

### **United Nations**

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

Sixtieth session (7-16 June 2017)

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

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#### Note

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

#### [27 June 2017]

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#### Chapter I

#### Introduction

1. The Committee on the Peaceful Uses of Outer Space held its sixtieth session in Vienna from 7 to 16 June 2017. The officers of the Committee were as follows:

Chair David Kendall (Canada)

First Vice-Chair Vladimir Galuska (Czechia)

Second Vice-Chair/Rapporteur Omar Shareef Hamad Eisa (Sudan)

#### A. Meetings of subsidiary bodies

- 2. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-fourth session in Vienna from 30 January to 10 February 2017, under the chairmanship of Chiaki Mukai (Japan). The report of the Subcommittee was before the Committee (A/AC.105/1138).
- 3. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-sixth session in Vienna from 27 March to 7 April 2017. From 27 to 29 March, the session was conducted under the acting chairmanship of Laura Jamschon Mac Garry (Argentina), who was elected Acting Chair at the 937th meeting of the Subcommittee. From 30 March to 7 April, the session was conducted under the chairmanship of Hellmut Lagos Koller (Chile). The report of the Subcommittee was before the Committee (A/AC.105/1122).

#### B. Adoption of the agenda

- 4. At its opening meeting, the Committee adopted the following agenda:
  - 1. Opening of the session.
  - 2. Adoption of the agenda.
  - 3. Statement by the Chair.
  - 4. General exchange of views.
  - 5. Ways and means of maintaining outer space for peaceful purposes.
  - 6. Report of the Scientific and Technical Subcommittee on its fifty-fourth session.
  - 7. Report of the Legal Subcommittee on its fifty-sixth 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 of the Committee.
  - 14. Other matters.
  - 15. Report of the Committee to the General Assembly.

#### C. Membership

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 and 68/75 and decisions 45/315, 67/412, 67/528 and 70/518, the Committee on the Peaceful Uses of Outer Space was composed of the following 84 States: Albania, Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Belarus, Belgium, Benin, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chad, Chile, China, Colombia, Costa Rica, Cuba, Czechia, Ecuador, Egypt, El Salvador, France, Germany, Ghana, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Lebanon, Libya, Luxembourg, Malaysia, Mexico, Mongolia, Morocco, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Oman, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Senegal, Sierra Leone, Slovakia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Venezuela (Bolivarian Republic of) and Viet Nam.

#### D. Attendance

- 6. Representatives of the following 72 States members of the Committee attended the session: Algeria, Argentina, Armenia, Australia, Australia, Azerbaijan, Belarus, Belgium, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechia, Ecuador, Egypt, El Salvador, France, Germany, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kenya, Libya, Luxembourg, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Oman, Pakistan, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Slovakia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela (Bolivarian Republic of) and Viet Nam.
- 7. At its 722nd meeting, the Committee admitted, at their request, observers for Cyprus, the Democratic People's Republic of Korea, Denmark, the Dominican Republic, Malta, Norway, Panama, Paraguay, Singapore and Yemen, as well as the Holy See, to attend its sixtieth session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.
- 8. Some delegations expressed their strong concern at the participation as an observer of the delegation of the Democratic People's Republic of Korea at the current session of the Committee. Those delegations were of the view that the status of the Democratic People's Republic of Korea as an observer of the Committee was inconsistent with repetitive violations by that State of Security Council resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016), 2321 (2016) and 2356 (2017). Those delegations were of the view that such participation in the Committee's session misrepresented that country's space programme as peaceful, while in fact, that was manifestly not the case, as any space launch by the Democratic People's Republic of Korea using ballistic missile technology directly violated the Security Council resolutions and brought that country closer to its stated objective of creating a nuclear-armed intercontinental ballistic missile.
- 9. Some delegations expressed the view that nothing in the framework established by the relevant Security Council resolutions prevented the Democratic People's Republic of Korea, as a State Member of the United Nations, from observing the work of the Committee. The delegations expressing that view were

also of the view that the Committee was a platform for discussion among all Member States and that it should be inclusive for all States, irrespective of their level of social and economic development, and thus all Member States had equal right to familiarize themselves with topical matters relating to the peaceful uses of outer space.

- 10. The view was expressed that the participation of the Democratic People's Republic of Korea was not clear in relation to paragraph 11 of Security Council resolution 2321 (2016), in which the Council decided that all Member States shall suspend scientific and technical cooperation involving persons or groups officially sponsored by or representing the Democratic People's Republic of Korea, and in relation to paragraph 17 of Security Council resolution 2270 (2016), in which the Council decided that all Member States shall prevent specialized teaching or training of nationals of the Democratic People's Republic of Korea, including teaching or training in aerospace engineering.
- 11. Also at the 722nd meeting, the Committee admitted, at its request, the State of Palestine, to attend the session as an observer and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.
- 12. At the same meeting, the Committee admitted, at the request of the Sovereign Military Order of Malta, the observer for that organization 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 it would not involve any decision of the Committee concerning status.
- 13. Also at the same meeting, the Committee admitted, at the request of the League of Arab States, the observer for that organization 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 it would not involve any decision of the Committee concerning status.
- 14. At the same meeting, the Committee admitted, at the request of the European Union, the observer for that organization to attend the session, in accordance with General Assembly resolution 65/276, entitled "Participation of the European Union in the work of the United Nations", and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.
- 15. Observers for the Office for Disarmament Affairs of the Secretariat and the Economic and Social Commission for Asia and the Pacific attended the session.
- 16. The session was attended by observers for the following intergovernmental organizations with permanent observer status with the Committee: Asia-Pacific Space Cooperation Organization (APSCO), European Organization for Astronomical Research in the Southern Hemisphere (ESO), European Space Agency (ESA), European Telecommunications Satellite Organization (EUTELSAT-IGO), International Mobile Satellite Organization and International Telecommunications Satellite Organization.
- 17. The session was also attended by observers for the following non-governmental organizations with permanent observer status with the Committee: African Association of Remote Sensing of the Environment, Committee on Space Research (COSPAR), Eurisy, European Space Policy Institute (ESPI), International Academy of Astronautics (IAA), International Association for the Advancement of Space Safety (IAASS), International Astronautical Federation (IAF), International Astronomical Union (IAU), International Institute of Space Law (IISL), Prince Sultan bin Abdulaziz International Prize for Water (PSIPW), Secure World Foundation (SWF), Space Generation Advisory Council (SGAC), and World Space Week Association.

- 18. At its 722nd meeting, the Committee admitted, at the request of CANEUS International, European Science Foundation and the University Space Engineering Consortium-Global (UNISEC-Global), the observers for those organizations 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 it would not involve any decision of the Committee concerning status.
- 19. A list of representatives of States members of the Committee, States not members of the Committee, United Nations entities and other organizations attending the session is contained in A/AC.105/2017/INF/1.

#### E. General statements

- 20. Statements were made by representatives of the following States members of the Committee during the general exchange of views: Algeria, Argentina, Armenia, Austria, Belarus, Brazil, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechia, France, Germany, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Kenya, Luxemburg, Mexico, Morocco, New Zealand, Nigeria, Oman, Pakistan, Poland, Republic of Korea, Romania, Russian Federation, Saudi Arabia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Thailand, Tunisia, Turkey, United Kingdom, United States, Venezuela (Bolivarian Republic of) and Viet Nam. Statements were also made by the representative of Algeria on behalf of the Group of African States, by the representative of the European Union, by the representative of the Islamic Republic of Iran on behalf of the Group of 77 and China, and by the representative of Venezuela (Bolivarian Republic of) on behalf of the Group of Latin American and Caribbean States. The observers for Denmark and Norway made statements. The observers for APSCO, COSPAR, ESA, Eurisy, EUTELSAT-IGO, IAF, SGAC and SWF also made statements.
- At the 722nd meeting, the Chair delivered a statement highlighting the rapid growth of the membership of the Committee as evidence of the increasing importance that the international community attached to cooperation in outer space affairs. He also stressed the need for the Committee to find constructive solutions to important issues relating to the mandate of the Committee, including the safety, security and sustainability of outer space activities, and noted that the Committee's mandate contributed to an essential debate on the major treaties, agreements and conventions in order to reflect the current global space situation, especially in relation to space resource extraction, space debris, and the growth of use of small satellites. The Chair also noted the valuable progress that the process under the thematic cycle of the Committee and its two Subcommittees dedicated to the fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50) had made towards steering the way towards strengthening the Committee's mandate to more effectively address current challenges and opportunities in the area of enhanced international cooperation in the peaceful uses of outer space.
- 22. At the same meeting, the Director of the Office for Outer Space Affairs made a statement in which she reviewed the work carried out by the Office during the previous year. The Director highlighted the ongoing progress of relating to UNISPACE+50 and stressed that the interdependencies in the space sector made international cooperation necessary. She also reiterated the Office's commitment to discharging the responsibilities of the Secretary-General under the United Nations treaties on outer space and in maintaining the Register of Objects Launched into Outer Space in accordance with the obligations set out in the Convention on Registration of Objects Launched into Outer Space. The Director noted that space science and technology were key to addressing development concerns and reiterated the Office's readiness to support the promotion of applications and technologies to help Member States to meet the objectives of the global development agendas. Regarding the current unfavourable financial situation of the Office, the Director

stressed the importance of the availability of financial and other resources for the successful implementation of the Office's programme of work, and in order to address its human resources shortfall.

- 23. The Committee heard the following presentations:
  - (a) "ESPI and international cooperation activities", by the observer for ESPI;
  - (b) "SPACEIL", by the representative of Israel;
- (c) "The International Space Station inside: 3D interactive presentation", by the representative of the Russian Federation;
- (d) "World Space Week", by the observer for the World Space Week Association;
- (e) "Capacity-building for satellite technology through the United Nations/Japan Long-term Fellowship Programme", by the representative of Japan;
- (f) "South Asia Satellite: a new approach to regional cooperation", by the representative of India;
- (g) "Open Universe initiative: progress report", by the representative of Italy;
- (h) "Recent achievements of the Algerian Space Programme", by the representative of Algeria;
- (i) "On the development of the United Nations regional centres", by the representative of China;
  - (j) "Cassini's grand finale", by the representative of the United States;
  - (k) "Austria in space", by the representative of Austria;
- (l) "The United States and the commercial space industry: partners in innovation and exploration", by the representative of the United States;
- (m) "The latest progress, future planning and international cooperation of China's human space flight programme", by the representative of China;
- (n) "United Arab Emirates space policy efforts towards long-term sustainability of space activities", by the representative of the United Arab Emirates;
  - (o) "Next Generation perspectives", by the observer for SGAC.
- 24. The Committee noted with appreciation the holding of the panel discussion entitled "The Outer Space Treaty: 50 years looking ahead towards 2030", organized by the Office for Outer Space Affairs. The panel discussion was moderated by the Chair of the Committee. An opening address was delivered by Yury Fedotov, Director-General of the United Nations Office at Vienna. Introductory remarks were made by the moderator, followed by presentations by Simonetta Di Pippo, Director of the Office for Outer Space Affairs; Kai-Uwe Schrogl, President of IISL; Lennard Fisk, President of COSPAR; Jean-Yves LeGall, President of IAF, via pre-recorded video message; and Sergio Marchisio, President of the European Centre for Space Law. The moderator made concluding remarks.
- 25. The Committee noted that the dedicated panel discussion, in commemoration of the fiftieth anniversary of the entry into force, on 10 October 1967, of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, had provided important and valuable insight into the role of the Outer Space Treaty over the past 50 years and in the future, giving consideration to the scientific, technical, policy and legal developments in the area of space activities.
- 26. The view was expressed that international legal regulation of activities in outer space would not last if there were various new interpretations of the 1967 Outer Space Treaty. The principles and norms that for 50 years had appeared to be basic,

- universal and beyond the bounds of time, would lose the meaning originally given to them, and States would each end up with their own interpretation.
- 27. The Committee, on the occasion of the sixtieth anniversary of the launch by the Soviet Union of the first man-made satellite, Sputnik 1, on 4 October 1957, recognized this extraordinary achievement in the history of space flight.
- 28. Some delegations expressed the view that the Committee played a leading role in promoting and regulating space exploration, as well as through its two Subcommittees, and that the Committee remained the appropriate forum for discussion and cooperation among States in order to ensure the continued peaceful exploration and use of outer space.
- 29. Some delegations underscored the commitment of their countries to the peaceful use and exploration of outer space and emphasized the following principles: universal and equal access to outer space for all countries without discrimination, regardless of their level of scientific, technical and economic development, as well as the equitable and rational use of outer space for the benefit of all humankind; non-appropriation of outer space, including the Moon and other celestial bodies, by claim of sovereignty, use, occupation or any other means; the commitment by States to the strict use of outer space for peaceful purposes; the non-weaponization of outer space, which shall never be used for the installation of weapons of any kind, and as a province of mankind, its strict use for the improvement of living conditions and peace among all peoples; and international cooperation in the development of space activities, especially those referred to in 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.
- 30. The view was expressed that the effect of merging certain political and technological factors tended to threaten the prospects of preserving outer space as an operationally safe, stable and conflict-free environment, making it necessary for the Committee to work to achieve full concordance between different factors that continued to ensure peace and predictability in outer space.
- 31. Some delegations expressed the view that space safety and security trends were multifaceted. Among the wide range of such trends were those related to the increased demand for the use of orbital spectrum resources, including through the deployment of extremely large satellite constellations in certain areas of outer space; the miniaturization of spacecraft, warranting enhanced space monitoring capabilities; the conduct of new types of space operations (such as the introduction of on-orbit servicing capabilities and the conduct of close-proximity operations); the enhancement of the role of spacecraft operators in managing safety and resolving cases of harmful radiofrequency interference, even without referring such cases to the International Telecommunication Union (ITU); and the intention of some States to proceed with implementing operations for the active removal of objects from orbit in the absence of an international normative regulation for the safe and secure conduct of such operations.
- 32. Some delegations expressed the view that space science and technology held immense potential to benefit both developed and developing countries, and that the Committee provided a vital platform for constant examination of ways in which space science and technology and its applications could contribute to the implementation of the 2030 Agenda for Sustainable Development. Those delegations also expressed the view that the examination and contribution of space science and technology to the 2030 Agenda should remain part of the work of the Committee.
- 33. The view was expressed that the international community called upon the Democratic People's Republic of Korea to fully comply with Security Council resolution 1718 (2006), 1874 (2009), 2807 (2013), 2904 (2013), 2270 (2016), 2321 (2016) and 2356 (2017). The delegation expressing that view was also of the view that until the Security Council decided otherwise, the Democratic People's Republic

