Space Activities.

154. The view was expressed that understanding what was stopping countries from being able to implement the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee was critical to understanding the form of future capacity-building activities.

155. The view was expressed that plans of the Working Group on the Long-term Sustainability of Outer Space Activities to identify and study challenges and consider possible new guidelines were of relevance due, among other things, to the interest of States and commercial companies in projects for the active removal of space debris, as well as the development of plans and programmes for the exploration and use of the Moon. The delegation expressing that view recalled that further substantive inputs related to the Working Group could be found in conference room papers A/AC.105/2022/CRP.9, A/AC.105/2022/CRP.10 and A/AC.105/2022/CRP.11.

156. The view was expressed that consideration of the issues of space debris, dark and quiet skies for science and society, near-Earth objects and the use of nuclear power sources in outer space could contribute to ensuring the long-term sustainability of outer space activities. The delegation expressing that view was also of the view that therefore, deliberations on those issues should take into account the Guidelines for the Long-term Sustainability of Outer Space Activities.

157. The view was expressed that the long-term sustainability of outer space activities should be retained as a regular item on the agenda of the Scientific and Technical Subcommittee to ensure that the discussion of the technical aspects on which progress had been made in the Working Group on the Long-term Sustainability of Outer Space Activities continued and received greater attention from all delegations.

158. The view was expressed that the Space Sustainability Rating, developed by a consortium led by the World Economic Forum and operated by the Federal Institute of Technology in Lausanne, Switzerland, would contribute to and reinforce responsible and sustainable behaviour in outer space.

10. Future role and method of work of the Committee

159. 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.105/1258](#), paras. 210–233).

160. 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)).

11. Use of nuclear power sources in outer space

161. 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.105/1258](#), paras. 224–237).

162. The Committee endorsed the 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 extension of the Working Group’s multi-year workplan by one year in order to finalize the report to the Subcommittee on the outcome of the multi-year workplan and explore options for gathering information about advances in knowledge, practices and plans for future space nuclear power source applications ([A/AC.105/1258](#), para. 237, and annex III).

163. The Committee noted that, in that connection, a series of intersessional meetings had been held by the Working Group, facilitated by the secretariat, and that the Working Group had held two informal meetings on the margins of the sixty-fifth session of the Committee, on 7 and 8 June 2022, to advance its work.

164. The Committee acknowledged the fact that some States and an international intergovernmental organization were developing, or considering developing, legal and regulatory instruments on the safe use of nuclear power sources in outer space, taking into account the content 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, which was developed jointly by the Subcommittee and the International Atomic Energy Agency.

165. The Committee in that regard also noted the importance of the work of the Working Group to allow for the continued sharing of information to promote further understanding and development of effective processes to ensure the safe use of nuclear power in space, given the renewed interest in the use of nuclear power sources in outer space that had opened the solar system to exploration, making it possible to observe and understand dark, distant planetary bodies that would otherwise be

unreachable, as well as the use of nuclear power sources for the in-space propulsion of spacecraft as a potential technology for crewed and cargo missions to Mars and scientific missions to the outer solar system, enabling faster and more robust human and robotic missions.

166. Some delegations expressed the view that 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 recommend to the Subcommittee the new arrangements that would be needed to take forward the development of safety guidelines for potential future uses of nuclear power sources in outer space.

12. Space and global health

167. 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.105/1258](#), paras. 238–249).

168. 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 decisions regarding the establishment of the Space and Global Health Platform and the Space and Global Health Network ([A/AC.105/1258](#), para. 249, and annex IV, para. 7).

169. The Committee expressed appreciation to the delegation of Switzerland for facilitating informal consultations on the text of the draft resolution on space and global health, as contained in [A/AC.105/L.328](#), during the current session of the Committee.

170. The view was expressed that the text of the draft resolution could have been further enhanced through the acknowledgement of the importance of human medical research for improving understanding of ecology, psychology, ergonomics, genetics, physical education, nutrition and other sciences. The delegation expressing that view also stressed the non-discriminatory character of international cooperation in the domain of global health and emphasized that goals to develop and improve health-care systems should not be hindered by political motivations.

171. Some delegations expressed the view that the draft resolution on space and global health (see annex), effectively captured the crucial role of space data and technology in the public health domain. Those delegations welcomed the submission of that draft resolution for adoption and underlined the importance of advancing that work in order to share the benefits of space activities for global health.

172. At its 790th meeting, on 3 June 2022, the Committee endorsed the draft resolution on space and global health, contained in annex I to the present report. The Committee noted that the draft resolution, as endorsed, would be submitted to the General Assembly at its seventy-seventh session, in 2022, for adoption by the Assembly under the agenda item entitled “International cooperation in the peaceful uses of outer space”.

173. 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.

174. 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, telehealth and communication, as well as methods of coping with social isolation.

175. The Committee welcomed the report of the Working Group on Space and Global Health on the work conducted under its multi-year workplan ([A/AC.105/C.1/121](#)) and expressed its gratitude to the Chair of the Working Group for his dedicated efforts and able leadership in guiding the work of the Working Group under its multi-year workplan.

176. The Committee took note with appreciation of the round table on the topic “Advancing global health using space technologies”, organized by Switzerland during the Geneva Health Forum held in May 2022, during which the Space and Global Health Platform and the international Space and Global Health Network were presented, with the participation of the Office for Outer Space Affairs, the World Health Organization, the United Nations Satellite Centre and GEO.

177. The Committee noted that Member States had been invited to identify experts and encourage them to participate in the Space and Global Health Network.

178. The Committee agreed that the agenda item entitled “Space and global health” was to be made a regular item on the agenda of the Subcommittee from 2023 onwards.

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

179. 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.105/1258](#), paras. 250–261).

180. 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. General exchange of views on dark and quiet skies for science and society

181. The Committee took note of the discussion of the Subcommittee under the item entitled “General exchange of views on dark and quiet skies for science and society”, as reflected in the report of the Subcommittee ([A/AC.105/1258](#), paras. 262–276).

182. The Committee welcomed the inclusion of the general exchange of views on dark and quiet skies for science and society on the agenda of the Scientific and Technical Subcommittee as a single issue/item for discussion, as an important recognition of the fact that astronomical observations for both optical and radio astronomy were an essential aspect of space activities and should be protected from interference.

183. The Committee welcomed the contributions made to the discussion by the United Nations/Spain/IAU Conference on Dark and Quiet Skies for Science and Society (see [A/AC.105/1255](#) and [A/AC.105/1257](#)) and the industry symposium organized by the Office for Outer Space Affairs on the topic of dark and quiet skies on the margins of the fifty-ninth session of the Scientific and Technical Subcommittee ([A/AC.105/1258](#), paras. 43–48) and took note of the recommendations resulting from those events.

184. The Committee noted the initiative taken by IAU in inviting delegations to engage with its recently opened Centre for the Protection of the Dark and Quiet Sky from Satellite Constellation Interference, which began operation on 1 April 2022, aimed at coordinating collaborative multidisciplinary international efforts with institutions and individuals worldwide to help mitigate the negative impact of satellite constellations on ground-based optical and radio astronomy observations as well as on humanity's enjoyment of the night sky.

185. The Committee noted the efforts to protect radio telescopes and radio quiet zones from satellite constellations carried out in some countries and the continuous engagement between the astronomical and satellite communities, as well as the importance of continued cooperation among all relevant actors, in particular the space industry, satellite constellation operators and the astronomical community, to ensure the protection of the dark and quiet sky from satellite constellation interference.

186. Some delegations expressed the view that multi-stakeholder efforts to develop practical solutions to address the unintended impacts of satellite constellations on astronomy were needed.

187. The view was expressed that the adverse effects of satellite constellations on the visibility of the night skies for ground-based astronomy had not been adequately considered and that the matter, which fell within the mandate of the Committee, called for an internationally agreed regulation.

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

188. The Committee took note of the discussion of the Subcommittee under the item on the draft provisional agenda for its sixtieth session, as reflected in the report of the Subcommittee ([A/AC.105/1258](#), paras. 277–281).

189. The Committee endorsed the recommendations and decisions on the item made by the Subcommittee ([A/AC.105/1258](#), paras. 279–281).

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

1. Adoption of the agenda.
2. Statement by the Chair.
3. General exchange of views and introduction of reports submitted on national activities.
4. United Nations Programme on Space Applications.
5. Space technology for sustainable socioeconomic development.
6. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment.
7. Space debris.
8. Space-system-based disaster management support.
9. Recent developments in global navigation satellite systems.
10. Space weather.
11. Near-Earth objects.
12. Long-term sustainability of outer space activities.

(Work for 2023 as reflected in the multi-year workplan of the Working Group on the Long-term Sustainability of Outer Space Activities ([A/AC.105/1258](#), para. 209 and para. 18 of the appendix to annex II))

13. Future role and method of work of the Committee.
14. Space and global health.
15. Use of nuclear power sources in outer space.
(Work for 2023 as reflected in the extended multi-year workplan of the Working Group on the Use of Nuclear Power Sources in Outer Space ([A/AC.105/1258](#), para. 237 and annex III, para. 5))
16. Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union.
(Single issue/item for discussion)
17. General exchange of views on dark and quiet skies for science and society.
(Single issue/item for discussion)
18. Draft provisional agenda for the sixty-first session of the Scientific and Technical Subcommittee.
19. Report to the Committee on the Peaceful Uses of Outer Space.