- of Korea could not engage with other Member States in technical cooperation on launches using ballistic missiles technologies, even if it characterized such launches as satellite launches or space launch vehicles.
- 34. The view was expressed that there was a need to care for the outer space environment in the same way as the Earth should be cared for and to avoid creating an artificial divide between the planet and the space around it, so as to allow future generations to enjoy the benefits of outer space.
- 35. Some delegations expressed the view that the Office for Outer Space Affairs should set up a Spanish language version of its website.
- 36. The Committee expressed its appreciation for the organization of the following events during the session:
- (a) A lunch-time event in honour of the fiftieth anniversary of the Outer Space Treaty, organized by the delegation of Canada;
- (b) An exhibition organized by the Roscosmos State Corporation for Space Activities of the Russian Federation and an evening event organized by the delegation of the Russian Federation on the theme "Sixtieth anniversary of the launch of the first artificial satellite of Earth: Sputnik 1";
- (c) A lunch-time event titled "TP7: effective approaches of capacity-building in Latin America and the Caribbean", organized by the delegation of Argentina;
  - (d) The launch of the International Gender Champions network;
- (e) An evening event entitled "Space security: some perspectives", organized by ESPI.

#### F. Adoption of the report of the Committee

37. After considering the various items before it, the Committee, at its 737th meeting, on 16 June 2017, 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

- 38. In accordance with paragraph 14 of General Assembly resolution 71/90, 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.
- 39. In accordance with the agreement of the Committee at its fifty-ninth session, in 2016, the Secretariat invited States members of the Committee to submit their views on transparency and confidence-building measures in outer space activities, on the report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities (A/68/189) and on document A/AC.105/1116 to the sixtieth session of the Committee, in 2017, and that those matters should be addressed under the item on ways and means of maintaining outer space for peaceful purposes (A/71/20, para. 272). In this connection, the Committee had before it the following:
- (a) Report of the Secretary-General on transparency and confidence-building measures in outer space activities (A/72/65 and Add.1);

- (b) Note by the Secretariat containing views of States members of the Committee on the Peaceful Uses of Outer Space on transparency and confidence-building measures in outer space activities (A/AC.105/1145 and Add.1);
- (c) Note by the Secretariat containing views of States members of the Committee on the Peaceful Uses of Outer Space on transparency and confidence-building measures in outer space activities (A/AC.105/2017/CRP.19);
- (d) Note by the Secretariat containing views of States members of the Committee on the Peaceful Uses of Outer Space on transparency and confidence-building measures in outer space activities (A/AC.105/2017/CRP.10);
- (e) Conference room paper containing information on the official visit to China of the Director of the United Nations Office for Outer Space Affairs (10-24 April 2017) (A/AC.105/2017/CRP.11).
- 40. The representatives of Canada, Egypt, Indonesia, Japan, 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 also made by other member States.
- 41. The Committee heard a presentation entitled "Space Security Index 2017: trust, transparency, accountability", by the representative of Canada.
- 42. Some delegations expressed the view that the report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities (A/68/189) and General Assembly resolution 69/38, in which the Assembly encouraged Member States to continue to review and implement, to the greatest extent practicable, the proposed transparency and confidence-building measures contained in that report, provided a solid basis for States to share information and improve mutual understanding of their activities in outer space and would help prevent military confrontation and foster regional and global stability.
- 43. Some delegations expressed the view that ratification of and adherence to key space treaties, as well as national implementation of these treaties and other international instruments, such as the Space Debris Mitigation Guidelines, remained a priority. The exchange of information, in particular with regard to the publication of national policies on the use of outer space, the registration of satellites with the Secretary-General of the United Nations in accordance with the Registration Convention, and the pre-launch notifications of space-launch vehicle launches and test flights in accordance with the Hague Code of Conduct were effective ways to reaffirm collective commitment of States to the implementation of the report of the Group of Governmental Experts and to be open and transparent in their space activities to preserve the use of outer space for peaceful purposes.
- 44. Some delegations expressed the view that it was important to establish, by 2018, clear, practicable and proven guidelines for the long-term sustainability of outer space activities, which could be a stepping stone to strengthening a rule-based outer space environment.
- 45. Some delegations expressed the view that the preservation of outer space for peaceful purposes would require the adoption by the international community of new standards of conduct in space, such as standards of transparency and trust, which would strengthen existing international standards governing outer space, increase mutual understanding and reduce tensions, and ultimately contribute to the preservation of a safe, secure and sustainable space environment. The delegations expressing that view were also of the view that such measures would constitute a pragmatic and short-term means of improving the exchange of information between States, reducing the risk of computational errors based on inaccurate perceptions of the action of others in space, and serve to increase the level of confidence among States in the peaceful use of outer space.
- 46. The view was expressed that in 2014, the Committee recognized the feasibility of an in-depth review of the principles and norms of international law related to

preserving outer space for peaceful purposes, and thus the Committee should set itself the very practical task of analysing different behavioural situations and behavioural responses in outer space and attending to the issue of self-defence in outer space, since clarity in those matters had great significance for the entire discipline of space safety and security. The delegation expressing that view was also of the view that document A/AC.105/L.294 and the questionnaire included therein were a solid basis for discussion of the issue, and that it would be a good idea to invite States to express their views on how the Committee should proceed with reviewing the principles and norms of international law related to preserving outer space for peaceful uses and considering the broader perspective of space security and associated matters.

- 47. The view was expressed that, taking into account the mandates given to the Committee by the General Assembly in its resolution 1472 (XIV) A of 12 December 1959, the Committee had the authority to promote international cooperation in space from scientific, technical and legal aspects. The delegation expressing that view was also of the view that the Committee's position as a subsidiary or advisory organ of the General Assembly gave it a political character, and thus the Committee not only had to address international space cooperation from a technical perspective, but also had to examine current problems objectively and assume its responsibility towards humanity.
- 48. The view was expressed that the Committee should make use of its full potential as part of the United Nations system and engage in interaction and communications with all entities of that system in order to achieve the Committee's fundamental objective of maintaining peace and security in outer space. The delegation expressing that view was also of the view that the Committee should have in place clearly established operating rules that would allow it to act in a flexible manner and create the right working conditions.
- 49. Some delegations expressed the view that the existing legal regime with respect to outer space was not sufficient to prevent the placement of weapons in outer space or to address issues concerning the space environment, and that it was important to further develop international space law in order to maintain outer space for peaceful purposes. Those delegations were of the view that, in order to ensure that outer space was used peacefully and to prevent its militarization, the preparation of binding international legal instruments was necessary.
- 50. The view was expressed that international cooperation in the peaceful uses of outer space was hindered by some non-peaceful utilization of space technology, for example, the development of spy satellites and use of satellites to intercept communications, that such activities were an invasion of privacy and that the technologies involved could be better used for humanitarian purposes and terrorism prevention. The delegation expressing that view was also of the view that activities involving international cooperation, such as participation in international scientific campaigns, the sharing of satellite data, the provision of educational and training assistance to other countries and building institutional capacity, should be further encouraged to enable the exploration of outer space and the use of outer space for peaceful purposes.
- 51. The view was expressed that some activities of States could prompt a new arms race on Earth and in outer space, including unilateral activities in outer space that could cause tensions, and such developments could lead to a situation where countries would feel forced into protecting their space assets or perceived rights, including with respect to the unilateral mining of celestial bodies or the unauthorized removal of space objects.
- 52. Some delegations expressed the view that in order to maintain the peaceful nature of space activities and prevent the placement of weapons in outer space, it was essential for the Committee to encourage greater cooperation and linkages across the United Nations system, such as with the First Committee of the General Assembly and the Conference on Disarmament. Those delegations were also of the

- view that the Committee had a duty to suggest, recommend and generate synergies with those bodies, with a view to formulating an approach to ways and means of maintaining outer space for peaceful purposes.
- 53. The view was expressed that the Committee had been created exclusively to promote international cooperation with respect to the peaceful uses of outer space and that disarmament issues were more appropriately dealt with in other forums such as the First Committee and the Conference on Disarmament. The delegation expressing that view was also of the view that no actions by the Committee were needed regarding the weaponization of outer space and that there was no scarcity of appropriate multilateral mechanisms under which disarmament could be discussed.
- 54. The view was expressed that consideration of the prevention of an arms race in outer space by the First Committee and the Conference on Disarmament should not prevent the Committee on the Peaceful Uses of Outer Space from also considering related issues, as it has responsibilities relating to strengthening the international basis for the peaceful exploration and uses of outer space, which could cover, among other things, the further development of international space law, including, as appropriate, the preparation of international agreements governing various practical peaceful applications of space science and technology.
- 55. Some delegations welcomed the organization of joint events by the First Committee and the Fourth Committee of the General Assembly and recommended that it would be appropriate for the Committee on the Peaceful Uses of Outer Space to express to the General Assembly the desirability of holding further such meetings as an established practice in the future.
- 56. The view was expressed that the agenda of the joint panel discussion of the First and the Fourth Committees of the General Assembly should be tailored so as to include space security issues and thus increase synergies, since that was the purpose of holding joint meetings on space security and sustainability, and that the agenda should make it possible to look at both soft law and hard law aspects.
- 57. The Committee noted with satisfaction continuous developments in a number of cooperative endeavours that were being pursued at the international, regional and interregional levels by various actors, such as States and international intergovernmental and non-governmental organizations, and emphasized that such cooperation was essential for strengthening the peaceful uses of outer space and for assisting States in the development of their space capabilities. In that regard, the Committee noted the important role that bilateral and multilateral agreements played in promoting common space exploration objectives and cooperative and complementary space exploration missions.
- 58. Some delegations expressed the view that the United Nations was essential for strengthening and developing cooperation and collaboration among countries, in particular with regard to scientific and space technology, and for maximizing space resources for the common prosperity, security and the long-term sustainability of outer space activities. The delegations expressing that view were also of the view that solid cooperation should enhance information-sharing and technical cooperation among countries in line with the principles of friendship, equal partnership and mutual respect.
- 59. Some delegations expressed the view that the Committee played a crucial role in promoting cooperation among States in space activities and that the Committee provided a unique forum for States to exchange information in that regard. Those delegations also expressed the view that there were tangible opportunities to further enhance international cooperation, in accordance with the Committee's mandate.
- 60. The Committee welcomed the adoption of the African Space Policy and Strategy by African Union Heads of State and Government at the twenty-sixth ordinary session of the Assembly of the Union, held in Addis Ababa on 30 and 31 January 2016, a milestone achievement that marked the first concrete steps

towards the realization of an African outer space programme within the framework of the African Union's Agenda 2063.

- 61. The Committee noted that the Government of the Bolivarian Republic of Venezuela and the Bolivarian Agency for Space Activities would host the Second Venezuelan Conference on Space Technology, to be held in Caracas from 18 to 20 September 2017.
- 62. The Committee also noted that the twenty-third session of the Asia-Pacific Regional Space Agency Forum, on the theme "Building a future through space science, technology and innovation", had been held in Manila from 15 to 18 November 2016. The twenty-fourth session would be held in Bangalore, India, from 14 to 17 November 2017.
- 63. The Committee further noted the activities that APSCO had been pursuing in 2016 to promote the socioeconomic development of the Asia-Pacific region.
- 64. The view was expressed that international cooperation in space activities should be inclusive and take into consideration the technological level of development of States, especially of developing States, thus enhancing the use of outer space for peaceful purposes.
- 65. The Committee agreed that through its work in the scientific, technical and legal fields, as well as through the promotion of international dialogue and exchange of information on various topics relating to the exploration and use of outer space, it had a fundamental role to play in enhancing transparency and confidence-building among States, as well as in ensuring that outer space was maintained for peaceful purposes.
- 66. The Committee recommended that at its sixty-first session, in 2018, 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-fourth session

- 67. The Committee took note with appreciation of the report of the Scientific and Technical Subcommittee on its fifty-fourth session (A/AC.105/1138), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution 71/90.
- 68. The Committee expressed its appreciation to Chiaki Mukai (Japan) for her able leadership during the fifty-fourth session of the Subcommittee.
- 69. The representatives of Austria, Belgium, Canada, Chile, China, Germany, India, Indonesia, Italy, Japan, Mexico, the Russian Federation, South Africa, the Sudan, Switzerland, the United States and Venezuela (Bolivarian Republic of) made statements under the item. Statements were also made by the representative of Argentina on behalf of the Group of Latin American and Caribbean States and by the representative of Costa Rica on behalf of the Group of 77 and China. The observer for IAU also made a statement under the item. During the general exchange of views, statements relating to the item were also made by other member States.
- 70. The Committee heard the following presentations:
- (a) "Massive Collision Monitoring Activity: examining urgency and options for debris remediation", by the observer for IAASS;
- (b) "Italy in space: from the Malindi base to the space economy", by the representative of Italy;
- (c) "Space and major disasters", by the representative of the United Kingdom.

#### 1. United Nations Programme on Space Applications

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

- 71. 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.105/1138, paras. 46-64).
- 72. The Committee had before it the following:
- (a) Report of the United Nations/Islamic Republic of Iran Workshop on the Use of Space Technology for Dust Storm and Drought Monitoring in the Middle East Region, held in Tehran from 5 to 9 November 2016 (A/AC.105/1132);
- (b) Report on the United Nations/Nepal workshop on the applications of global navigation satellite systems, held in Kathmandu from 12 to 16 December 2016 (A/AC.105/1149).
- 73. The Committee noted that the priority areas of the Programme were environmental monitoring, natural resource management, satellite communications for tele-education and telemedicine applications, disaster risk reduction, the use of global navigation satellite systems, the Basic Space Science Initiative, climate change, the Basic Space Technology Initiative, the Human Space Technology Initiative, and biodiversity and ecosystems.
- 74. The Committee took note of the activities of the Programme carried out in 2016 and planned in 2017, as presented in the report of the Subcommittee (A/AC.105/1138, paras. 49-54 and 58-59).
- 75. 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 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 2017.
- 76. The Committee once again expressed its concern that the financial resources available to the United Nations Programme on Space Applications remained limited and appealed to the donor community to support the Programme through voluntary contributions.
- 77. The Committee requested the Office to continue to work with the Scientific and Technical Subcommittee on defining the priorities of the Programme. The Committee also noted that in her statement, the Director of the Office, in her capacity as the Expert on Space Applications, had informed the Committee about transitional measures in view of UNISPACE+50, aimed at strengthening the work of the Office for a more resilient capacity-building programme of the Office for Outer Space Affairs.
- 78. The Committee noted with appreciation that since its fifty-ninth session, additional resources for 2017 and 2018 had been offered by various Member States and organizations.
- 79. 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.
- 80. The Committee noted that the Government of Japan, through the Kyushu Institute of Technology, and the Politecnico di Torino and Instituto Superiore Mario Boella, with the collaboration of the Istituto Nazionale di Ricerca Metrologica, had continued to provide long-term fellowship programme opportunities for students from developing countries under the United Nations/Japan Long-term Fellowship Programme on Nanosatellite Technologies, and the United Nations/Italy Long-term

Fellowship Programme on Global Navigation Satellite Systems and Related Applications, respectively.

- 81. The Committee noted that the Office for Outer Space Affairs, in collaboration with the Japan Aerospace Exploration Agency (JAXA), provided CubeSat opportunities for deployments from the Japanese Experiment Module (Kibo) of the International Space Station through the KiboCube programme's calls for proposals. The University of Nairobi was implementing its project selected under the first call in 2016, and the selection of the project under the 2017 call for proposals would be completed by August 2017.
- 82. The Committee also noted the Drop Tower Experiment Series, which was a fellowship programme of the Office for Outer Space Affairs, undertaken in collaboration with the Center of Applied Space Technology and Microgravity and the German Aerospace Center, in which students could study microgravity by performing experiments in a drop tower. The Costa Rica Institute of Technology, together with the University of Costa Rica, had successfully implemented their project in 2016, and a new call cycle was under way.
- 83. 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.
- 84. The Committee noted that the Directors of the regional centres for space science and technology education, affiliated to the United Nations, met on the margins of the current session of the Committee, on 13 and 14 June 2017, to consider their contributions to UNISPACE+50.
- 85. The Committee expressed its appreciation to the Office for Outer Space Affairs for implementing the United Nations Programme on Space Applications and noted the important role of the Programme in supporting capacity-building in space science technology and its applications, particularly in developing countries.

#### (b) International Satellite System for Search and Rescue

86. The Committee noted with satisfaction that the International Satellite System for Search and Rescue currently had 40 member States and two participating organizations and that other entities were also interested in becoming associated with the programme in the future. The Committee noted with appreciation that the worldwide coverage for emergency beacons, carried on vessels, aircraft, and individual users around the world, had been made possible by the space segment, which consisted of transponders carried on 5 polar-orbiting, 5 geostationary and 32 newly added medium-Earth orbit satellites provided by Canada, France, India, the Russian Federation and the United States, along with the European Organization for the Exploitation of Meteorological Satellites, as well as by the ground-segment contributions of 28 other countries. The Committee also noted that, in 2016, alert data from the system had helped to save 2,100 lives in 850 search and rescue events 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 Scientific and Technical Subcommittee (A/AC.105/1138, paras. 65-80).
- 88. The Committee endorsed the recommendations and decisions on the item made by the Subcommittee and its Working Group of the Whole (A/AC.105/1138, para. 80).
- 89. The Committee had before it the conference room paper entitled "The 'Dark and quiet skies' proposal as an initiative under the auspices of the Committee on the Peaceful Uses of Outer Space for protecting the environmental observing conditions

- for large astronomical observatories and world citizens, submitted by the International Astronomical Union" (A/AC.105/2017/CRP.24).
- 90. The Committee recalled that the General Assembly, in its resolution 71/90, had reiterated the need to promote the benefits of space technology and its applications in the major United Nations conferences and summits for economic, social and cultural development and related fields, and had recognized that the fundamental significance of space science and technology and their applications for global, regional, national and local sustainable development processes should be promoted in the formulation of policies and programmes of action and their implementation, including through efforts towards achieving the objectives of those conferences and summits and in implementing the 2030 Agenda for Sustainable Development.
- 91. The Committee noted the crucial role of space data and technology in the public health domain and reaffirmed the importance of the work of the Expert Group on Space and Global Health of the Scientific and Technical Subcommittee.
- 92. The Committee took note with appreciation of a number of global conferences and workshops on space and global health that had been held or were being planned, including the United Nations/World Health Organization/Switzerland Conference on Strengthening Space Cooperation for Global Health, to be held in Geneva from 23 to 25 August 2017.
- 93. The Committee agreed that the Office for Outer Space Affairs and IAU would jointly organize a workshop/conference in the coming years on the general topic of light pollution, and noted the offers from Chile and Mexico to host the event.
- 94. Some delegations expressed the view that the examination of ways in which space science and technology and their applications could contribute to the implementation of the 2030 Agenda for Sustainable Development should remain part of the work of the Committee.

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

- 95. 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.105/1138, paras. 81-97).
- 96. The Committee noted that international and regional initiatives had been undertaken in order to promote and use remote sensing data to support socioeconomic and sustainable development, in particular for the benefit of developing countries.
- 97. In the course of the discussion, delegations reviewed national and international cooperation programmes on using remote sensing data. A number of key areas in which remote sensing data were viewed as crucial for well-informed decision-making were singled out. Examples included atmospheric gas measurement in support of climate change monitoring; disaster management and emergency response; the management of natural resources; forest cover mapping and agricultural forecasting and management; irrigation infrastructure mapping; drought and desertification status mapping; oceanography and sea temperature and sea level monitoring; an inventory of coastal waterways and wetlands, and monitoring of rivers and watershed development; snow and glacial studies, including inventory and monitoring of glacial lakes and water bodies; rural development, urban planning and overall land-use monitoring, including the identification of cultivable wasteland; food security, public health and epidemiological monitoring; and facilitating the deployment of humanitarian and development aid.
- 98. The Committee noted that with the increased relevance and use of remote sensing technology and other space science and technology applications by relevant national actors, greater capacity-building was needed, in particular in developing

countries, to most effectively incorporate and apply such technologies and solutions into planning and development decision-making processes. In that regard, some delegations expressed their support for initiatives that promoted greater availability of space-based data at no cost.

#### 4. Space debris

- 99. 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.105/1138, paras. 98-133).
- 100. The Committee endorsed the decisions and recommendations of the Subcommittee on the item (A/AC.105/1138, paras. 132-133).
- 101. The Committee noted with satisfaction that 2017 marked the tenth anniversary of the endorsement by the General Assembly, in its resolution 62/217, of the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, and urged those countries that had not yet done so to consider implementing the Guidelines on a voluntary basis.
- 102. The Committee noted with appreciation that many States and international intergovernmental organizations were already implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines of the Committee and/or the Inter-Agency Space Debris Coordination Committee (IADC) Space Debris Mitigation Guidelines, and that other States had developed their own space debris mitigation standards based on those guidelines.
- 103. In addition, the Committee noted that some States were using the Space Debris Mitigation Guidelines of the Committee and/or the IADC Space Debris Mitigation Guidelines, the European Code of Conduct for Space Debris Mitigation, International Organization for Standardization standard 24113:2011 (Space systems: space debris mitigation requirements), and ITU recommendation ITU-R S.1003 ("Environmental protection of the geostationary-satellite orbit") as reference points in their regulatory frameworks for national space activities. The Committee also noted that some States had cooperated in the space surveillance and tracking support framework funded by the European Union and in the ESA space situational awareness programme.
- 104. The Committee 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.
- 105. Some delegations expressed the view that the future of space activities largely depended on space debris mitigation and removal and that the mitigation of space debris should continue to be treated as a priority.
- 106. 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.
- 107. Some delegations expressed the view that measures taken to address the issue of space debris should not impose an undue burden on the space programmes of developing nations.
- 108. Some delegations expressed the view that there was a need for the detection, tracking, monitoring and reduction of space debris and for the elimination of that debris according to a known timetable.
- 109. The view was expressed that since much of the orbital space debris was a result of the past operations of major spacefaring countries, there was a moral international responsibility on their part to assist emerging spacefaring countries in the implementation of space debris mitigation guidelines through the provision of

- space situational awareness and conjunction assessment risk analysis systems, as well as financial contributions in order to absorb the additional costs incurred by developing countries with regard to spacecraft design modifications.
- 110. The view was expressed that international efforts were required to reach a common view, establish common rules and pool efforts in relation to the increasing amount of space debris and related matters.
- 111. The view was expressed that presentations and statements made under the agenda item illustrated the dedicated research efforts required to mitigate the effects of space debris to better protect future space missions.
- 112. The view was expressed that it was necessary to ensure that policies and procedures aimed at minimizing the risks of accidents in space did not result in long-term disadvantages for emerging spacefaring countries seeking to launch space objects in the future, and that developing countries should not be denied an opportunity to work in research and development on the grounds that such activity could generate more space debris or pose a danger to objects already in space.
- 113. The view was expressed that all States should take into account that space debris affected the sustainable use of outer space, constituted a hazard to outer space activities and potentially limited the effective deployment and utilization of associated outer space capabilities.

#### 5. Space-system-based disaster management support

- 114. 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.105/1138, paras. 134-152).
- 115. The Committee had before it the report on the United Nations/Germany International Expert Meeting on the Global Partnership on Space Technology Applications for Disaster Risk Reduction, held in Bonn, Germany, on 1 and 2 December 2016 (A/AC.105/1148).
- 116. The Committee welcomed the activities organized by the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) aimed at promoting greater understanding, acceptance and commitment by countries regarding ways of accessing and developing 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 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.
- 117. Some delegations called upon the Office for Outer Space Affairs, through UN-SPIDER, to intensify its capacity-building activities through technical advisory missions and training programmes, in particular in developing countries, to strengthen disaster risk preparedness and emergency response at the national level.
- 118. In her statement to the Committee at its 722nd meeting, on 7 June 2017, the Director of the Office for Outer Space Affairs thanked the Governments of Austria, China and Germany for their commitment to and support of UN-SPIDER since its inception, including through the implementation of UN-SPIDER activities coordinated by the UN-SPIDER offices in Bonn, Germany, Beijing and Vienna.
- 119. The Committee noted with appreciation that the eighth annual UN-SPIDER regional support offices coordination meeting had been held in Vienna on 6 June 2017. The meeting had brought together representatives of 11 regional support offices. The offices were a strong pillar of UN-SPIDER and contributed to the programme's activities in the areas of capacity-building, institutional strengthening and knowledge management.

- 120. The Committee noted that UN-SPIDER would hold its seventh annual conference in Beijing in October 2017, as one of the commitments of the Office for Outer Space Affairs to supporting the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030.
- 121. The Committee also noted the valuable contribution of the ongoing activities of Member States to increase the availability and use of space-based solutions in support of disaster management, including the Sentinel Asia project and its coordination of emergency observation requests through the Asian Disaster Reduction Centre, the emergency mapping service of the European Earth Observation Programme (Copernicus) and the Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters (also called the International Charter on Space and Major Disasters).