191. The Committee agreed that the Working Group of the Whole, the Working Group on the Use of Nuclear Power Sources in Outer Space, and the Working Group on the Long-term Sustainability of Outer Space Activities should be reconvened at the sixtieth session of the Scientific and Technical Subcommittee.

192. 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 symposium to be organized by the Committee on Space Research at the sixtieth session of the Subcommittee should be on the topic of climate action and the contribution from space.

C. Report of the Legal Subcommittee on its sixty-first session

193. The Committee took note with appreciation of the report of the Legal Subcommittee on its sixty-first session ([A/AC.105/1260](#)), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution [76/76](#).

194. The Committee expressed its appreciation to Nomfuneko Majaja (South Africa) for her able leadership as Chair during the sixty-first session of the Subcommittee.

195. The representatives of Austria, Brazil, Canada, Chile, China, Finland, Germany, Greece, Indonesia, Iran (Islamic Republic of), Italy, Japan, Luxembourg, the Republic of Korea, the Russian Federation, the United Kingdom, the United States and Venezuela (Bolivarian Republic of) made statements under the item. Statements were also made by the representative of Morocco 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.

196. The Committee heard a presentation entitled “Progress report on the initiatives of the Asia-Pacific Regional Space Agency Forum for enhancing space policy and law capacity in the Asia-Pacific region”, by the representative of Japan.

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

197. 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.105/1260](#), paras. 36–38).

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

198. 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.105/1260](#), paras. 39–51).

199. 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.105/1260](#), annex I, paras. 7–15).

200. Some delegations expressed the view that the discussions in the Working Group on the status and application of the five treaties, on the application of international law to small satellites and on broader issues such as the registration of satellites, as well as the preparation in the Working Group of the wide-ranging document entitled “Bringing the benefits of space to all countries: a guidance document on the legal framework for space activities” ([A/AC.105/C.2/117](#)), had all provided useful assistance to the Subcommittee and significantly contributed to formulating national space legislation and policies in various countries.

201. Some delegations expressed the view that the Legal Subcommittee was the right forum for promoting the progressive development of international space law for the peaceful uses of outer space, and that greater interaction with the Scientific and Technical Subcommittee was necessary to ensure that legal rules remained relevant and applicable to current and planned space activities.

202. Some delegations expressed the view that, in the light of the increasing participation and the evolving potential of the private sector in space activities, the negotiation of an international legally binding instrument that clearly defined and guided commercial activities in outer space could play an important role in expanding the use of outer space and stimulate space activities for the benefit of humanity, and could help to ensure that the rights of developing countries were considered and that those countries were not excluded from the benefits of space exploration.

203. The view was expressed that while the five United Nations treaties on outer space formed the cornerstone of international space law, and greater adherence by a growing number of countries was welcomed, the treaties needed to be further developed and complemented in order to be able to respond to new developments such as the rise of non-governmental entities and private sector actors in outer space.

204. Some delegations expressed the view that international space law was a key enabler that allowed actors to flourish in a safe and predictable environment, and that in that regard, meeting the obligation in the Outer Space Treaty to authorize and supervise the activities of non-governmental entities engaged in space activities played a crucial role in providing the legal certainty necessary to encourage large-scale investments by the private sector in space activities.

205. The view was expressed that, as space activities evolved, the norms, rules and principles that guided outer space activities must also evolve, and that maintaining and updating domestic legislation on the authorization and continuing supervision of non-governmental entities was a way to promote certainty and predictability for private sector actors in outer space. The delegation expressing that view also expressed the view that sharing information on States’ national legislation that addressed obligations under the Outer Space Treaty could encourage a common understanding and approach to the interpretation and implementation of the Treaty.

206. The view was expressed that it was important to complete or implement the recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects, as contained in General Assembly resolution [62/101](#) and the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space ([A/74/20](#), annex II), in order to address the trend of megaconstellations with hundreds or even thousands of unregistered space objects, which could have an impact on ground-based astronomy, the Earth orbit and the Earth's upper atmosphere.

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

207. 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.105/1260](#), paras. 52–77).

208. 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.

209. Some delegations expressed the view that it was not necessary to define or delimit outer space.

210. 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.

211. 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.

212. 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.

213. The view was expressed that there were shortcomings in equitable access to the geostationary orbit. Several actions should therefore be considered, such as the establishment of a dedicated working group of the Legal Subcommittee, modifications to the corresponding agenda item of the Scientific and Technical Subcommittee in order to consider technical aspects of the issue, the establishment of an intergovernmental panel of experts, and closer cooperation with ITU on issues related to the equitable utilization of orbital resources.

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

214. 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 ([A/AC.105/1260](#), paras. 78–91).

215. The Committee endorsed the recommendation of the Subcommittee on this agenda item (see [A/AC.105/1260](#), para. 91).

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

217. The Committee noted with satisfaction the update prepared by the Secretariat to the schematic overview of national regulatory frameworks for space activities (A/AC.105/C.2/2022/CRP.9), which enabled States to gain an understanding of existing national regulatory frameworks, share experiences on national practices and exchange information on national legal frameworks.

218. The Committee took note of the regional efforts by the National Space Legislation Initiative study group of the Asia-Pacific Regional Space Agency Forum. The Initiative had moved on to a second phase that covered the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space (A/74/20, annex II), and new States had joined the study group, making for a total of 12 States involved in the study.

219. The Committee agreed that national space legislation should be developed in accordance with international law.

220. The view was expressed that national space legislation should not include regulations associated with the commercialization of outer space.

5. Capacity-building in space law

221. 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.105/1260](#), paras. 92–102).

222. The Committee endorsed the recommendation of the Subcommittee on this agenda item (see [A/AC.105/1260](#), para. 102).

223. 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.

224. 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.

225. Some delegations expressed the view that capacity-building in space law was a fundamental tool that should be enhanced through international cooperation and that greater support was needed from the Office and member States to foster both North-South and South-South cooperation with a view to facilitating the sharing of knowledge and expertise in the field of space law.

226. 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.

227. The Committee noted with appreciation the United Nations/Chile Conference on Space Law and Policy, held online from 10 to 12 May 2022. It noted that such events contributed to capacity-building in space law by connecting space law experts, practitioners and representatives of government, industry and civil society.

6. Future role and method of work of the Committee

228. 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.105/1260](#), paras. 103–121).

229. The Committee endorsed the decisions of the Subcommittee as reflected in its report ([A/AC.105/1260](#), para. 106).

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

230. 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.105/1260, paras. 122–149).

231. The Committee endorsed the decisions of the Subcommittee as reflected in its report (A/AC.105/1260, para. 149).

232. 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 had been a crucial step in providing guidance on ways to mitigate the problem of space debris, and urged all States Members of the United Nations to consider voluntary implementation of the Guidelines.

233. The Committee noted with satisfaction that some States had taken measures to implement internationally recognized guidelines and standards relating to space debris, including the Space Debris Mitigation Guidelines of the Committee and the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee, through relevant provisions in their national legislation.

234. The view was expressed that the Subcommittee should expand its review of the Space Debris Mitigation Guidelines of the Committee, taking into account that space debris may be generated by space platforms with nuclear power sources on board and that such platforms may collide with space debris. The delegation expressing that view also expressed concern over the atmospheric re-entry of such debris in the southern hemisphere, in particular in the South Pacific region, and called upon launching States to adopt measures to avoid the generation of space debris.

235. The view was expressed that the recommendations of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities, as well as the Guidelines for the Long-term Sustainability of Outer Space Activities in Outer Space, would contribute to the monitoring and mitigation of space debris and to the conduct of space operations in a safe and sustainable manner.

236. The view was expressed that it was necessary to develop new, binding instruments to reduce space debris.

237. Some delegations expressed the view that it was important to address the space debris issue through legal means, and that the Legal Subcommittee should discuss legal issues such as the State of registry, jurisdiction, control and liability for damage to space objects.

238. The view was expressed that the Legal Subcommittee should closely cooperate with the Scientific and Technical Subcommittee to address issues related to the problems of space debris and the long-term sustainability of space activities and to develop internationally recognized definitions of basic terms in the field of human-caused space debris.

239. 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

240. The Committee took note of the discussion within the Legal 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.105/1260](#), paras. 150–164).

241. 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 for Outer Space Affairs 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.

242. Some delegations expressed the view that 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 further enhancing the safety, security and sustainability of outer space activities.

243. 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 upon all spacefaring nations to contribute to promoting and fostering international cooperation on an equitable basis, with particular attention to the interests of developing countries and to strengthening the role of the Committee as the main platform for the exchange of information in the field of international cooperation in the exploration and use of outer space.

244. The view was expressed that non-legally binding United Nations instruments were also an important means of establishing codes of conduct to ensure the safe and sustainable use of outer space. The delegation expressing that view called upon States to support and continue to work with the open-ended working group established by the General Assembly in its resolution [76/231](#) to develop norms, rules and principles of responsible behaviours in outer space.

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

245. 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.105/1260](#), paras. 165–178).

246. The Committee endorsed the recommendation by the 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.

247. Some delegations expressed the view that those phenomena posed a challenge to the safety, security and sustainability of outer space activities.

248. Some delegations expressed the view that the development of a global space traffic management regime, which would contribute to the creation, development and implementation of common international rules, would be timely and essential, since the issues concerning the safety, security and sustainability of outer space activities were a growing concern for all space actors and society.

249. Some delegations expressed the view that it was also important to adopt norms and principles of responsible behaviour in outer space, in particular a general commitment by States to refrain from experiments with anti-satellite weapons producing long-lasting orbital debris.

250. The view was expressed that although the United Nations treaties on outer space as well as the international regulations of ITU already contained basic provisions relevant to the management of space traffic, and although a number of issues related to space traffic management had already been covered by non-binding international instruments, such as the Space Debris Mitigation Guidelines and the Guidelines on the Long-term Sustainability of Outer Space of the Committee, there was an urgent need for the development of an international space traffic governance regime consisting of technical and regulatory provisions that could fill the legal gaps in existing instruments. The delegation expressing that view was also of the view that the Subcommittee was the appropriate forum to develop such a comprehensive multilateral approach with a view to effectively managing space traffic, and that any singular national or regional efforts in that regard carried the risk of legal fragmentation, which could lead to a deterioration of the safety of space activities.

251. Some delegations expressed the view that existing international space law, with the Outer Space Treaty as its cornerstone, provided the basic legal regime for space traffic management. The delegations expressing that view were also of the view that all States should preserve the international order in outer space based on international law and ensure the safety of spacecraft operations.

252. The view was expressed that a definition and delimitation of outer space was not required in the consideration of future space traffic management approaches.

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

253. 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.105/1260](#), paras. 179–202).

254. The Committee noted that the item continued to be on the agenda of the Subcommittee and agreed that its retention contributed to addressing and raising awareness of issues relating to the use of small satellites.

255. The Committee noted that activities involving small satellites should be carried out in compliance with international space law, regardless of the size of those satellites.

256. Some delegations expressed the view that the above-mentioned small-satellite activities should be conducted in compliance with the existing international regulatory framework.

257. The Committee was informed about programmes of States and international organizations focused on the development and operation of small satellites and about regulatory frameworks applicable to the development and use of small satellites.

258. Some delegations expressed the view that, considering the essential role of space objects, regardless of their size, in the socioeconomic development of Member States, the Committee and its Subcommittees should not create an ad hoc legal regime or any other mechanisms that might impose limitations on the design, construction, launch and use of space objects.

259. Some delegations expressed the view that ongoing developments in outer space, such as the rising number of large constellations, should be taken into consideration in discussions on the registration of space objects.

260. The view was expressed that megaconstellations had implications for the long-term sustainability of outer space activities and that the Legal Subcommittee should conduct targeted discussions on that topic.

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

261. 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 the exploration, exploitation and utilization of space resources”, as reflected in the report of the Subcommittee ([A/AC.105/1260](#), paras. 203–230).

262. The Committee endorsed the decisions and recommendations of the Subcommittee and its working group established under this agenda item, which had been reconvened under the chairmanship of Andrzej Misztal (Poland) and the vice-chairmanship of Steven Freeland (Australia) ([A/AC.105/1260](#), annex II, paras. 5–8).

263. The Committee noted that the working group established under that agenda item had been named the Working Group on Legal Aspects of Space Resource Activities and had agreed on its detailed workplan and methods of work, which were contained in the appendix to the report of the Working Group ([A/AC.105/1260](#), annex II).

264. Some delegations expressed the view that the working paper submitted by Austria, Belgium, Czechia, Finland, Germany, Luxembourg, Norway, Portugal and Romania ([A/AC.105/C.2/2022/CRP.21](#)) had contributed to the adoption of the workplan of the Working Group and contained proposals for the international space resources conference to be convened under the auspices of the United Nations, as foreseen in [A/AC.105/1260](#), annex II.

265. Some delegations expressed the view that the exploration, exploitation and utilization of space resources were best coordinated at the international level, through multilateral forums, such as the Committee and its Subcommittees, for the peaceful and sustainable exploration and use of outer space in order to ensure that those activities were carried out in accordance with international law and for the benefit and in the interests of all States.

266. The view was expressed that any output of the Working Group, be it in the form of recommendations or a set of principles, that laid out the framework for space resource utilization activities, should be undertaken in a way that ensured that the rules established by the five United Nations treaties on outer space were applied to space resource activities in a manner that did not impede technological progress and private space activities, while at the same time realizing the promise in article I of the Outer Space Treaty that the exploration and use of outer space shall be carried out for the benefit and in the interests of all States.

267. The view was expressed that the progression of the agenda item on space resources, which had moved from a topic of discussion to a goal-oriented working group, could be a potential model for future methods of work for the Subcommittee as a whole, as it demonstrated the concerted interest of States in working multilaterally to deliver specific and practical outcomes on difficult matters of common concern and provide useful legal guidance for all space actors.

268. The view was expressed that the adoption of the five-year workplan of the Working Group to clarify important provisions of the Outer Space Treaty was to be welcomed. The delegation expressing that view also expressed the view that a step-by-step approach to developing the framework for space resource activities should be used and that the output should be consistent with the fundamental principles of international space law set out in the Outer Space Treaty.

269. Some delegations noted that the number of States that had signed the Artemis Accords on the Principles for Cooperation in the Civil Exploration and Use of the Moon, Mars, Comets, and Asteroids for Peaceful Purposes had grown to 20, and

expressed the view that the Accords represented a set of commitments laying out the rules and principles that would guide those States in the exploration of the Moon, Mars and beyond. The delegations expressing that view also expressed the view that the Artemis Accords were 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.

270. The view was expressed that a key principle set out in the Artemis Accords was transparency and that States should remain committed to sharing and disseminating information on their national space policies and space exploration plans. The delegation expressing that view also expressed the view that it was imperative that multilateral discussions focus on identifying practical tools for sharing information about States' lunar activities in a transparent way that were consistent with international obligations and commitments stemming from the Outer Space Treaty.

271. The view was expressed that, while the Artemis Accords could serve as a starting point, with some of its provisions readily acceptable, some aspects would need to be pared back and reconciled with a broader understanding of the principle of non-appropriation in order to achieve greater support.

272. Some delegations expressed the view that any activity in the exploration, exploitation and utilization of space resources should be conducted in accordance with the five United Nations treaties on outer space, which established international space law, and that any activity by States, individually or as a club of countries, outside of the multilateral framework of the United Nations would lead to fragmentation of cooperation among States members of the Committee and should be avoided.

273. Some delegations expressed the view that the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies offered meaningful inspiration for the work of the Working Group, as that instrument contained provisions calling for the establishment of an international regime for the exploitation of space resources and as such exploitation was about to become feasible. The delegations expressing that view also expressed the view that such an international regime would be a way to consider both the efforts of those countries that have contributed directly or indirectly to the exploration of the Moon and the interests of developing countries.

274. Some delegations expressed the view that an authoritative interpretation of important principles found in the Outer Space Treaty, such as the principles of non-appropriation and the free exploration and use of outer space, would enable States to make concrete future commitments for space resource activities. The delegations expressing that view also expressed the view that a common understanding of the obligation in the Outer Space Treaty to conduct space activities with due regard for the corresponding interests of all other States parties to the Treaty, and a common understanding of what acts constituted, or did not constitute, due regard, would help to ensure that space resources remained available to all.

275. The view was expressed that because only a limited number of States would be able to carry out space resource activities, it was important to ensure that the accumulation of assets resulting from such activities was not concentrated in the hands of just a few stakeholders, and that the Outer Space Treaty outlined socially responsible behaviours that supported peaceful, inclusive and sustainable space activities while promoting international participation in a way that took into account the particular needs and interests of developing countries.

276. The view was expressed that, in developing a framework for space resource activities, greater interaction with the Scientific and Technical Subcommittee should be ensured so that the resulting framework was responsive to the actual activities undertaken. The delegation expressing that view also expressed the view that there was a need to develop an internationally recognized set of definitions for basic terms related to space resource activities as a first step in developing legal rules governing

such activities, and that a set of definitions could only be prepared with technical input.

277. The view was expressed that space resources did not include radio frequencies or orbits, such as the geostationary orbit, as those resources fell under the remit of ITU.

278. Some delegations expressed the view that, in developing a framework for the exploration, exploitation and utilization of space resources, the Working Group 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](#)).

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-second session

279. The Committee took note of the discussion of the Legal Subcommittee under the item on proposals to the Committee for new items to be considered by the Subcommittee at its sixty-second session, as reflected in the report of the Subcommittee ([A/AC.105/1260](#), paras. 231–244).

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

Regular items

1. Adoption of the agenda.
2. Statement by the Chair.
3. General exchange of views.
4. Information on the activities of international intergovernmental and non-governmental organizations relating to space law.
5. Status and application of the five United Nations treaties on outer space.
6. 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.
7. National legislation relevant to the peaceful exploration and use of outer space.
8. Capacity-building in space law.
9. Future role and method of work of the Committee.