#### 6. Recent developments in global navigation satellite systems

- 122. 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.105/1138, paras. 153-178).
- 123. The Committee noted with appreciation that the eleventh meeting of the International Committee on Global Navigation Satellite Systems (ICG) and the seventeenth meeting of its Providers' Forum had been hosted by the Roscosmos State Corporation for Space Activities on behalf of the Government of the Russian Federation in Sochi, Russian Federation, from 6 to 10 November 2016. The Committee noted that the twelfth meeting of ICG in 2017, to be held from 2 to 7 December 2017, would be hosted by Japan.
- 124. The Committee noted that the items on the ICG meeting agenda covered compatibility and interoperability of satellite navigation systems; reference frames and timing; enhancement of the performance of global satellite navigation systems (GNSS); and development of new navigation services and capabilities. It also noted that ICG was progressing significantly in establishing an interoperable GNSS space service volume, and that by exploiting the interoperability of all systems, a GNSS signal availability of nearly 100 per cent had been achieved.
- 125. The Committee noted the proposal by ICG that the Subcommittee consider issues related to GNSS spectrum protection and interference detection and mitigation under its current agenda item on recent developments in GNSS. The Committee also noted that the intent behind the proposal was to raise awareness of the issue among States members of the Committee as part of efforts to promote the effective use of GNSS open services by the global community. In that context, States members and permanent observers of the Committee were invited to participate in the focused exchange of information under the item.
- 126. The Committee expressed its appreciation to the Office for Outer Space Affairs for its continued support as executive secretariat for ICG and its Providers' Forum, and for the organization of workshops and training courses focusing on capacity-building in the use of GNSS-related technologies in various fields of science and industry, including on the subject of space weather disturbances in the ionosphere and their impact on positioning and navigation.
- 127. The Committee noted with appreciation the financial contributions made by the United States and the European Commission to the Office for Outer Space Affairs in support of GNSS-related activities and ICG and its Providers' Forum.
- 128. The Committee noted that the National Commission for Space Activities (CONAE) would host a workshop on the applications of GNSS in Córdoba, Argentina, in 2018 dedicated to strengthening capacity-building in satellite navigation technologies.

#### 7. Space weather

- 129. 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.105/1138, paras. 179-201).
- 130. The Committee welcomed the fact that the Expert Group on Space Weather, working under the leadership of Canada and with substantive support from the Office for Outer Space Affairs as the mechanism designated to pursue the objective formulated under UNISPACE+50 thematic priority 4, had taken steps in coordination with the Office to align its workplan with the objective under thematic priority 4 and had started to develop a strategy, taking into account its intersessional work.
- 131. The Committee noted that the Expert Group had held meetings on the margins of the fifty-fourth session of the Scientific and Technical Subcommittee, in 2017, as well as intersessionally, in Vienna, on 27-28 April 2017, to further its work to meet the objective under thematic priority 4.
- 132. The Committee also noted that the Office had aligned the space weather-related activities it implemented through its capacity-building efforts and those it carried out in its capacity as the executive secretariat of ICG.
- 133. The Committee noted with appreciation a number of global conferences and workshops on space weather that had been held or were being planned, including the United Nations/United States workshop entitled "International Space Weather Initiative: the decade after the International Heliophysical Year 2007", to be held in Boston, United States, from 31 July to 4 August 2017.

#### 8. Near-Earth objects

- 134. 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.105/1138, paras. 202-218).
- 135. The Committee noted with appreciation the work done by the International Asteroid Warning Network (IAWN) and the Space Mission Planning Advisory Group (SMPAG), as provided in the reports on their activities to the fifty-fourth session of the Scientific and Technical Subcommittee (A/AC.105/1138, paras. 205-210).
- 136. The Committee welcomed the progress made by IAWN and SMPAG in strengthening international cooperation to mitigate the potential threat posed by near-Earth objects. In the interests of public safety, cooperative action was required on the part of the global community. In that context, IAWN and SMPAG had reached an initial agreement on proposed criteria and thresholds for impact response, which had been presented to the Scientific and Technical Subcommittee at its fifty-fourth session (see A/AC.105/C.1/2017/CRP.25).
- 137. The Committee noted that SMPAG had held its eighth meeting on 1 February 2017, supported by the Office for Outer Space Affairs, on the margins of the fifty-fourth session of the Subcommittee. The Committee also noted that the SMPAG Ad Hoc Working Group on Legal Issues, established in 2016, had held its first meeting on 2 February 2017, also on the margins of the fifty-fourth session of the Subcommittee, to discuss its terms of reference, identify and agree on its plan of work, in particular with regard to possible legal questions related to SMPAG workplan items.
- 138. The Committee noted that IAWN and the Office for Outer Space Affairs had initiated the establishment of an interface for general communication on near-Earth objects with the public, and for communication with Member States in the event of an impact warning.
- 139. At the Committee's 722nd meeting, the Director of the Office for Outer Space Affairs had informed the Committee that, pursuant to General Assembly

resolution 71/90, the Office had assumed its role as the permanent secretariat of SMPAG and that the funding arrangements between SMPAG and the Office in that regard were to be finalized.

- 140. The Committee further noted that the next meeting of SMPAG would be held in Toulouse, France, from 10 to 12 October 2017.
- 141. The Committee also noted that International Asteroid Day, declared by the General Assembly in its resolution 71/90, to raise public awareness about the asteroid impact hazard, would be observed on 30 June 2017.

#### 9. Use of nuclear power sources in outer space

- 142. 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.105/1138, paras. 219-237).
- 143. The Committee endorsed the report and recommendations of the Subcommittee and the Working Group on the Use of Nuclear Power Sources in Outer Space, reconvened under the chairmanship of Sam A. Harbison (United Kingdom), including the Working Group's new multi-year workplan (A/AC.105/1138, para. 237, and annex II).
- 144. The Committee had before it the document entitled "Report on the status of implementation of the Safety Framework for Nuclear Power Source Applications in Outer Space, and recommendations for future work" (A/AC.105/C.1/112), which had been prepared by the Working Group in accordance with its multi-year workplan for the period 2010-2015, adopted by the Subcommittee at its forty-seventh session, in 2010 (A/AC.105/958, para. 134 and annex II, para. 8), and extended to 2017 by the Subcommittee at its fifty-first session, in 2014 (A/AC.105/1065, para. 187 and annex II, para. 9).
- 145. The Committee stressed the value and importance of implementing the voluntary Safety Framework for Nuclear Power Source Applications in Outer Space, which had been developed by the Subcommittee jointly with the International Atomic Energy Agency.
- 146. Some delegations expressed the view that more consideration should be given to the use of nuclear power sources in terrestrial orbits, specifically in the geostationary orbit and low-Earth orbit, in order to address the problem of potential collisions of nuclear-powered space objects in orbit and the incidents or emergencies that could be created by the accidental re-entry of such objects into the Earth's atmosphere, as well as the impact of such a re-entry on the Earth's surface, human life and health and the ecosystem. The delegations expressing this view were also of the view that increased attention should be given to these issues through adequate strategies, long-term planning and regulation, including the Safety Framework for Nuclear Power Source Applications in Outer Space.

#### 10. Long-term sustainability of outer space activities

- 147. 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.105/1138, paras. 238-273).
- 148. The Committee endorsed the recommendations and decisions on the item endorsed by the Subcommittee regarding the Working Group on the Long-term Sustainability of Outer Space Activities, reconvened under the chairmanship of Peter Martinez (South Africa) (A/AC.105/1138, para. 273).
- 149. The Committee had before it the following:
- (a) Working paper by the Chair of the Working Group entitled "Outline for the report of the Working Group on the Long-term Sustainability of Outer Space

Activities" (A/AC.105/C.1/L.357), which had been before the Subcommittee at its fifty-fourth session;

- (b) Note by the Secretariat entitled "Guidelines for the long-term sustainability of outer space activities" (A/AC.105/L.308);
- (c) Working paper submitted by the Russian Federation entitled "Considerations aimed at facilitating a broader systemized understanding of the objective dimensions of issues and the functional dimensions of solutions related to sharing information on the situation in outer space in the context of deciding on the establishment of a working group on enhanced information exchange on space objects and events" (A/AC.105/L.310), which had been before the Subcommittee at its fifty-fourth session as conference room paper A/AC.105/C.1/2017/CRP.27;
- (d) Conference room paper by the Chair of the Working Group entitled "Guidelines for the long-term sustainability of outer space activities" (A/AC.105/2017/CRP.23), which contained proposals for structuring the work of the Working Group;
- (e) Working paper by the Chair of the Working Group entitled "Guidelines for the long-term sustainability of outer space activities" (A/AC.105/2017/CRP.26), which reflected the proposed amendments to the guidelines discussed at the present session of the Committee.
- 150. The Committee agreed on the importance of completing a compendium of guidelines for the long-term sustainability of outer space activities, to be adopted by the Committee and transmitted to the General Assembly in 2018 to coincide with UNISPACE+50.
- 151. The Committee noted that the Working Group had held an intersessional meeting on 5 and 6 June, just prior to the current session of the Committee. In that connection, the Committee noted with appreciation that the Permanent Mission of Japan had provided the meeting venue on 5 June.
- 152. The Committee noted that during the current session, the Working Group had met, using available interpretation services, and that the Chair of the Working Group and interested delegations had held extensive informal consultations to further advance their work on the preamble and the draft guidelines.
- 153. The Committee noted that, having acknowledged the large amount of work before the Working Group and the limited amount of working time remaining under the extended workplan (A/71/20, para. 137), the Working Group had considered the preamble and some of the guidelines in small informal drafting groups during the present session of the Committee in order to accelerate the progress of its work. The Committee also noted that the outputs from those small informal drafting groups were then considered in multilateral informal consultations so as to give the maximum number of delegations an opportunity to view and react to all proposals.
- 154. The Committee noted that the preamble and the text of the following guidelines had been discussed in detail during the present session, and that the latest versions of the updated texts were reflected in conference room paper A/AC.105/2017/CRP.26:
  - (a) Guideline 6: Enhance the practice of registering space objects;
- (b) Guideline 7: Provide, in national legal and/or policy frameworks, for a commitment to conducting space activities solely for peaceful purposes;
- (c) Guideline 11:1 Provide updated contact information and share information on space objects and orbital events;

<sup>&</sup>lt;sup>1</sup> Extensive discussions were held on this guideline, and the Working Group agreed to postpone further discussions on this guideline pending agreement on the preamble and the harmonization of the final compendium of guidelines.

- (d) Guideline 14: Perform conjunction assessment during all orbital phases of controlled flight;
- (e) Guideline 15: Develop practical approaches for pre-launch assessment of possible conjunctions of space objects to be launched with space objects already present in near-Earth space;
- (f) Guideline 24:<sup>1</sup> Share experience related to the long-term sustainability of outer space activities and develop new procedures, as appropriate, for information exchange;
- (g) Guideline 30: Address approaches to the design and operation of small-size space objects;
- (h) Guideline 31: [Mitigate] [Take measures to address] risks associated with the uncontrolled re-entry of space objects;
- (i) Guideline 32:<sup>1</sup> Observe measures of precaution when using sources of laser beams passing through outer space.
- 155. The Committee noted that a proposal for consolidating guideline 20, guideline 21 and three paragraphs of guideline 22 had been presented at this session for consideration by delegations.
- 156. The Committee requested that the content of conference room paper A/AC.105/2017/CRP.26 be made available in the six official languages of the United Nations following the current session of the Committee.
- 157. The Committee noted that the fifth intersessional meeting of the Working Group would be held in Vienna in the period of September/October 2017, and requested the Chair and the Secretariat to make the necessary arrangements as soon as possible.
- 158. The Committee noted that, in an effort to expedite its work, the Working Group had requested the Chair to produce a streamlined version of the preambular text following the current session of the Committee, taking into account inputs of all interested delegations. In that connection, the Committee noted that the Working Group had agreed to submit those related views of delegations electronically to the Chair and the Secretariat by no later than 31 July, 2017. The Committee noted that those informal documents containing views on the preamble would then be made available on the Working Group's dedicated web page. The Committee also noted that the Working Group had agreed to use the above-mentioned preambular text to be prepared by the Chair as the starting point for discussions on the preamble at the fifth intersessional meeting of the Working Group.
- 11. 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
  - 159. 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.105/1138, paras. 274-285).
  - 160. Some delegations expressed the view that the geostationary orbit a limited natural resource clearly in danger of saturation needed to be used rationally, efficiently and economically, in conformity with the ITU Radio Regulations, so that countries or groups of countries may have equitable access to those orbits and

frequencies, taking into account the special needs of developing countries and the geographical situation of particular countries. Those delegations underscored that the geostationary orbit was not to be subject to national appropriation by claim of sovereignty, by means of use, repeated use or occupation, or by any other means, and that its utilization was governed by applicable international law, including the Outer Space Treaty and ITU instruments and regulations.

161. Some delegations expressed the view that the geostationary orbit provided unique potential for access to communications and information, in particular for assisting developing countries in implementing social programmes and educational projects, in disseminating knowledge and in providing medical assistance. Those delegations therefore considered that, in order to ensure the sustainability of the geostationary orbit, it was necessary to keep the issue on the agenda of the Subcommittee.

## 12. Draft provisional agenda for the fifty-fifth session of the Scientific and Technical Subcommittee

- 162. The Committee took note of the discussion of the Subcommittee under the item on the draft provisional agenda for its fifty-fifth session, as reflected in the report of the Subcommittee (A/AC.105/1138, paras. 286-292).
- 163. The Committee endorsed the recommendations and decisions on the item made by the Subcommittee (A/AC.105/1138, paras. 287-292).
- 164. On the basis of the deliberations of the Subcommittee at its fifty-fourth session, the Committee agreed that the following items should be considered by the Subcommittee at its fifty-fifth session:
  - 1. Adoption of the agenda.
  - 2. Election of the Chair.
  - 3. Statement by the Chair.
  - 4. General exchange of views and introduction of reports submitted on national activities.
  - 5. United Nations Programme on Space Applications.
  - 6. Space technology for sustainable socioeconomic development.
  - 7. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment.
  - 8. Space debris.
  - 9. Space-system-based disaster management support.
  - 10. Recent developments in global navigation satellite systems.
  - 11. Space weather.
  - 12. Near-Earth objects.
  - 13. Use of nuclear power sources in outer space.

(Work for 2018 as reflected in the multi-year workplan of the Working Group (A/AC.105/1138, para. 237 and annex II, para. 9))

14. Long-term sustainability of outer space activities.

(Work for 2018 as reflected in the extended multi-year workplan of the Working Group (A/71/20, para. 137))

15. 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)

16. Draft provisional agenda for the fifty-sixth session of the Scientific and Technical Subcommittee, including identification of subjects to be dealt with as single issues/items for discussion or under multi-year workplans.

165. 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 fifty-fifth session of the Scientific and Technical Subcommittee.

#### C. Report of the Legal Subcommittee on its fifty-sixth session

166. The Committee took note with appreciation of the report of the Legal Subcommittee on its fifty-sixth session (A/AC.105/1122), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution 71/90.

167. The Committee expressed its appreciation to Hellmut Lagos Koller (Chile) for his able leadership during the fifty-sixth session of the Subcommittee. The Committee also expressed its appreciation to Laura Jamschon Mac Garry (Argentina) for assuming the role of Acting Chair of the Subcommittee for three days due to the unavailability of Mr. Lagos Koller.

168. The representatives of Austria, Brazil, Chile, China, France, Germany, Greece, Indonesia, Israel, Japan, Pakistan, the Russian Federation, South Africa, the Sudan, the United States and Venezuela (Bolivarian Republic of) made statements under the item. Statements were also made by the representative of Costa Rica on behalf of the Group of 77 and China and the representative of Argentina on behalf of the Group of Latin American and Caribbean States. During the general exchange of views, statements relating to this agenda item were also made by other member States.

169. Some delegations reiterated the need to strengthen interaction between the Scientific and Technical Subcommittee and the Legal Subcommittee in order to synchronize the progressive development of space law with key scientific and technical developments in that area, and that such interaction would bring substantive benefits to the work of the Committee as a whole.

170. Some delegations expressed the view that interaction and coordination between the Scientific and Technical Subcommittee and the Legal Subcommittee were essential for ensuring a comprehensive discussion of aspects related to, inter alia, the use of nuclear power sources in outer space, space debris and geostationary orbit, and that a mechanism that would increase the coordination between those bodies could be established as an outcome of UNISPACE+50.

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

171. The Committee took note of the discussion of the Subcommittee under the item on 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.105/1122, paras. 55-69).

172. The Committee noted the important role of international intergovernmental and non-governmental organizations relating to space law in their contribution to the development, strengthening and furtherance of understanding of international space law.

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

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

174. 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.105/1122, paras. 70-83).

175. 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.105/1122, para. 72, and annex I, paras. 4, 8, 13 and 15).

176. At its 729th meeting, the Committee endorsed the draft declaration on the fiftieth anniversary of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (A/AC.105/L.311), as amended, which is annexed to the present report of the Committee at its sixtieth session. The draft declaration will be tabled for adoption by the General Assembly at its seventy-second session, in 2017.

177. Some delegations expressed the view that the universality of the five United Nations treaties on outer space should be strongly supported and promoted and that it was of particular importance to foster the international regime of responsibility and liability to cope with present and future challenges to the safety, security and sustainability of outer space activities.

178. Some delegations expressed the view that it was important to strengthen the Legal Subcommittee as the prime multilateral body to promote the development of international space law, and that as such, space law issues needed to be addressed in a holistic manner because all aspects of safety and security required a profound understanding of space law as the indispensable framework for the long-term sustainability of outer space activities.

179. Some delegations expressed the view that the importance of the international legal framework was important in that it allowed the exploration of outer space on an equitable basis and based on the principles of non-appropriation and peaceful uses of outer space in conformity with the five United Nations treaties governing activities, in particular the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

180. Some delegations expressed the view that the Committee and the Legal Subcommittee were to be encouraged to continue their efforts to develop the existing legal framework, where required, including through soft law, taking into account technological developments, the expansion of space activities and the emergence of new space actors, provided that the principles governing the exploration and use of outer space were not undermined.

181. Some delegations expressed the view that space exploration by States, international organizations and, now, non-governmental entities had flourished under the legal framework of the United Nations treaties on outer space and that that framework remained the primary legal basis for supporting the increasing scale of space activities and for strengthening international cooperation on the peaceful uses of outer space. The delegations expressing that view also welcomed the growing adherence to the treaties and encouraged those States that had not yet become parties to the treaties to consider doing so.

- 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
  - 182. 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.105/1122, paras. 84-113).
  - 183. The Committee endorsed the recommendations of the Subcommittee and its Working Group on the Definition and Delimitation of Outer Space, reconvened under the chairmanship of José Monserrat Filho (Brazil) (A/AC.105/1122, para. 87, and annex II, para. 6).
  - 184. Under this item, the Committee had before it the following:
  - (a) Working paper prepared by the Chair of the Working Group on the Definition and Delimitation of Outer Space of the Legal Subcommittee entitled "Promoting the discussion of the matters relating to the definition and delimitation of outer space with a view to elaborating a common position of States members of the Committee on the Peaceful Uses of Outer Space" (A/AC.105/C.2/L.302);
  - (b) Working paper prepared by the Russian Federation entitled "The challenging context of considering complete aspects of delimitation of airspace and outer space: arguments for adding dialectical elements to, and setting newer analytical trends in, discussing the issue" (A/AC.105/2017/CRP.7).
  - 185. Some delegations expressed the view that it was a matter of concern that no consensus had been reached to date on the definition and delimitation of outer space. The delegations expressing that view were also of the view that the definition and delimitation of outer space, as a very important topic, should be kept on the agenda of the Legal Subcommittee and that more work should be done to delimit the legal regime applicable to airspace and to outer space.
  - 186. The view was expressed that the definition and delimitation of outer space was important for addressing significant problems such as the liability, safety and security of aerospace operations and the national sovereignty of States, particularly for suborbital flights and vehicles for which it remained unclear whether they fell under air law or space law regimes.
  - 187. Some delegations expressed the view that the geostationary orbit was a limited natural resource with great potential for the implementation of a wide array of programmes for the benefit of all States, and that it was at risk of becoming saturated, thereby threatening the sustainability of space activities in it; that the exploitation of the geostationary orbit should be rationalized; and that it should be made available to all States, under equitable conditions, taking into account in particular the needs of developing countries and the geographical position of certain countries. Those delegations were also of the view that it was important to use the geostationary orbit in compliance with international law, in accordance with the instruments and regulations of ITU and within the legal framework established in the relevant United Nations treaties, while giving consideration to the contributions of space activities to sustainable development and the achievement of the 2030 Agenda for Sustainable Development.
  - 188. The view was expressed that special attention should be given to equitable access for all States to orbit and spectrum resources in geostationary orbit while recognizing the potential of those resources to contribute to social programmes that benefited the most underserved communities, making educational and medical projects possible, ensuring access to information and communications technology, and improving links to necessary sources of information in order to strengthen

social organization, as well as promoting knowledge and the exchange of that knowledge.

189. Some delegations expressed the view that, as the definition and delimitation of outer space and the character and utilization of the geostationary orbit were of crucial importance, the item should be retained on the agenda of the Subcommittee.

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

190. 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.105/1122, paras. 114-123).

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

192. The Committee agreed that the general exchange of information on national legislation relevant to the peaceful exploration and use of outer space provided States with a comprehensive overview of the current status of national space laws and regulations and assisted States in understanding the various approaches taken at the national level with regard to the development of national space-related regulatory frameworks. In that regard, the Committee greatly appreciated the continuously updated schematic overview of national regulatory frameworks that was made available on the website of the Office for Outer Space Affairs.

193. The view was expressed that all States should ensure that their national legislation on the exploration and use of outer space was closely aligned with the relevant international treaties, and that the promotion of laws and regulations relating to the commercialization of outer space, which was the heritage of humankind and belonged to all States under equitable conditions, should be avoided.

#### 5. Capacity-building in space law

194. 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 (A/AC.105/1122, paras. 124-136).

195. The Committee endorsed the recommendation of the Subcommittee on the agenda item (A/AC.105/1122, para. 136).

196. The Committee agreed that international cooperation in research, training and education in space law was essential to build the capacity necessary at the national level to ensure that the increasing number of players in space activities would be in compliance with international space law.

197. The Committee reaffirmed that the regional centres for space science and technology education, affiliated to the United Nations, played an important role in providing teaching and training opportunities in space law. The Committee noted that greater use of the regional centres could be made to provide more opportunities for academic linkages with other institutes and universities, as appropriate.

198. The Committee noted with satisfaction the holding of the tenth United Nations workshop on space law in Vienna from 5 to 8 September 2016, organized by the Office for Outer Space Affairs. The workshop had brought together experts in the field and representatives of permanent missions to the United Nations in Vienna to enhance the understanding of the legal framework governing the conduct of space activities and by adopting a recommendation for further consideration by the Committee (A/AC.105/1131, para. 50 (a)-(k)).

199. Some delegations expressed the view that more effective and proactive efforts were needed to increase awareness of the importance of complying with international space law when carrying out space activities and programmes. Those delegations were also of the view that capacity-building in space law was a fundamental tool that should be enhanced through greater international cooperation among States and an increased number of workshops, seminars and events to promote space law, in particular in developing countries.

200. Some delegations expressed the view that the Committee should focus the provision of technical assistance on those member States that wished to improve their domestic law.

201. The view was expressed that the Committee and its Legal Subcommittee should remain the prime international forum for the further development of space law and that the Office had an important role in promoting capacity-building in that regard and in offering technical assistance to those States wishing to accede to the treaties.

## 6. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space

202. The Committee took note of the discussion of the Subcommittee under the item on the review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, as reflected in the report of the Subcommittee (A/AC.105/1122, paras. 137-149).

203. Some delegations expressed the view that the Principles Relevant to the Use of Nuclear Power Sources in Outer Space should be reviewed.

204. The view was expressed that the Principles Relevant to the Use of Nuclear Power Sources in Outer Space should be reviewed, taking into account the latest developments in technology. The delegation expressing that view was also of the view that the use of nuclear energy as a source of fuel was permissible if environmental protection had been ensured in space and on the ground.

205. The view was expressed that nuclear power sources should not be used in outer space within the gravitational field of the Earth and that exceptions could be made only for deep space mission or in absolutely necessary cases when there is no alternative.

206. The view was expressed that the Legal Subcommittee should establish new legal instruments addressing the current activities of States in outer space, and that it could start by exchanging views on the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.

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

207. 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 measures, taking into account the work of the Scientific and Technical Subcommittee, as reflected in the report of the Legal Subcommittee (A/AC.105/1122, paras. 150-173).

208. The Committee endorsed the decisions of the Subcommittee as reflected in its report (A/AC.105/1122, para. 173).

209. The Committee noted with satisfaction that the endorsement by the General Assembly, in its resolution 62/217, of the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space was a key step in providing all spacefaring nations with guidance on how to mitigate the problem of space debris, and urged Member States to consider voluntary implementation of the Guidelines.

- 210. The Committee noted with satisfaction that some States had taken measures to enforce the implementation of internationally recognized guidelines and standards relating to space debris through relevant provisions in their national legislation.
- 211. The Committee agreed that States members of the Committee and international intergovernmental organizations having permanent observer status with the Committee should be invited to further contribute to the compendium of space debris mitigation standards adopted by States and international organizations by providing or updating the information on any such legislation or standards adopted, using the template provided for that purpose. The Committee also agreed that all other States Members of the United Nations should be invited to contribute to the compendium, and encouraged States with such regulations or standards to provide information on them.
- 212. Some delegations expressed satisfaction with the amendment of the agenda item to include space debris remediation measures.
- 213. The view was expressed that the Legal Subcommittee should develop new legal instruments regulating activities of States in outer space, and could begin with an exchange of views on existing non-legally binding instruments such as the space debris mitigation guidelines.
- 214. The view was expressed that the increased amount of space debris and a growing gap between technological progress and the regulatory framework increased the relevance and importance of the work of the Committee and its Subcommittees.
- 215. The view was expressed that the absence of international normative regulation of the safe and secure conduct of operations for the active removal of objects from orbit (both fragments of debris and intact defunct space objects) had an effect on the safety and security of outer space activities.

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

- 216. The Committee took note of the discussion of the Subcommittee under the item on the general exchange of information on non-legally binding United Nations instruments on outer space, as reflected in the report of the Subcommittee (A/AC.105/1122, paras. 174-184).
- 217. The Committee noted with appreciation the compendium of mechanisms adopted by States and international organizations in relation to non-legally binding United Nations instruments on outer space, which had been made available on a dedicated web page of the Office.
- 218. The Committee invited States members of the Committee and international intergovernmental organizations having permanent observer status with the Committee to submit their responses to the Secretariat for inclusion in the compendium and to continue to provide updated information.
- 219. Some delegations expressed the view that non-legally binding United Nations instruments related to space activities were important instruments that provided guidance to States and other relevant actors on conducting their activities in a safe and secure manner. Those delegations were of the view that although such instruments played an important role in complementing and supporting the United Nations treaties on outer space, they could not serve as a substitute for existing legally binding instruments, nor should they hinder the progressive development of international space law.