Items under workplans

10. General exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources.
(Work for 2023 as reflected in the multi-year workplan of the Working Group on Legal Aspects of Space Resource Activities ([A/AC.105/1260](#), para. 206 and annex II, appendix))

Single issues/items for discussion

11. 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.
12. General exchange of information on non-legally binding United Nations instruments on outer space.
13. General exchange of views on the legal aspects of space traffic management.
14. General exchange of views on the application of international law to small-satellite activities.

New items

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

281. The Committee agreed that the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, the Working Group on the Definition and Delimitation of Outer Space and the Working Group on Legal Aspects of Space Resource Activities should be reconvened at the sixty-second session of the Subcommittee.

282. The Committee endorsed the agreement reached by the Subcommittee that a symposium be held during the sixty-second session of the Subcommittee in accordance with the report of the Legal Subcommittee ([A/AC.105/1260](#)).

283. The view was expressed that the Subcommittee should periodically review agenda items with a view to either suspending items in which there was a lack of interest or which no longer appeared necessary, or establishing a workplan to realize specific outcomes under items of interest. The delegation expressing that view was also of the view that it was important that previously suspended items could be reintroduced if there was interest in or a need for doing so.

D. Space and sustainable development

284. The Committee considered the agenda item entitled “Space and sustainable development”, in accordance with General Assembly resolution [76/76](#).

285. The representatives of China, France, Germany, India, Indonesia, Japan, Kazakhstan, Mexico, the Netherlands, the Russian Federation, South Africa, Thailand, the United Arab Emirates, the United States and Venezuela (Bolivarian Republic of) made statements under the item. The observers for the Square Kilometre Array Observatory and the World Space Week Association also made statements. During the general exchange of views, representatives of other member States also made statements relating to the item.

286. The Committee had before it the following documents:

- (a) Report on the United Nations/Austria World Space Forum on the theme “Space 4 climate action” ([A/AC.105/1266](#));
- (b) Report on the United Nations/Brazil/United Arab Emirates Space for Women expert meeting on the theme “Initiatives, challenges and opportunities for women in space” ([A/AC.105/1267](#)).

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

- (a) “Satellite application in emergency management in China (2021–2022)”, by the representative of China;

(b) “Protecting the outer space environment contributes to sustainable space activities”, by the representative of China;

(c) “India’s earth observation applications for national development and governance”, by the representative of India;

(d) “Capacity-building activities in the field of space in India: an update”, by the representative of India;

(e) “Space technology: contribution to sustainable development in Iran”, by the representative of Iran (Islamic Republic of);

(f) “JAXA sustainable space principles: contributions of JAXA to the Sustainable Development Goals”, by the representative of Japan;

(g) “Space for food security”, by the representative of the Netherlands;

(h) “Disaster monitoring and construction of spatial information using Korea Land Observation Satellite images”, by the representative of the Republic of Korea;

(i) “Brazil, Russian Federation, India, China and South Africa (BRICS) Intelligent Telescope and Data Network (BITDN) flagship project: BRICS State global optical telescope network”, by the representative of the Russian Federation;

(j) “Innovative, cross-cutting, advanced space technology training programme for developing countries”, by the representative of the Russian Federation;

(k) “Remote monitoring systems to study marine ecosystems”, by the representative of the Russian Federation;

(l) “Capacity-building for a nascent space industry”, by the representative of the Philippines.

288. 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.

289. The Committee noted the value of space technology and applications, as well as that of space-derived data and information, to sustainable development, including 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 resource management, snow and glaciers, biodiversity, agriculture and food security.

290. 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.

291. 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.

292. The Committee also 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.

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

294. 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 the use of space science and technology applications for sustainable development.

295. The Committee noted the value of international cooperation and partnerships for the realization of the full potential of space science, technology and applications for sustainable development.

296. The Committee noted that the fourth Ministerial Conference on Space Applications for Sustainable Development in Asia and the Pacific would be held in Indonesia in October 2022.

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

297. The Committee considered the agenda item entitled “Spin-off benefits of space technology: review of current status”, in accordance with General Assembly resolution [76/76](#).

298. The representatives of Algeria, Brazil, India, Italy, Mexico, the Russian Federation, South Africa, 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 made by representatives of other member States.

299. The Committee heard the following presentations:

(a) “The SAOCOM project as a national capacity-building engine”, by the representative of Argentina;

(b) “Natural hazards monitoring using the Zhengheng-1 electromagnetic satellite and Gaofen (GF) remote sensing satellites”, by the representative of China;

(c) “Russian new-generation very long baseline interferometry (VLBI) network”, by the representative of the Russian Federation.

300. 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.

301. The Committee noted that the publication entitled “Spinoff 2022”, 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.

302. The Committee took note of innovations in numerous areas, such as agriculture, indoor vertical farming, pollution and toxic chemical remediation, sustainable water and natural resource management, forestry and wildfire detection, geology, geophysics, ecosystem preservation, the identification and development of arable land, fisheries and mineral deposits, health, medicine, prosthetics, biology, chemistry, the environment, education, electronics, communication, navigation and timing, materials applications, energy storage, transport, safety, Internet access, laser data transfer, processing, analytics and storage, and disaster management. In addition, it 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, various types of medical support equipment that utilized space spin-off technology had been developed by commercial actors to address the coronavirus disease (COVID-19) pandemic.

303. Some delegations expressed the view that technology transfer programmes of space agencies facilitated economic development in various industries, which in turn 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 strategic initiatives to create an integrated international space ecosystem that fostered private sector growth,

industrial self-reliance, attracted foreign business investment and encouraged international collaboration.

304. Some delegations expressed the view that dedicated public sector entities tasked with working directly with industry and academia had supported commercial participation and facilitated the application of space-derived technology to achieve widespread use and greater socioeconomic benefit.

305. Some delegations expressed the view that as a result of a long-term study on the socioeconomic effects of public sector investment in the space sector, benefits could be identified in how suppliers and users of space-derived technology had improved their performance and innovation potential. The delegation expressing that view also expressed the view that, in particular, products and services that were spun off from space technology, including Earth observation, navigation and timing technology, improved the commercial availability of a wide variety of products and services and contributed to more effective and efficient research and development.

306. Some delegations expressed the view that remote sensing, geospatial and Earth observation programmes, in particular images, data and analysis, were important for disaster management and emergency response, urban and agricultural planning, mapping health, energy, food safety, border surveillance, the control of illicit crops and illicit mining, logistics, the construction industry, tourism, ecology, combating desertification and supporting the processing of large volumes of data through neural network technologies, artificial intelligence and machine learning. The delegations expressing that view also expressed the view that those programmes were important to achieving sustainable projects and helped to inform the decisions of entities affected by climate change.

F. Space and water

307. The Committee considered the agenda item entitled “Space and water”, in accordance with General Assembly resolution [76/76](#).

308. The representatives of Algeria, Brazil, France, India, Indonesia, Iran (Islamic Republic of), Japan, Mexico and Thailand made statements under the item. The observer for the Prince Sultan bin Abdulaziz International Prize for Water also made a statement under the item. During the general exchange of views, other member States also made statements relating to the item.

309. 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.

310. The Committee noted that water and the issues related to it were becoming some of the most critical environmental problems of the twenty-first century. The Committee also noted that, in order to contribute to the achievement of the Sustainable Development Goals, it was important to make use of space technologies, applications, practices and initiatives enabled by space-borne observations of water.

311. 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 sea levels, global water cycles and unusual climate patterns; the mapping of surface water bodies, watercourses and basins, including the mapping of their seasonal and annual variabilities; the monitoring of water volume levels in dam reservoirs; the assessment of sedimentation processes in reservoirs and rivers; river run-off; the monitoring of evapotranspiration; the estimated values for water quality parameters; the estimation of snowmelt run-off; the monitoring of groundwater resources; the planning and management of reservoirs and irrigation projects; early warning with regard to

hydrological disasters; the monitoring and mitigation of the effects of floods, droughts, typhoons, cyclones, landslides and glacial lake outburst floods; the monitoring of soil moisture; the reuse of agricultural drainage water; the harvesting of rain; the identification of prospective zones of groundwater development; 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.

312. Some delegations expressed the view that climate change had become a crucial issue for stable water management, as it had caused serious droughts and water-related disasters, as well as sinking land, around the world.

313. The view was expressed that space-based technology supported the monitoring of water quality in rivers, lakes, wetlands and coastal waters, especially in large and remote water bodies, including the monitoring of contaminants in water bodies, and that space technology contributed insights in relation to ecological disasters, such as industrial spills or diffuse pollution sites that could impact groundwater at the regional level.

314. The Committee noted that Sustainable Development Goal 6, on clean water and sanitation for all, could not be achieved without the successful implementation and monitoring of integrated water resource management.

315. The view was expressed that space technology and applications had the potential to contribute to the development of water-related policies and coordinated efforts to achieve Sustainable Development Goal 6.

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

317. The Committee noted the value of the Space4Water portal of the Office for Outer Space Affairs, and the role of the portal in the dissemination of the use of space technology for water-related purposes was highlighted.

318. The Committee took note of the holding of the fifth International Conference on the Use of Space Technology for Water Resources Management, which was hosted by the Government of Ghana and co-sponsored by the Prince Sultan bin Abdulaziz International Prize for Water from 10 to 13 May 2022 in Accra.

G. Space and climate change

319. The Committee considered the agenda item entitled “Space and climate change”, in accordance with General Assembly resolution [76/76](#).

320. The representatives of Austria, China, France, India, Indonesia, Iran (Islamic Republic of), Japan, Kenya, Mexico, the Netherlands, Nigeria, the United Arab Emirates, 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.

321. The Committee heard the following presentations:

(a) “Space observatory for climate change and response in China”, by the representative of China;

(b) “Geostationary Environment Monitoring Sensor (GEMS) application plan for climate change research”, by the representative of the Republic of Korea;

(c) “Copernicus contribution to global efforts on monitoring CO₂ emissions”, by the permanent observer for the European Union;

(d) “Benefits of space solar power”, by the observer for the National Space Society.

322. The Committee noted that climate change was one of the most pressing global challenges of our time and underscored the growing value of space-based technology in providing critical climate data to better understand, mitigate and adapt to climate change and monitor implementation of the Paris Agreement, underscoring as well the importance of space-based observations for understanding climate change. The Committee also noted the importance of space-based observations for the achievement of Sustainable Development Goal 13 on climate action.

323. The Committee noted the efforts undertaken at the national, regional and international levels in developing and operating satellites for observing atmospheric conditions, as well as the importance of multi-stakeholder partnerships and actions to tackle climate change by utilizing space-based observations and technologies. In that regard, the Committee noted the Working Group III contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, released in April 2022, in which the Working Group called for urgent action to limit global warming to 1.5°C degrees, and the essential role of space technologies and applications on the path to climate-friendly transformation. It also noted that more than half of the 54 variables used by the Intergovernmental Panel on Climate Change could be measured only with the central contribution of space-based technology.

324. The Committee noted the interest expressed by international partner agencies and organizations, including the Office for Outer Space Affairs, to join and contribute to the efforts of the Space Climate Observatory, which was created upon the initiative of the National Centre for Space Studies (CNES) of France, which had been 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, giving the Observatory the main objective of producing and distributing adequate, timely and reliable data and 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 adaptation.

325. The Committee further noted that the Space Climate Observatory had developed its Charter, which was presented to the 36 space agencies that were currently signatories to the declaration of interest. In that regard, the Committee noted that the Charter of the Space Climate Observatory, which would enter into force on 1 September 2022, would enable the Observatory to take its place among the multilateral networks working to fight climate change, giving the Observatory the task of facilitating the mobilization of space tools for climate action and supporting the implementation of the Paris Agreement on climate change.

326. The Committee noted that as part of the “Space4ClimateAction” initiative of Austria, the annual United Nations/Austria symposium would be held from 12 to 15 September 2022 on the topic of “Space for climate action: experiences and best practices in mitigating and adapting to climate change and supporting sustainability on Earth”. The Committee also noted that a dedicated web page on the “Space4ClimateAction” initiative, hosted by the Office for Outer Space Affairs, would be created as part of the Office’s efforts to support Member States in the achievement of Sustainable Development Goal 13 on climate action.

327. The Committee noted the successful holding, in Glasgow, United Kingdom, in 2021, of 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, at which the importance of space-based climate action was highlighted. In that regard, the Committee also noted that the twenty-seventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change would be held under the presidency of Egypt from 7 to 18 November 2023.

328. 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.

329. The Committee noted the usefulness of satellite observations and Earth observation applications for monitoring essential climate variables and related challenges such as increased desertification and extreme weather events, tracking changes in sea level, carbon dioxide concentrations, sea ice depletion and terrestrial snow mass and gathering data on remote areas such as deserts, oceans, the polar caps and glaciers.

330. The Committee also noted that it was important to support international cooperation for Earth observation, including through long-established organizations such as the World Meteorological Organization, CEOS, the Coordination Group for Meteorological Satellites, the Global Climate Observing System, GEO and APSCO. In that regard, the Committee noted that the Office for Outer Space Affairs was currently finalizing the report on the strategic mapping exercise aimed at providing a more complete understanding of the range of technical and policy coordination capabilities of existing intergovernmental entities in using space technologies to support climate change mitigation, adaptation, resilience and monitoring.

H. Use of space technology in the United Nations system

331. The Committee considered the agenda item entitled “Use of space technology in the United Nations system”, in accordance with General Assembly resolution [76/76](#).

332. The representatives of Austria, India, Indonesia and Mexico 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.

333. The Committee had before it the following:

(a) Report of the Inter-Agency Meeting on Outer Space Activities on its fortieth session ([A/AC.105/1263](#));

(b) Conference room paper containing an advance version of the special report of the Inter-Agency Meeting on Outer Space Activities on coordination of space-related activities within the United Nations system for climate action ([A/AC.105/2022/CRP.15](#)).

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

(a) “Russian–Cuban Observatory: objectives, instruments and tasks”, by the representative of the Russian Federation;

(b) “Cosmic impacts on the Earth: assessment of the consequences”, by the representatives of the Russian Federation.

335. The Committee noted that the fortieth session of Inter-Agency Meeting on Outer Space Activities (UN-Space) had been held on 14 December 2021 in an online format. The Committee also noted that the Office for Outer Space Affairs was working with the Economic and Social Commission for Asia and the Pacific to jointly organize the forty-first session of UN-Space.

336. The Committee further noted that UN-Space had agreed to issue in 2022 a publication highlighting space-related activities within the United Nations system.

337. The Committee welcomed the forthcoming special report of UN-Space on coordination of space-related activities within the United Nations system for climate action (to be issued under the symbol [A/AC.105/1264](#)) and expressed its appreciation to UN-Space and the Office for Outer Space Affairs, in its capacity as the secretariat of UN-Space, for preparing that report.

338. The Committee encouraged entities of the United Nations system to participate, as appropriate, in the coordination efforts of UN-Space.

339. The Committee noted that the third segment of the Unispace Nanosatellite Assembly and Training by the Indian Space Research Organization (UNNATI) programme would be conducted from 15 October to 15 December 2022 in coordination with the Office for Outer Space Affairs, and encouraged Member States, especially those aspiring to participate in space activities, to apply and benefit from that programme.

I. Future role and method of work of the Committee

340. The Committee considered the agenda item entitled “Future role and method of work of the Committee”, in accordance with General Assembly resolution [76/76](#).

341. The representatives of Australia, Canada, Chile, China, France, Germany, Indonesia, Iran (Islamic Republic of), Japan, Mexico, the Netherlands, the Republic of Korea, the Russian Federation, Switzerland, the United Kingdom, 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.

342. The Committee had before it the following:

(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](#));

(b) Paper submitted by Canada, Japan, the United Kingdom and the United States entitled “Preparations for a multi-stakeholder dialogue on outer space as part of a United Nations Summit of the Future” ([A/AC.105/2022/CRP.17](#)).

343. The Committee recalled the deliberations on the item as reflected in the report of the Committee on its sixty-fourth session ([A/76/20](#), paras. 281–300), the report of the Scientific and Technical Subcommittee at its fifty-ninth session ([A/AC.105/1258](#), paras. 210–223) and the report of the Legal Subcommittee at its sixty-first session ([A/AC.105/1260](#), paras. 103–121).

344. The Committee agreed to consider matters relating to the United Nations Summit of the Future under the agenda item entitled “Other matters”.

345. Some delegations expressed the view that the Committee should focus exclusively on promoting the peaceful uses of outer space, while matters of preventing escalation of conflict that could arise from the use of weapons against space systems, or the use of outer space for military and other national security activities, should be dealt with in the forums for disarmament of the United Nations.

346. 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 and disarmament.

347. Some delegations expressed the view that it was important to increase coordination, interaction and synergies between the two subcommittees on cross-cutting issues, in particular long-term sustainability and space resources.

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

349. Some delegations expressed the view that new items should be added to the agenda of the Committee and its subcommittees only when other items were removed.

350. Some delegations expressed the view that agenda items should be considered in sequential order while not precluding the holding of working group meetings.

351. The view was expressed that all member States should first be given the opportunity to speak under an agenda item, and only then should the floor be given to observer organizations.

352. The view was expressed that the Committee should consider new and innovative ways to best engage relevant stakeholders, such as those from industry, academia and civil society, in its activities.

353. 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 its rules of procedure and existing practices, in order to adapt to changing realities and needs.

354. The view was expressed that the work of other United Nations entities with regard to space-related issues should be closely coordinated with the work of the Committee and that the Committee should receive regular updates from United Nations entities participating in UN-Space.

355. 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.

356. The view was expressed that it was important to promote the development of human capacities in emerging countries to allow them to harness the benefits of space technology for development.

357. The view was expressed that it was important to maintain at future sessions the hybrid format of the current session, which included live webcasting of plenary meetings with interpretation into the six official languages of the United Nations, and in that regard the importance of the availability of a smooth webcast and comprehensive digital recordings was stressed.

358. The view was expressed that the organization of sessions of the Committee and its subcommittees in a hybrid format should remain an exceptional measure and would require prior approval by consensus.

359. The view was expressed that a procedure to be followed 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.

360. The view was expressed that the Committee should appeal to the open-ended working group established pursuant to General Assembly resolution [76/231](#) to abstain from considering issues that were covered by the Committee and reflected in its decisions taken before the establishment of the working group.