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

220. The Committee took note of the discussion of the Subcommittee under the item on the general exchange of views on the legal aspects of space traffic management, as reflected in the report of the Subcommittee (A/AC.105/1122,

- paras. 185-203), as the discussion related in particular to measures being undertaken at the national and international levels to improve the safety of spaceflight.
- 221. The Committee took note of the intention of the Legal Subcommittee to continue to discuss space traffic management at its fifty-seventh session and considered that a number of factors, such as the complex and congested space environment, should serve as the context of the deliberations.
- 222. The view was expressed that there were doubts as to the functionality of having the topic of space traffic management under the purview of the Legal Subcommittee at the current stage because the Subcommittee was not fully able to analyse major factors shaping the concepts underlying space traffic management. Sound logic dictated that a fruitful exchange of views on space traffic management was indispensable to the success of efforts to devise politically strong regulation of the safety of space operations within the set of guidelines for the long-term sustainability of outer space activities.

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

- 223. The Committee took note of the discussion of the Legal Subcommittee under the item on the general exchange of views on the application of international law to small-satellite activities, as reflected in the report of the Subcommittee (A/AC.105/1122, paras. 204-220).
- 224. The Committee noted with satisfaction the continuation of this item on the agenda of the Subcommittee and agreed that it would provide valuable opportunities to address and raise awareness of a number of issues relating to the use of small satellites by various actors.
- 225. Some delegations expressed the view that, in order to ensure the safe and responsible use of outer space in the future, it was important to include small-satellite missions, as appropriate, in the scope of application of international and national regulatory frameworks.
- 226. The Committee noted that the questionnaire on the application of international law to small-satellites activities (see A/AC.105/1122, annex I, paras. 14 and 15, and appendix II) had been useful in guiding the discussion under the agenda item.

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

- 227. The Committee took note of the discussion of the Subcommittee under the item on the general exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources, as reflected in the report of the Subcommittee (A/AC.105/1122, paras. 221-250).
- 228. Some delegations welcomed the continuation of this item on the agenda, and were of the view that, in the light of the increasing participation of the private sector in space activities, an international legal framework 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.
- 229. Some delegations expressed the view that a broad debate should be undertaken about the implications of activities relating to the utilization of space resources. In particular, developing countries must participate in the debate and their rights with respect to such activities must be taken into consideration.
- 230. The view was expressed that the Committee was the appropriate forum for that debate.
- 231. The view was expressed that there was a need to adopt a multilateral approach to further develop a common understanding of the principles relevant to the utilization of space resources set out in the Outer Space Treaty.

- 232. The view was expressed that it was desirable to enhance the exchange of information and discussion about States' efforts to adopt their own national legislation regarding outer space, in particular with respect to commercial activities, as the best way to ensure the compliance of all States with the international legal framework governing outer space activities.
- 233. The view was expressed that national legislation on outer space activities should strictly conform to the principles enshrined in the United Nations treaties on outer space and that as space was to be considered the common heritage of humanity, belonging to all States on an equal footing, legislation regarding the commercialization of outer space should neither exist nor be promoted.
- 234. The view was expressed that free and open access to all parts of outer space for all States must be maintained and that the obligation of common public ownership of outer space should be reflected in the national legislation of States, in particular with respect to legislation regarding space resources.
- 235. The view was expressed that the absence of regulation in the realm of space law and the proliferation of domestic legislation on resource-oriented private exploration activities in outer space demanded an appropriate response from the Committee.
- 236. The view was expressed that the Committee as a whole, and its Legal Subcommittee in particular, should examine pressing questions about the utilization of space resources, such as whether international treaties as they currently stand could regulate the commercial mining of space resources; what mechanisms would need to be adopted to extend the benefits of such activities to all countries; how to ensure that companies active in that area were cognizant of the role of the Committee in developing the legal regime on space resources; how to ensure that member States were aware of the interests and concerns of companies regarding the development of that legal regime; and what impact commercial resource extraction might have on national security policies.
- 237. The view was expressed that the rapid development of domestic legislation on space resource extraction presented serious challenges to multilateralism in space diplomacy.

## 12. Review of international mechanisms for cooperation in the peaceful exploration and use of outer space

- 238. The Committee took note of the discussion of the Legal Subcommittee under the item on the review of international mechanisms for cooperation in the peaceful exploration and use of outer space, in accordance with its five-year workplan, as reflected in the report of the Subcommittee (A/AC.105/1122, paras. 251-266).
- 239. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group on the Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space, which had been reconvened by the Subcommittee at its fifty-sixth session, under the chairmanship of Setsuko Aoki (Japan) (A/AC.105/1122, para. 253, and annex III, paras. 6-8).
- 240. The Committee had before it the report of the Working Group on the Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space on the work conducted under its multi-year workplan (A/AC.105/C.2/112), as finalized by the Working Group at the fifty-sixth session of the Subcommittee.
- 241. The Committee noted with satisfaction that the Working Group had completed its work under the multi-year workplan by presenting a comprehensive report. The Committee noted that the report was an important source of information for further joint undertakings by spacefaring nations and emerging space nations, as appropriate, and provided useful guidance, given the complexity of having various layers of cooperation mechanisms.

242. The Committee noted with appreciation the dedicated efforts by the Chair of the Working Group in successfully guiding the Working Group to its conclusion, and noted that the final report presented to the Committee would constitute a basis for the further strengthening of international cooperation in the peaceful exploration and use of outer space.

### 13. Draft provisional agenda for the fifty-seventh session of the Legal Subcommittee

- 243. The Committee took note of the discussion of the Subcommittee under the item on proposals to the Committee for new items to be considered by the Legal Subcommittee at its fifty-seventh session, as reflected in the report of the Subcommittee (A/AC.105/1122, paras. 267-276).
- 244. On the basis of the deliberations of the Legal Subcommittee at its fifty-sixth session, the Committee agreed that the following substantive items should be considered by the Subcommittee at its fifty-seventh session:

### Regular items

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

#### Single issues/items for discussion

- 10. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.
- 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.
- 15. General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources.

New items

- 16. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-eighth session.
- 245. The Committee agreed that the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space and the Working Group on the Definition and Delimitation of Outer Space should be reconvened at the fifty-seventh session of the Legal Subcommittee.
- 246. The Committee endorsed the agreement reached by the Subcommittee that IISL and the European Centre for Space Law should again be invited to organize a symposium, to be held during the fifty-seventh session of the Subcommittee (A/AC.105/1122, para. 275).

# D. Space and sustainable development

- 247. The Committee considered the agenda item entitled "Space and sustainable development", in accordance with General Assembly resolution 71/90.
- 248. The representatives of Egypt, France, Germany, India, Indonesia, Japan, Mexico, Oman, Pakistan, South Africa, the Sudan, the United Kingdom and the United States made statements under the item. The observer for SWF also made a statement. During the general exchange of views, representatives of other member States also made statements relating to the item.
- 249. The Committee heard the following presentations under the item:
  - (a) "Monitoring-SG", by the representative of Belarus;
- (b) "Active and passive terminal networks in Burkina Faso: challenges and perspectives", by the representative of Burkina Faso;
- (c) "Operation and development of the BeiDou Navigation Satellite System", by the representative of China;
- (d) "Space for the Sustainable Development Goals", by the representative of Japan;
- (e) "Data integration and analysis system: a contribution to the United Nations Sustainable Development Goals", by the representative of Japan;
- (f) "The Italian Space Agency's commitment in promoting space knowledge and culture", by the representative of Italy;
- (g) "nSight-1, a reliable nanosatellite platform for remote sensing capacity-building", by the representative of South Africa;
- (h) "European Space Agency catalogue of activities supporting United Nations Sustainable Development Goals", by the observer for ESA;
- (i) "Space for Sustainable Development Goals: a global partnership", by a consultant for the Office for Outer Space Affairs.
- 250. The Committee acknowledged the significant role of space science and technology applications in the implementation of the three global development frameworks adopted in 2015: the 2030 Agenda for Sustainable Development, in particular the Sustainable Development Goals; the Sendai Framework for Disaster Risk Reduction 2015-2030; and the Paris Agreement on climate change.
- 251. The Committee noted the value of space technology and applications, as well as of space-derived data and information, to sustainable development, including by improving the formulation and subsequent implementation of policies and programmes of action relating to environmental protection, land and water management, marine and coastal ecosystems, health care, climate change, disaster

- risk reduction and emergency response, energy, infrastructure, navigation, seismic monitoring, natural resources management, snow and glaciers, biodiversity, agriculture and food security.
- 252. The Committee took note of the information provided by States on their actions and programmes aimed at increasing awareness and understanding in society of the applications of space science and technology for meeting development needs.
- 253. The Committee noted that the space community should gain a visible presence in the governmental processes pertaining to the development of implementation and monitoring methods relating to the attainment of the Sustainable Development Goals, and agreed that the Office for Outer Space Affairs should explore various means to raise awareness of the benefits of space-based solutions within those processes.
- 254. The Committee noted the continued role played by the International Space Station in education and outreach to educational communities worldwide.
- 255. The Committee noted with satisfaction the large number of outreach activities carried out at the regional level for building capacity through education and training in using space science and technology applications for sustainable development. The Committee noted with appreciation the role played in space-related education by the regional centres for space science and technology education, affiliated to the United Nations.
- 256. Some delegations expressed the view that the role of the Committee in the dissemination and extension of the benefits that space activities generate for the socioeconomic development of all States should be strengthened, and that UNISPACE+50 could provide a unique opportunity in that regard.
- 257. Some delegations expressed the view that it was imperative to redouble the efforts to extend to all States the benefits derived from outer space activities, and to promote a wider and more active involvement of developing countries, including through capacity-building.
- 258. Some delegations expressed the view that it was important to increase the equality of access to the benefits of space technology and its applications to help achieve the 2030 Agenda for Sustainable Development.
- 259. The view was expressed that, taking into account the need of developing countries to use space science and technology for their socioeconomic development, cooperation with such countries in outer space activities should be promoted, and, in particular, the non-discriminatory transfer of related science, know-how and technology should be ensured.
- 260. The view was expressed that the Committee should continue to create opportunities to assist Member States in enhancing their capacities and institutional integration relating to the use of space technology for sustainable development at various levels of cooperation, and that the support of the international community was needed in providing technical support to developing countries, adequate resources for the transfer of knowledge and capacity-building relating to space technology.
- 261. The view was expressed that there was a need to promote space science and technology and their applications as relevant not just for space missions, but also for their practical societal benefits, such as tele-education, disaster management and food security.
- 262. The view was expressed that it was necessary to further leverage space and space assets to support the successful implementation of the 2030 Agenda and increase its socioeconomic benefits to humankind.
- 263. The view was expressed that the development of guidelines for the long-term sustainability of outer space activities was vital to supporting the 2030 Agenda.

264. The view was expressed that positions in the geostationary orbit should be fairly distributed in accordance with the principle of equality and that unjust, excessive reservation of such positions should not be allowed. The delegation expressing that view was of also the view that the Committee should request ITU to protect the rights of Member States with regard to positions in that orbit and to distribute such positions in accordance with the principle of equality, allocating at least two orbital positions for each country in accordance with their actual needs and not far from the longitude of their territory.

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

- 265. The Committee considered the agenda item entitled "Spin-off benefits of space technology: review of current status", in accordance with General Assembly resolution 71/90.
- 266. The representatives of India, Italy, Oman, South Africa and the United States made statements under the item.
- 267. The Committee heard a presentation entitled "Interactive visual exploration of 'big data' from space astronomy missions", by the representative of Portugal.
- 268. The Committee noted with interest *Spin-off 2017*, a publication of the National Aeronautics and Space Administration.
- 269. The Committee took note of the information provided by States on their national practices regarding spin-offs from space technology involving various actors, including from the private sector and academia, that had resulted in the introduction of strategies for the management of regional economic development.
- 270. The Committee took note of innovations in numerous scientific areas, such as medicine, dentistry, biology, chemistry and materials sciences. It further took note of practical applications in civil society, such as the use of enhanced robotics in medicine and of colour photometry to monitor water levels for the benefit of agriculture, and the use of enhanced technologies to reduce energy consumption, improve techniques in lubrication, cutting and drilling, and to facilitate resource exploration, infrastructure improvements, firefighting, geographical positioning, navigation and the tracking of search and rescue personnel.
- 271. The Committee agreed that spin-offs from space technology constituted a powerful engine for technological innovation and growth in both the industrial and service sectors and that spin-offs had helped to improve public service delivery through modern communications infrastructure and to open new avenues of scientific and technological innovations and had allowed for sustainable growth in the global space industry. It also agreed that spin-offs could be applied to achieve social and economic objectives and the Sustainable Development Goals.
- 272. The Committee noted that Governments had continued to develop national policies directed specifically at disseminating space technologies and actively promoting spin-offs by streamlining licensing and procedures to protect intellectual property to facilitate and support the market entry of products derived from space technology by start-up companies.
- 273. The Committee agreed that the use of spin-offs from space technology should be further promoted because such spin-offs had fostered the development of innovative technologies in other sectors, thus advancing national economies and contributing to a better quality of life.