361. Some delegations expressed the view that General Assembly resolution [76/231](#) was sufficient to clearly define the mandate of the open-ended working group. The delegations expressing that view were also of the view that the open-ended working group was open to the participation of all States Members of the United Nations and that the call to avoid overlaps between the work of the Committee and that of the working group would more appropriately be made in the meetings of the working group itself.

362. Some delegations expressed the view that the recorded votes against General Assembly resolution [76/231](#), as well as the abstentions from voting, demonstrated the contentious nature of the open-ended working group.

363. Some delegations expressed the view that the consideration of issues relating to security and stability was within the purview of the Disarmament and International Security Committee (First Committee) of the General Assembly.

364. Some delegations expressed the view that the work of the Committee on the Peaceful Uses of Outer Space, which included the development of the Guidelines for

the Long-Term Sustainability of Outer Space Activities, evidenced the Committee's role in enhancing the sustainability, security and safety of space operations.

365. The Committee noted with appreciation that a joint panel discussion of the Disarmament and International Security Committee (First Committee) and the Special Political and Decolonization Committee (Fourth Committee) of the General Assembly on possible challenges to space security and sustainability, with the joint support of the Office for Outer Space Affairs and the Office for Disarmament Affairs, would be held in New York on 27 October 2022, and agreed that the joint panel discussion should discuss cross-cutting issues between the work of the Committee on the Peaceful Uses of Outer Space and that of the open-ended working group.

J. Space exploration and innovation

366. The Committee considered the agenda item entitled "Space exploration and innovation", in accordance with General Assembly resolution [76/76](#).

367. The representatives of Azerbaijan, China, France, India, Indonesia, Italy, Japan, Luxembourg, Mexico, the Republic of Korea, Romania, the Russian Federation, Switzerland, Thailand and the United States made statements under the item. The observers for the Moon Village Association, the Open Lunar Foundation and the Secure World Foundation also made statements. During the general exchange of views, other statements relating to the agenda item were also made by other member States.

368. The Committee had before it the following:

(a) Conference room paper entitled "Report of the Moon Village Association on the Global Expert Group on Sustainable Lunar Activities – status/plan" (A/AC.105/2022/CRP.12);

(b) Conference room paper entitled "Report of the Moon Village Association of the International Moon Day – support implementation status" (A/AC.105/2022/CRP.13);

(c) Conference room paper by Mexico and Romania entitled "Proposal for inclusion of a yearly agenda sub-item 'Coordination for sustainable lunar activities' under the agenda item 'Space exploration and innovation', at the sixty-sixth session of the Committee on the Peaceful Uses of Outer Space, in 2023" (A/AC.105/2022/CRP.14).

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

(a) "Lunar Oasis: architectural visions for an integrated lunar habitat", by the representative of Austria;

(b) "Progress of China's deep space exploration", by the representative of China;

(c) "Italian scientific research activity in the Minerva mission", by the representative of Italy;

(d) "Korea Pathfinder Lunar Orbiter (KPLLO): the first lunar mission of the Republic of Korea", by the representative of the Republic of Korea;

(e) "New X-ray map of the universe with the Spectrum-Roentgen-Gamma (SRG) Observatory", by the representative of the Russian Federation;

(f) "The E.T.PACK project: a technological solution for the space debris proliferation problem", by the representative of Spain;

(g) "Estrange: the most versatile space centre in the world – new services to enable a sustainable future", by the representative of Sweden;

(h) "The first International Moon Day", by the observer for the Moon Village Association;

(i) “Current status of the Scientific Committee on Solar-Terrestrial Physics PRESTO programme for predictability of the variable solar-terrestrial coupling”, by the observer for the Scientific Committee on Solar-Terrestrial Physics;

(j) “The Space Exploration Project Group’s plan to ensure a diverse, sustainable and exciting path for the future of space exploration”, by the observer for the Space Generation Advisory Council.

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

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

372. The Committee noted that, in the course of the discussions, information had been provided on, inter alia, research and development activities; space object launches; human space flight programmes; robotic exploration activities; activities and cooperation opportunities related to the International Space Station and the China Space Station; numerous missions to the Moon, Mars, the moons of Mars, the Sun and asteroids; satellite-, lander-, rover- and helicopter-based experiments to explore the solar system and to research scientific topics; samples returned to the Earth; the planned international lunar research station; the planned Gateway lunar outpost; a next-generation telescope that would soon reveal images of stars and galaxies that formed more than 13 billion years ago; CubeSats that demonstrated small spacecraft technology; a pressurized crewed rover to be used as a means of transportation; space tracking and management capabilities; developments in rocket technology; innovative uses of additive manufacturing and artificial intelligence; developments in in situ resource utilization technology; novel uses of remote sensing data and applications; a space exploration innovation hub centre; an innovation centre for space resources; the development of national space white papers, strategies, consortiums, plans, road maps, strategies and laws; commitments made among Governments on common frameworks to guide cooperation in space exploration; space summits; a ministerial conference; exhibitions on space exploration and innovation themes; a space resources week; an aerospace and technology festival; a yearly model satellite competition; and increasing human and financial resources being committed to space exploration and innovation.

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

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

375. The Committee noted efforts to promote the space industry, in particular among young people, and to foster the development of human capital in the areas of space exploration and innovation.

376. The Committee also noted efforts to promote diversity and inclusion in space exploration and innovation activities.

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

378. The view was expressed that the space sector played a key role in economic diversification, offering high added value. The delegation expressing that view was also of the view that the space economy was no longer developing solely through technological innovation but also through commercial innovation, and that there were substantial opportunities in that regard for businesses, institutions and citizens.

379. The view was expressed that, as space projects were complex and expensive, it was necessary to promote international cooperation and trade, to exchange knowledge and to open markets for products and services. The delegation expressing that view was also of the view that instead of all countries attempting to cover all areas, it was highly recommended that countries focus on specific technological niches and develop them so as to position themselves as world leaders in particular fields.

380. The view was expressed that the main requirement for a country to commence space exploration and innovation was the firm determination of the country's leaders to consider space as a strategic area, and that included the leaders' commitment to developing space exploration and innovation through a long-term plan, the creation of supporting institutions, and adequate and sustained investment.

381. The view was expressed that, as emerging space nations would play an important role in future global space exploration, cooperation among emerging space countries, as well as cooperation between leading and emerging countries, should be more actively discussed.

382. The view was expressed that the various research associations that had emerged as centres of competence for the development and creation of rocket and space technology – from design to ready-to-use products – served to incubate ideas, created spin-off benefits, optimized space infrastructure and increased economic efficiency under the control of State bodies, and concentrated highly qualified personnel within the framework of a single organizational structure.

383. The view was expressed that the interaction among relevant State structures, small and medium-sized businesses, university innovation teams and a system of non-State venture financing had already proved its effectiveness, in particular in relation to business accelerators, through which there was a focused selection of start-up companies to meet the needs of industry.

384. The view was expressed that outer space contained virtually unlimited energy sources and vast amounts of useful materials and had untapped potential to provide an abundance of resources to humanity in the future, and that related innovations and developments could strengthen the resilience of societies for meeting future challenges.

385. The view was expressed that the main goals of space exploration and innovation should be sustainability, cradle-to-cradle design and viability, using green technology to reduce the negative impacts that humans have on the planet. The delegation expressing that view was also of the view that new ideologies, methods and products should be used to identify and replace existing wasteful or harmful habits developed over time, improve the quality of the Earth's environment and bring about a course correction towards a resource-rich future.

386. The view was expressed that it was the destiny of the human spirit to explore, and that exploration campaigns responding to the challenge of going deeper into space were in line with that spirit and with the spirit of the Committee.

387. The Committee considered the proposal contained in conference room paper A/AC.105/2022/CRP.14.

K. “Space2030” Agenda

388. The Committee considered the agenda item entitled “‘Space2030’ Agenda”, in accordance with General Assembly resolution 76/76.

389. The representatives of Argentina, Austria, China, Germany, Indonesia, Japan, Kenya, Nigeria, Norway, the Republic of Korea, Switzerland and the United Kingdom made statements under the item. A statement was also made by the observer for the Square Kilometre Array Observatory. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

390. The Committee heard the following presentations:

(a) “The National Commission on Space Activities (CONAE) education programme”, by the representative of Argentina;

(b) “Lunar Polar Mission LUNA-25”, by the representative of the Russian Federation.

391. The Committee welcomed the adoption by the General Assembly, in its resolution 76/3, of the “Space2030” Agenda and its implementation plan as a high-level political document that showcased how space activities could contribute to the achievement of the Sustainable Development Goals, the Paris Agreement on climate change and the Sendai Framework for Disaster Risk Reduction, the broad societal benefits of such activities and the essential role of space technologies and applications and space-derived data in furthering economic growth and prosperity for the international community. The Committee also commended the work of the Bureau of the Working Group on the “Space2030” Agenda and the secretariat in facilitating the finalization and adoption of that milestone document.

392. The Committee 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 in order to ensure that, through joint efforts and by taking advantage of the practical experience and contributions of different stakeholders, the benefits of space were brought to everyone, everywhere. In that regard, the Committee also noted the importance of partnerships and concerted efforts to bridge the gap in the use of space-derived data for planning and decision-making in developing countries.

393. The Committee noted that, in implementing the “Space2030” Agenda, States contributed to and benefited from a number of space-related international and regional mechanisms, programmes, projects and platforms, as well as from tools and initiatives that had been developed or were being developed by the Office for Outer Space Affairs (see General Assembly resolution 76/3, paras. 24 and 25).

394. The Committee noted that the actions listed under the four overarching objectives of the “Space2030” Agenda, which were structured around the four pillars of space economy, space society, space accessibility and space diplomacy, had been taken by several States as part of their national space programmes and plans with a view to increasing the economic benefits derived from space, strengthening the role of the space sector as an important engine of sustainable national development, increasing the participation of various sectors of society, industry, academia, researchers and end users, and facilitating the integration of the space sector with other sectors.

395. The Committee also noted that the “Space2030” Agenda contained a strategic vision that addressed key areas and objectives of the future work of the Committee, its subcommittees and the Office for Outer Space Affairs, as unique forums 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.

396. The Committee welcomed the intention of Paraguay, in its capacity as Chair of the Scientific and Technical Subcommittee, to seek the inclusion of a reference to the “Space2030” Agenda in the ministerial declaration of the high-level political forum on sustainable development to be held in July 2022, as follows: “The ‘Space2030’ Agenda: space as a driver of sustainable development and its implementation plan, adopted by the General Assembly in its resolution 76/3, represent a forward-looking strategy for reaffirming and strengthening the contribution of space activities of States members of the Committee on the Peaceful Uses of Outer Space in the use of space tools for the achievement of the Sustainable Development Goals of the 2030 Agenda for Sustainable Development”.

397. The view was expressed that the “Space2030” Agenda was important for several countries, as it also aimed to promote and strengthen the use of outer space for a sustainable ocean economy.

398. The view was expressed that Member States and other donors should consider providing sufficient means to the Office for Outer Space Affairs so that it could fully and effectively implement its mandate and support Member States in the implementation of the “Space2030” Agenda.

399. The view was expressed that the Space for Impact Initiative of the Federal Institute of Technology in Lausanne, Switzerland, was contributing to implementing to the “Space2030” Agenda under both the space economy and space education objectives.

400. The Committee noted that, as part of the Space for Women project of the Office for Outer Space Affairs, the Space for Women expert meeting would be held in Daejeon, Republic of Korea, from 16 to 19 August 2022, and that, building on the results of the previous year’s expert meeting, organized by Brazil and the United Arab Emirates in cooperation with the Office, a survey would be conducted to take stock of the current levels of female representation in space agencies and institutions around the world.

401. The Committee further noted that the fourth World Space Forum, aimed at strengthening partnerships and dialogue among the global community to support the implementation of the “Space2030” Agenda, would be held in Vienna from 12 to 15 December 2022 and be organized by Austria and the Office for Outer Space Affairs.

402. The Committee noted that the Office for Outer Space Affairs intended to make the “Space2030” Agenda and implementation plan available as a publication in order to increase its visibility and outreach to a broader international community.

403. The Committee noted that States were encouraged to continue to report on the implementation of the “Space2030” Agenda, also taking into account that the Committee would carry out a midterm review of progress made in implementing the Agenda in 2025, and a final review in 2030, and report to the General Assembly on the results.

404. The Committee recalled its decision to retain the present item on its agenda for each session through 2030 in order to allow for an exchange among States members of the Committee and its permanent observers on their experiences in implementing the “Space2030” Agenda and implementation plan.

L. Other matters

405. The Committee considered the agenda item entitled “Other matters”, in accordance with General Assembly resolution 76/76.

406. The representatives of Canada, China, Germany, Japan, Mexico, the Russian Federation, Switzerland and the United States made statements under the agenda item. The representative of the European Union, in its capacity as permanent observer, also made a statement on behalf of the European Union and its member States. 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 2024–2025

407. The Committee recalled that in paragraph 11 of its resolution 58/89, the General Assembly had endorsed the agreement reached by the Committee on the future composition of the bureaux of the Committee and its subsidiary bodies (A/58/20, annex II, paras. 5–9), on the basis of the measures relating to the working methods of the Committee and its subsidiary bodies (see A/52/20, annex I, and A/58/20, annex II, appendix III), which had previously been endorsed by the Assembly in its resolution 52/56.

408. The Committee further recalled that, in accordance with the measures relating to the future composition of the bureaux of the Committee and its subsidiary bodies, the Committee should reach agreement at its sixty-fifth session on all officers of the bureaux for the period 2024–2025.

409. The Committee noted that no regional groups had made their nominations, and therefore encouraged regional groups to make the required nominations either before the consideration by the Fourth Committee of the draft resolution on international cooperation in the peaceful uses of outer space at the seventy-seventh session of the General Assembly, in 2022, or before the sixty-sixth session of the Committee, in 2023.

2. Membership of the Committee

410. The Committee took note of the application of Guatemala for membership in the Committee (A/AC.105/2022/CRP.3) and decided to recommend to the General Assembly at its seventy-seventh session, in 2022, that Guatemala should become a member of the Committee.

411. The Committee took note of the application of Uzbekistan for membership in the Committee (A/AC.105/2022/CRP.4) and decided to recommend to the General Assembly at its seventy-seventh session, in 2022, that Uzbekistan should become a member of the Committee.

3. Observer status

412. 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.

413. The Committee took note of the application of the Association for the Development of the Atlantic International Research Centre for permanent observer status with the Committee. The application and the relevant correspondence were before the Committee in conference room paper A/AC.105/2022/CRP.5.

414. The Committee decided to grant the Association for the Development of the Atlantic International Research Centre the status of observer, on a provisional basis, for a period of three years, pending information on the status of its application for consultative status with the Economic and Social Council.

415. The Committee took note of the application of the Access Space Alliance for permanent observer status with the Committee. The application and the relevant

correspondence were before the Committee in conference room paper A/AC.105/2022/CRP.6.

416. The Committee decided to grant the Access Space Alliance the status of observer, on a provisional basis, for a period of three years, pending information on the status of its application for consultative status with the Economic and Social Council.

417. The Committee took note of the application of the Hague Institute for Global Justice for permanent observer status with the Committee. The application and the relevant correspondence were before the Committee in conference room paper A/AC.105/2022/CRP.7.

418. The Committee decided to grant the Hague Institute for Global Justice the status of observer, on a provisional basis, for a period of three years, pending information on the status of its application for consultative status with the Economic and Social Council.

419. The Committee took note of the application of the International Peace Alliance (Space) for permanent observer status with the Committee. The application and the relevant correspondence were before the Committee in conference room paper A/AC.105/2022/CRP.8.

420. The Committee decided to grant the International Peace Alliance (Space) the status of observer, on a provisional basis, for a period of three years, pending information on the status of its application for consultative status with the Economic and Social Council.

4. Other matters

421. The Committee took note of a non-paper by the Chair of the Committee, made available at the present session of the Committee, and noted that the Chair had noted the special role of the Committee and its subcommittees as unique platforms for international cooperation in the exploration and use of outer space for peaceful purposes and therefore the importance of their discussion, at their respective sessions in 2023, as appropriate, of the Summit of the Future to take place in September 2023; that the secretariat was to report on the status of the preparations for the Summit of the Future at the sessions of the Committee and its subcommittees to be held in 2023; that the Chair of the Committee, in consultation with the bureaux of the Committee and its subcommittees, intended to present, at the sixtieth session of the Scientific and Technical Subcommittee, in 2023, proposed elements for further consideration; that the joint panel discussion of the First and Fourth Committees of the General Assembly, at its seventy-seventh session, in 2022, might address the Summit of the Future and its multi-stakeholder dialogue on outer space; that the topic of the Summit of the Future would be addressed at the World Space Forum 2022 and at a potential United Nations/Portugal conference on the topic of the management and sustainability of space activities to be held in the first half of 2023; and that the overarching basis for the preparations of the Summit of the Future and its multi-stakeholder dialogue on outer space should be to fully acknowledge the role and work of the Committee and its subcommittees, supported by the Office for Outer Space Affairs, and to take full account of the adopted "Space2030" Agenda.

422. Some delegations welcomed the non-paper by the Chair and expressed the view that it outlined an excellent way forward to prepare the contribution of the Committee in view of the Summit of the Future and the multi-stakeholder dialogue.

423. The view was expressed that the multi-stakeholder format of the Summit of the Future proposed by the Secretary-General was unlikely to serve its purpose by providing the means for a fruitful decision-making process on key issues of the global space agenda.

5. Programme 5, “Peaceful uses of outer space”: proposed programme plan for the period 2023 and programme performance for 2021

424. The Committee had before it the following:

- (a) Conference room paper entitled “Programme 5, ‘Peaceful uses of outer space’: proposed programme plan for the period 2023” (A/AC.105/2022/CRP.16);
- (b) Proposed programme budget for 2023 (A/77/6 (Sect. 6)).

425. The Committee welcomed the presentation by the Acting Director of the Office for Outer Space Affairs on the proposed programme plan for the period 2023 and the information provided by the Office on key areas of work.