# F. Space and water

274. The Committee considered the agenda item entitled "Space and water", in accordance with General Assembly resolution 71/90.

- 275. The representatives of Egypt, France, India, Israel, Japan, Mexico and South Africa made statements under the item. During the general exchange of views, other member States also made statements relating to the item.
- 276. The Committee heard a presentation entitled "Prince Sultan bin Abdulaziz International Prize for Water: meet the winners of the seventh award", by the observer for PSIPW.
- 277. In the course of the discussion, delegations reviewed water-related cooperation activities, giving examples of national programmes and bilateral, regional and international cooperation.
- 278. The Committee noted that water and the issues related to it were becoming one of the most critical environmental problems facing humankind, often with political implications, and that the conservation and proper utilization of existing water resources were of paramount importance for sustaining life on Earth. In that connection, space-derived data could support policymakers in making informed decisions on water resources management.
- 279. The Committee noted that a large number of space-borne platforms addressed water-related issues and that space-derived data were used extensively in water management. The Committee also noted that space technology and applications, combined with non-space technologies, played an important role in addressing many water-related issues, including the observation and study of oceans and coastal aquifers, global water cycles and unusual climate patterns, the mapping of watercourses, aquatic weed and algal blooms, the rehabilitation of water systems, the monitoring of glaciers, the estimation of snowmelt run-offs, the planning and management of reservoirs and irrigation projects, the monitoring and mitigation of the effects of floods, droughts and cyclones, the management of conventional and non-conventional water resources, including fossil groundwater, the reuse of agricultural drainage water, the desalination of sea and brackish water, the reuse of municipal wastewater, the harvesting of rain, and reserve water resources, the protection of riparian States in accordance with international agreements and treaties, and the improvement of the timeliness and accuracy of forecasts.
- 280. The view was expressed that space and water were linked in two ways, in that space technology was used for water monitoring on Earth and technological research and exploration focused on methods and means of detecting water in outer space, and that for that reason the exchange of views in the Committee held much potential and hence more time should be set aside for the agenda item.

# G. Space and climate change

- 281. The Committee considered the agenda item entitled "Space and climate change", in accordance with General Assembly resolution 71/90.
- 282. The representatives of Egypt, France, India, Japan, Mexico, Pakistan, Portugal and the Russian Federation made statements under the item. During the general exchange of views, representatives of other member States also made statements relating to the item.
- 283. The Committee heard a presentation entitled "Adverse impacts of climate change on Egypt", by the representative of Egypt.
- 284. The Committee underscored the importance of the global community's commitment to tackling climate change as one of the most pressing issues for humankind and Earth, and of the increasing recognition of the value of space-based technology in providing critical climate data to better understand and mitigate climate change and to monitor the implementation of the Paris Agreement.
- 285. The Committee noted that the New Delhi Declaration had officially come into effect on 16 May 2017, giving shape to the intent of the world's space agencies to support the Paris Agreement. By signing the New Delhi Declaration, more than

- 60 countries had committed themselves to working together to establish an international, independent system for estimating and curbing global greenhouse gas emissions based on internationally accepted data.
- 286. The Committee also noted that the New Delhi Declaration was the continuation of the declaration signed at the Heads of Space Agencies Summit on Climate Change and Disaster Management held in Mexico City on 18 September 2015, in which the participants in the Summit had recognized the tremendous contribution of satellites to climate change studies and disaster management support and expressed their determination to enhance their efforts to strengthen the role of space in these fields in support of political decisions to be taken at the Conference of the Parties to the United Nations Framework Convention on Climate Change in Paris.
- 287. The Committee noted that adequate monitoring of and adaptation to climate change were crucial to tackling its adverse effects, in particular the increased severity of droughts and flooding that further threatened fragile coastal aquifers, impacted marine ecosystems, forestry, levels of water, snow and glaciers, and agricultural productivity, among others, and consequently adversely affected large segments of the world population, in particular in developing countries.
- 288. The Committee further noted that those adverse effects of climate change had negative socioeconomic consequences, in particular the degradation of the standard of living of the population.
- 289. The Committee noted the importance of international cooperation in tackling climate change and, in that regard, of bilateral and multilateral partnerships in Earth observation activities related to climate change, such as the efforts undertaken by the World Meteorological Organization (WMO), the Committee on Earth Observation Satellites, the Group on Earth Observations and the Global Earth Observation System of Systems.
- 290. The Committee noted that it was necessary to strengthen basic research required for improving climate change models in order to better assess the effects of climate change, predict the severity of its impact and determine appropriate mitigation measures.
- 291. The Committee also noted that to gain an integrated perspective on the changing environment of the Earth, it was necessary to combine and complement space-derived data with ground- and/or sea-based observations.
- 292. The Committee further took note of a number of space programmes at the national level that placed high priority on building, launching and operating Earth observation satellite systems to track the manifestations and effects of climate change.
- 293. The view was expressed that contributions of outer space observation systems to the monitoring of, mitigation of and adaptation to climate change supported the attainment of the objectives of Sustainable Development Goal 13 and should also be emphasized during UNISPACE+50, in 2018.
- 294. The view was expressed that in order for developing countries to fulfil the commitments at the national level resulting from the Paris Agreement, it was necessary to strengthen capacity-building efforts relating to the mitigation of and adaptation to climate change, provide for the transfer of related technologies and facilitate greater participation on the part of the private sector.
- 295. The view was expressed that, in order to gain comprehensive understanding of all processes that may affect climate change, it was necessary to monitor processes in interplanetary space using not only low orbital satellite constellations, but also dedicated geostationary and extra-magnetospheric spacecraft. In that regard it was noted that the combination of space and terrestrial factors, in particular the impact of galactic cosmic rays and a shift of the Earth's magnetic pole, could cause climate change in polar regions and, hence, result in global climate change.

296. The view was expressed that global efforts to reduce carbon dioxide emissions had not yet been successful enough to avoid the potentially dangerous effects of climate change. The delegation expressing that view was also of the view that if mitigation efforts continued to be delayed or continued to be unsuccessful, additional actions to reduce global temperatures, such as geoengineering, might become necessary. The same delegation expressed the view that space science and technology and their applications could play a role in geoengineering in more than one way, for example through the use of remote-sensing from space to provide insights into the effectiveness and environmental impact of small-scale geoengineering experiments and carbon removal techniques, or, more actively, through the application of solar radiation management techniques to reduce the incoming solar radiation by modifying the reflectivity or albedo of the Earth.

# H. Use of space technology in the United Nations system

- 297. The Committee considered the agenda item entitled "Use of space technology in the United Nations system", in accordance with General Assembly resolution 71/90.
- 298. The representatives of India, Indonesia, Italy, Nigeria and Sri Lanka made statements under the item. The observer for the Economic and Social Commission for Asia and the Pacific also made a statement. During the general exchange of views, further statements relating to the item were made by representatives of other member States.
- 299. The Committee heard the following presentations under the item:
- (a) "Practice of using space-based information for disaster risk management in China", by the representative of China;
- (b) "Future exploration missions of the Indian Space Research Organization", by the representative of India;
- (c) "India's international cooperation in Earth observation missions", by the representative of India.
- 300. The Director of the Office for Outer Space Affairs, in her capacity as the Chair of the Inter-Agency Meeting on Outer Space Activities (UN-Space), made a statement informing the Committee about the preparations for the thirty-seventh session of UN-Space, to be held in Geneva in conjunction with the United Nations/World Health Organization/Switzerland Conference on Strengthening Space Cooperation for Global Health from 23 to 25 August 2017.
- 301. The Committee welcomed with appreciation the special report of UN-Space on developments within the United Nations system related to space weather (A/AC.105/1146). The Committee noted that the report was instrumental in assisting it in its preparations under the UNISPACE+50 thematic priority on an international framework for space weather services by providing an overview of efforts in the area of space weather.
- 302. The view was expressed that the efforts being made as part of UNISPACE+50 and other processes, as well as at high-level forums on space for sustainable socioeconomic development, to develop a comprehensive agenda for "Space2030" would contribute to the achievement of the global agendas on sustainable development, disaster risk reduction and climate change.
- 303. The Committee noted with satisfaction the action being taken by the Economic and Social Commission for Asia and the Pacific to adopt a plan of action for space applications for Asia and the Pacific region for the period 2018-2030, building on the current five-year Asia-Pacific Plan of Action for Applications of Space Technology and Geographic Information Systems for Disaster Risk Reduction and Sustainable Development (2012-2017).

- 304. The Committee noted the cooperative efforts by Member States and United Nations entities to promote the use of space technology, including in drought and desertification monitoring and in disaster risk reduction and emergency response operations, to resolve global issues.
- 305. The Committee requested the Office for Outer Space Affairs to further promote, through United Nations entities, the increased practical application of space science and technology for development in view of the catalytic role that could play in the implementation of the 2030 Agenda for Sustainable Development.
- 306. The view was expressed that through continuous inter-agency collaboration, including joint meetings of the First Committee and the Fourth Committee of the General Assembly and of the Office for Outer Space Affairs and the International Civil Aviation Organization, United Nations entities could find synergies between cross-cutting ideas on increasing the security, safety and sustainability of outer space activities. The delegation expressing that view was also of the view that deliberations on the work of other institutions, such as the World Health Organization and WMO, could help the Committee to expedite its work on pending issues, such as the definition and delimitation of outer space.

### I. Future role of the Committee

- 307. The Committee considered the agenda item entitled "Future role of the Committee", in accordance with General Assembly resolution 71/90.
- 308. The representatives of Algeria, China, Costa Rica, Indonesia, the Russian Federation, Saudi Arabia 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.
- 309. The Committee agreed that it served, together with its two Subcommittees, as a unique common platform for promoting international cooperation in the peaceful uses and exploration of outer space on a global scale, facilitating the rule of law in outer space and capacity-building in space technology and its applications for the benefit of all States, in particular developing countries.
- 310. The view was expressed that the Committee should resist tendencies that, if not contained, would relegate the Committee the role of a mere spectator of new developments in the sphere of regulation of outer space activities at the national level, and that it should be more proactive concerning the in-depth study of technically and politically rather complex issues, thus taking a comprehensive view of reality.
- 311. The view was expressed that coordination between the Committee and its subsidiary bodies was important to avoid duplication of work, given the need for enhanced common outputs of the Committee and its subsidiary bodies. The Committee and its Subcommittees should formulate their common forward-looking agenda and further strengthen the governance role of the Committee as a whole in promoting international cooperation and strengthening the rule of law in outer space. In that context it was important to work towards avoiding the fragmentation of international space law and to ensure that the Committee adequately addressed key matters, such as new legal issues pertaining to present and future outer space activities; the increasing role of space actors, including non-governmental entities; and the strengthening of technical assistance and the sharing of technology, data and expertise, in particular for the benefit of developing countries.
- 312. The view was expressed that the Committee, through its subsidiary bodies, should consider ways and means for outer space to be accessible to all States. The topic could be considered under a new agenda item or within a new working group.
- 313. The view was expressed that the Committee should adapt to new realities and preserve its position as the focal point of communication and interaction between

States on matters relating to the regulation of space activities, while effectively finding remedies for inefficient practices and being more proactive in addressing a number of important issues on its agenda that relate, first and foremost, to safety and security in outer space. The delegation expressing that view was also of the view that in the near future the Committee should begin the discussion about ways and means to meet a number of realistic expectations regarding the relationships between cross-cutting issues relating to safety and security of outer space activities, including the interpretation of the right of self-defence in outer space and of a harmful interference with peaceful activities in the exploration and use of outer space.

314. Some delegations expressed the view that the deliberations on the future role of the Committee should be aimed at strengthening the governance role of the Committee and its Subcommittees, and that issues pertaining to the Committee's method of work should be assessed carefully in order to improve its overall work and output as an intergovernmental platform. The same delegations were of the view that several measures to improve the organization of work of the Committee and its Subcommittees should be adequately addressed and thoroughly considered as part of strengthening the governance role of the Committee as a whole. It was of paramount importance to modernize the method of work of the Committee as an intergovernmental platform in order to strengthen its ability to address future scientific, technological, policy and legal aspects of outer space activities.

315. Some delegations expressed the view that the Committee, as the only guiding body dealing with the promotion of international cooperation in the peaceful use and exploration of outer space, should carefully study the cross-cutting issues pertaining to the peaceful uses of outer space, including on space security. Current items on the agenda of the two Subcommittees were of a cross-cutting nature, such as those items relating to the use of nuclear power sources in outer space, space debris mitigation and the geostationary orbit, and therefore served as examples of areas in which the two Subcommittees should improve their coordination.

316. The Committee noted that the deliberations under the agenda item on the future role of the Committee were closely linked to UNISPACE+50, and that it was therefore important that it align its work with the overall considerations linked to UNISPACE+50 in order to strengthen its role in the global governance of outer space activities.

### J. Other matters

317. The Committee considered the agenda item entitled "Other matters", in accordance with General Assembly resolution 71/90.