426. The Committee agreed on the proposed programme plan.

427. The Committee noted that footnote d of annex I to the proposed programme budget for 2023 (A/77/6 (Sect. 6)) should be corrected to reflect the correct name of the Ministry of Emergency Management of China.

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

428. The Committee recommended that the following items should be considered at its sixty-sixth session, in 2023:

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 sixtieth session.
7. Report of the Legal Subcommittee on its sixty-second 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.

429. The Committee noted that an agreement on the proposal contained in conference room paper A/AC.105/2022/CRP.14 to include “Coordination for sustainable lunar activities” as a one-year sub-item of the agenda item on “Space exploration and innovation” at the sixty-sixth session of the Committee could possibly be reached in the intersessional period, that further discussions could be held during the sixtieth session of the Scientific and Technical Subcommittee and the sixty-second session of the Legal Subcommittee, and that, in that connection, States members of the Committee should be informed well in advance of the sixty-sixth session of the Committee of any such agreement reached in that regard.

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

430. The Committee agreed on the following tentative timetable for its session and those of its subcommittees in 2023:

	<i>Date</i>	<i>Location</i>
Scientific and Technical Subcommittee	6–17 February 2023	Vienna
Legal Subcommittee	20–31 March 2023	Vienna
Committee on the Peaceful Uses of Outer Space	31 May–9 June 2023	Vienna

Annex

Draft resolution on space and global health

The General Assembly,

Recalling its resolutions 51/122 of 13 December 1996, 54/68 of 6 December 1999, 59/2 of 20 October 2004, 66/71 of 9 December 2011, 69/85 of 5 December 2014, 70/1 of 25 September 2015, 71/90 of 6 December 2016, 73/91 of 7 December 2018 and 76/3 of 25 October 2021,

Recalling also the recommendations contained in the resolution entitled “The Space Millennium: Vienna Declaration on Space and Human Development”, adopted by the third United Nations Conference on the Exploration and Peaceful Uses of Outer Space,¹ in which participating States called for action to improve public health services by expanding and coordinating space-based services for telemedicine and for controlling infectious diseases,

Recalling further the fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50) and its thematic priority 5, on strengthened space cooperation for global health,

Acknowledging the importance of the contribution of space science and technology and their applications to efforts towards the achievement of the 2030 Agenda for Sustainable Development,² in particular Sustainable Development Goal 3, on ensuring healthy lives and promoting well-being for all at all ages, and conscious that the work done in the space health sector can contribute to sustainable development, especially with programmes aimed at enhancing the quality of life in various ways, including improving human health,

Emphasizing that overarching objective 2 of the “Space2030” Agenda,³ to harness the potential of space to solve everyday challenges and leverage space-related innovation to improve the quality of life, could be attained by strengthening space-related cooperation in support of global health, by improving the use and application of space medicine, science and technology, innovations in the global health domain, cooperation and the sharing of information, while protecting the privacy of personal data, and tools to improve research advancement and the timeliness and effectiveness of public health and health-care interventions, and by enhancing capacity-building in space medicine, science and technology,

Convinced of the importance, and recognizing the existing contributions, of space science, space technology and space applications to enhance space life sciences and digital health technologies, such as telehealth, telemedicine⁴ and tele-epidemiology, for the prevention and control of diseases and global health issues, the promotion of human health, environmental health, animal health and food sourcing and supply, and the advancement of medical research and health practices, including the provision of health-care services to individuals and communities irrespective of geographical location as a means of promoting equitable, affordable and universal access to health for all,

Noting with concern that among the gaps in the areas of telemedicine and telehealth are the limited uptake of digital technologies in public health systems and

¹ *Report of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, Vienna, 19–30 July 1999* (United Nations publication, Sales No. E.00.I.3), chap. I, resolution 1.

² Resolution 70/1.

³ Resolution 76/3.

⁴ The term “telemedicine” is used broadly to refer to the use of telecommunications, satellite communications and information technology to provide clinical health care from a distance and includes many active and relevant subfields, such as tele-cardiology, tele-radiology, tele-ophthalmology, tele-oncology, tele-pharmacy, tele-surgery, tele-dermatology and other developing fields.

health care, as well as the lack of harmonized data-sharing standards among the various manufacturers of medical equipment,

Noting with satisfaction the work of the Committee on the Peaceful Uses of Outer Space, its subsidiary bodies and the Office for Outer Space Affairs of the Secretariat in the area of space and global health, including in the framework of action team 6, on public health, established to implement the recommendations of the third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, as well as the action team 6 follow-up initiative, the Expert Group on Space and Global Health, UNISPACE+50 thematic priority 5, on strengthened space cooperation for global health, and the Working Group on Space and Global Health of the Scientific and Technical Subcommittee of the Committee, and welcoming its report on the work conducted under its multi-year workplan,⁵

Deeply concerned about the devastating global effects of emerging infectious diseases and other emergencies with an impact on health, including the coronavirus disease (COVID-19) pandemic, to the detriment of human life, society and development, and urging the international community to embrace a One Health approach by strengthening the role of space-based solutions, in particular telehealth, in monitoring, preparedness and response activities,

1. *Encourages* United Nations entities, intergovernmental organizations, Governments and the private sector to pursue effective coordination in all key space activities relevant to global health;

2. *Encourages* formalized cooperation between health authorities and space authorities at the domestic level, and welcomes existing cross-sectoral networks that foster the exchange of ideas between the space and health sectors;

3. *Encourages* Member States to establish a policy-enabled environment and governance mechanisms, with due consideration of legal and ethical issues, for removing challenges to facilitating the effective use of space-based technologies in support of global health, including telemedicine solutions and other emerging technologies;

4. *Also encourages* Member States to promote open data-sharing policies and participatory approaches to developing and improving access to all geospatial information relevant to global health, including remote sensing and Earth observation data, whenever possible;

5. *Further encourages* Member States to enable organizational and technical interoperability and promote research and innovation activities to facilitate the development and implementation of space-based science and technology in the health sector;

6. *Urges* United Nations entities and intergovernmental organizations to support the wider development of, equitable access to and application of space solutions for global health, public health, including epidemics and pandemics, emergencies that may have an impact on health, and the individual health needs of Member States, and encourages the implementation of a broader range of space solutions for sustainable development, including public-private partnerships;

7. *Encourages* Member States and participating entities to advance their efforts related to the geotagging of all assets relevant to health systems, including health information systems, and to make them available to further the attainment of health goals;

8. *Encourages* Member States to recognize the relevance of access to the space environment and space analogues⁶ for health and life sciences research and

⁵ [A/AC.105/C.1/121](#).

⁶ Space analogues include parabolic flights, bed rest studies and expeditions to Antarctica and other isolated, confined and extreme environments that simulate the space environment on Earth.

development, especially in the area of astronaut health for social and economic benefits on Earth;

9. *Also encourages* Member States to actively promote international cooperation in the field of space medicine on the basis of equal opportunities for all interested participants and in the interests of the further exploration of outer space by humankind, and further scientific and technological development and applications in the interests of global health;

10. *Further encourages* Member States to conduct appropriate drills and exercises to benchmark their operational preparedness and response capacities and capabilities for the appropriate use of space technologies in responding to global health events;

11. *Welcomes* the establishment of a dedicated, cooperative, globally accessible, multifaceted platform based in Geneva to promote effective collaboration on space and global health issues among Member States, United Nations entities, other international organizations and relevant actors;

12. *Emphasizes* that all key activities, reference documents and plans relevant to space for global health carried out or prepared by United Nations entities should be monitored and compiled on an annual basis, including those of the World Health Organization, other international organizations and States members of the Committee on the Peaceful Uses of Outer Space, as well as, to the extent possible, non-governmental organizations and other non-governmental actors, and also emphasizes that the resulting annual compilation of activities should serve as a reference to identify and discuss gaps and opportunities and should be shared broadly in an effort to raise awareness and promote cooperation among relevant actors in this domain;

13. *Recognizes* the importance of analysing and assessing the roles and interests of current actors in the domain of space and global health, with the aim of promoting synergy, complementarity, cooperation and coordination among all actors;

14. *Emphasizes* the need to enhance, in an equitable and sustainable manner, intersectoral coordination and cooperation for effective international, regional, national and subnational capacity-building activities relevant to the application of space science and technology in the field of global health;

15. *Encourages* Member States to engage learning institutions and other capacity-building mechanisms in motivating young health professionals, at an early stage, to acquire space-related skills and abilities;

16. *Agrees* to promote capacity-building events, to be organized by United Nations entities and other relevant actors, with the objective of further promoting awareness of and engagement with regard to the important contribution of space science and technology among actors applying One Health approaches, with a view to increasing the number of organizations and other actors in the health domain that are actively engaged in using space science and technology;

17. *Requests* the Office for Outer Space Affairs to strengthen, within existing resources, capacity-building and networking in Africa, Asia and the Pacific and Latin America and the Caribbean, through regional technical cooperation projects, and to support field projects for strengthening collaboration between the space and global health sectors as an efficient strategy for making better use of space science and technology for access to global health for beneficiary States and taking better advantage of opportunities offered by bilateral or multilateral collaboration;

18. *Encourages* Member States to foster linkages between academia, national experts, telecommunications regulatory authorities and science and technology authorities with a view to improving access to and the use of digital technologies and information systems in health care.