318. The representatives of Algeria, Argentina, Austria, Brazil, Canada, China, Costa Rica, Cuba, Czechia, Egypt, France, Germany, Iran (Islamic Republic of), Iraq, Israel, Italy, Jordan, Libya, Mexico, Morocco, New Zealand, Oman, Portugal, Qatar, the Russian Federation, Saudi Arabia, Switzerland, the Syrian Arab Republic, Tunisia, the United Arab Emirates, the United Kingdom, the United States and Venezuela (Bolivarian Republic of) made statements under the item. Statements were also made under the item by the representative of Switzerland on behalf of the Group of Western European and other States, and by the representative of the Sudan on behalf of the Group of Arab States. During the general exchange of views, statements relating to the item were also made by the representative of Iran (Islamic Republic of) on behalf of the Group of 77 and China, the representative of Algeria on behalf of the Group of African States and the representative of Venezuela (Bolivarian Republic of) on behalf of the Group of Latin American and Caribbean States, and by representatives of other States members of the Committee.

# 1. Fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space

- 319. The Committee had before it the following:
- (a) Note by the Secretariat entitled "Fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space: the Committee on the Peaceful Uses of Outer Space and global governance of outer space activities" (A/AC.105/1137);
- (b) Report on the United Nations/United Arab Emirates High-level Forum: Space as a Driver for Socioeconomic Sustainable Development, held in Dubai, United Arab Emirates, from 20 to 24 November 2016 (A/AC.105/1129);
- (c) Conference room paper entitled "UNISPACE+50: scope and organization—status of preparations" (A/AC.105/2017/CRP.5);
- (d) Conference room paper entitled "Gender equality and the empowerment of women: contribution by the Office for Outer Space Affairs" (A/AC.105/2017/CRP.13);
- (e) Conference room paper entitled "Access to space: strengthening the means for the Office for Outer Space Affairs to cooperate with industry and private sector entities in the space arena for the benefit of developing countries" (A/AC.105/2017/CRP.20);
- (f) Conference room paper entitled "UNISPACE+50 thematic priority 1: Global partnership in space exploration and innovation" (A/AC.105/2017/CRP.21);
- (g) Conference room paper entitled "Report on the expert meeting on preparation of the United Nations/Italy Workshop on the Open Universe Initiative" (A/AC.105/2017/CRP.22);
- (h) Conference room paper entitled "Space science for global development: report on the United Nations Office for Outer Space Affairs and Committee on Space Research coordination meeting in support of the preparations for UNISPACE+50, held in Vienna, Austria, on 22 and 23 May 2017" (A/AC.105/2017/CRP.25);
- (i) Conference room paper entitled "Working paper by Switzerland with a view to making progress under UNISPACE+50 thematic priority 3 on enhanced information exchange on space objects and events" (A/AC.105/2017/CRP.27).
- 320. The Committee also had before it a non-paper by Switzerland entitled "Proposal on UNISPACE+50 thematic priority 3: enhanced information exchange on space objects and events" and two non-papers by the Secretariat entitled "Proposed concept note on the joint panel discussion of the First and Fourth Committees on possible challenges to space security and sustainability" and "UNISPACE+50 decision-making plan for the sixtieth session of the Committee on the Peaceful Uses of Outer Space".
- 321. The Committee noted with appreciation the preparatory work undertaken by the Secretariat for UNISPACE+50 in 2018 and the related relevant documents that were before the Committee at the current session to further assist States members of the Committee in decision-making and preparatory work for UNISPACE+50 in 2018.
- 322. The Committee underscored the significance of that process, which had been initiated by the Committee in 2015 (see A/AC.105/L.297) and which was leading towards the UNISPACE+50 high-level segment, to be held on 20 and 21 June 2018 at the Committee's sixty-first session. That session was expected to conclude with concrete deliverables and outcomes in the form of a draft resolution to be recommended for adoption by the General Assembly on UNISPACE+50, as well as the "Space2030" agenda and its implementation plan for strengthening the contribution of space activities and space tools to the achievement of the global

agendas addressing overarching long-term development concerns based on the peaceful exploration and use of outer space.

- 323. The Committee further noted that UNISPACE+50 offered a unique opportunity for countries to reflect on the achievements of the more than 50 years of space exploration and look towards the future, strengthening the mandates of the Committee on the Peaceful Uses of Outer Space, its subsidiary bodies and the Office for Outer Space Affairs, as unique platforms for international space cooperation, in order to align their work with the current challenges and opportunities in the space area, making them fit for purpose and responsive to new realities in the space enterprise, which was witnessing an ever-growing number of actors, their diversification and the diversification of space activities.
- 324. The Committee underscored the importance of timely preparations for UNISPACE+50 in 2018, and in that regard agreed the following:

Format of the UNISPACE+50 high-level segment, to be held on 20 and 21 June 2018

- (a) All States Members of the United Nations are to be invited by the Secretariat to participate in the high-level segment at the level of Head of State or Government, the ministerial level or at the otherwise highest possible level;
- (b) The broader space community, including United Nations entities, other international intergovernmental and non-governmental organizations and non-governmental entities, including industry and the private sector, will be able to attend the UNISPACE+50 high-level segment, to be held on 20 and 21 June 2018, in accordance with established rules and practices of the Committee;

Consideration of UNISPACE+50 by the General Assembly in plenary meeting at its seventy-third session, in 2018

(c) A draft resolution, to be tabled by Canada in its capacity as Chair of the Committee, will be submitted to the General Assembly at its seventy-second session, in 2017, in which the Assembly would decide whether to consider UNISPACE+50 as a separate item on the agenda of its plenary meeting to be scheduled simultaneously with the Fourth Committee, at the seventy-third session of the Assembly, in 2018;

Consideration of a draft resolution on UNISPACE+50 to be recommended for adoption by the General Assembly

- (d) The Secretariat will prepare a first version of the draft resolution on UNISPACE+50 in close consultation with the UNISPACE+50 Steering Committee, and make it available in the six official languages of the United Nations in advance of the fifty-fifth session of the Scientific and Technical Subcommittee, in 2018, and an advance edited version in English will be circulated among all States members of the Committee;
- (e) There will be an intersessional meeting in the week of 7-11 May 2018 at the Vienna International Centre to finalize the draft resolution, and all States Members of the United Nations are to be invited to participate in that meeting. The meeting will be conducted in English only. However, the Secretariat will work with the Conference Management Service to look into the feasibility of having full interpretation services for at least one day of the meeting. The meeting will be held within existing resources. The chairmanship of this intersessional meeting will be undertaken by Canada;
- (f) To facilitate progress on UNISPACE+50 during the 2018 cycle of sessions, the Working Group of the Whole of the Scientific and Technical Subcommittee and the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space of the Legal Subcommittee are mandated to consider the draft resolution on UNISPACE+50. To do so effectively, any technical

- presentations that may be requested will be delivered at lunch time only and without interpretation.
- 325. Some delegations expressed the view that funding should be provided for representatives of developing countries to attend UNISPACE+50 in 2018.
- 326. The Committee endorsed that the Office for Outer Space Affairs should pursue greater engagement with industry and private sector entities so that they supported and contributed to the overall work of the Office and, for example, the Access to Space initiative of the Office. This would enable the Office for Outer Space Affairs to further develop similar initiatives and submit further proposals to UNISPACE+50 through the 2018 cycle of sessions of the Committee and its Subcommittees.
- 327. The Committee requested the Secretariat to prepare a conference room paper to be submitted to the Scientific and Technical Subcommittee at its fifty-fifth session, in 2018, containing a proposed workplan on how to improve overall governance and the method of work of the Committee as a whole. States members of the Committee would be invited to provide ideas. The conference room paper, as revised on the basis of discussions at the Scientific and Technical Subcommittee at its fifty-fifth session, would then be submitted to the Legal Subcommittee at its fifty-seventh session, in 2018. The paper, as further revised at that session, would be submitted to the Committee for consideration at its sixty-first session in June 2018.

### UNISPACE+50 thematic priorities

- 328. The Committee welcomed with appreciation the progress made under the UNISPACE+50 thematic priorities, as reflected in conference room paper A/AC.105/2017/CRP.5 (paras. 51-109). The Committee noted that reports on the UNISPACE+50 thematic priorities, a report on the "Space2030" agenda and its implementation plan, and reports from each of the flagship conferences and workshops under the UNISPACE+50 thematic priorities, would be prepared by the Secretariat and issued in the six official languages of the United Nations for submission to the Committee and its Subcommittees at their sessions in 2018, in close coordination with the mechanisms working under each of the UNISPACE+50 thematic priorities.
- 329. The Committee noted with appreciation the establishment of the Action Team on Exploration and Innovation, co-chaired by China, Jordan and the United States, with the following members to date: Austria, Canada, China, France, Germany, India, Italy, Japan, Jordan, Luxembourg, Pakistan, Poland, Qatar, Romania, Russian Federation, Saudi Arabia, South Africa, Switzerland, Tunisia, United Arab Emirates, United Kingdom, United States, COSPAR, ESA, ESO, Inter-Islamic Network on Space Sciences and Technology, International Law Association, National Space Society and United Nations Environment Programme.
- 330. The Committee noted that the Action Team had held three meetings on the margins of the current session of the Committee to prepare its report on UNISPACE+50 thematic priority 1: global partnership in space exploration and innovation. The terms of reference and further information on the work of the Action Team had been made available to the Committee at its current session in conference room paper A/AC.105/2017/CRP.21.
- 331. The Committee also welcomed with appreciation the holding by the Office for Outer Space Affairs and COSPAR of a coordination meeting in Vienna on 22 and 23 May 2017 to exchange views and ideas on the scientific and research needs for the implementation of the UNISPACE+50 thematic priorities, including on space weather, and recommendations on which were included in conference room paper A/AC.105/2017/CRP.25.
- 332. The Committee also noted the long-standing role of COSPAR in maintaining the planetary protection policy as a reference standard for spacefaring nations and in guiding compliance with article IX of the Outer Space Treaty. The Committee further noted the position held by COSPAR that the involvement of the Office for

Outer Space Affairs in the reconstituting and functioning of the Panel on Planetary Protection would help ensure that the needs of all States parties pursuing the exploration and use of planetary bodies were served satisfactorily.

- 333. The Committee welcomed with appreciation the briefing by the Office for Outer Space Affairs held on the margins of the current session, regarding the Open Universe initiative, which was included in the preparations for UNISPACE+50 (A/71/20, para. 299) and was aimed at promoting and facilitating open and transparent access to astronomy and space science data, ensuring that all people could utilize and learn from such invaluable sources of information, for the benefit of humankind.
- 334. The Committee welcomed the holding of the United Nations/United Arab Emirates High-level Forum held in Dubai, United Arab Emirates, from 20 to 24 November 2016, organized by the Office for Outer Space Affairs in collaboration with the Government of the United Arab Emirates, in preparation for UNISPACE+50 (A/AC.105/1129).
- 335. The Committee noted that the first High-level Forum had concluded with the Dubai Declaration, in which, inter alia, it was recommended that the High-level Forum should become a permanent platform for strengthened partnerships among all relevant stakeholders in working towards the "Space2030" agenda for exploration, innovation and inspiration and for strengthening the contribution of space activities in addressing overarching, long-term development concerns.
- 336. The Committee noted that the next High-level Forum, to be held in Dubai from 6 to 9 November 2017, would be an important opportunity for all stakeholders to put forward initiatives and further recommendations for UNISPACE+50 in 2018 and for building stronger partnerships and international cooperation and coordination for the peaceful use of outer space at all levels.
- 337. The Committee also noted that the Office was planning to prepare the outline of a proposal for consideration and agreement at the next High-level Forum in Dubai, on modalities for establishing the high-level forums as a permanent platform for strengthened partnerships among all relevant stakeholders. The aim was to ensure that the high-level forums continued to serve as a unique platform for dialogue among Governments, international organizations, industry, the private sector, academia and civil society; to connect the four pillars (space economy, space society, space accessibility and space diplomacy), UNISPACE+50 and the "Space2030" agenda and its implementation beyond UNISPACE+50; and to facilitate partnerships with the Office for Outer Space Affairs.
- 338. The Committee welcomed the launch of the International Gender Champions Initiative (http://genderchampions.com) in Vienna on 14 June by the Director of the Office for Outer Space Affairs along with other leaders of international organizations based in Vienna and permanent representatives of Member States. The aim of the Initiative, which had been established in Geneva and had then extended to New York and Vienna, was to strengthen gender equality and the empowerment of women in the workplace. As part of her pledge of support, the Director made a number of commitments, available on the web page of the Initiative, to defend and promote gender-balanced representation and gender mainstreaming in the work of the Office.

Joint panel discussion of the First and Fourth Committees on possible challenges to space security and sustainability

- 339. The Committee took note of the proposed concept note on the joint panel discussion and recommended the following for consideration jointly by the First and Fourth Committees of the General Assembly:
- (a) The Co-Chairs of the First and Fourth Committees would open the panel discussion; keynote addresses would be delivered by the High Representative for Disarmament Affairs and the Director of the Office for Outer Space Affairs; panel

presentations would be delivered by panellists from the broader space community, including academia, civil society, industry and the private sector, taking into account a gender-balanced representation and youth representation; there would be question-and-answer sessions after each presentation and a concluding interactive dialogue with delegations; and the Co-Chairs of the First and Fourth Committees would close the panel discussion;

- (b) The Office for Outer Space Affairs and the Office for Disarmament Affairs would jointly invite the panellists;
- (c) A detailed programme of the panel discussion would be presented in English, containing the indicative themes and corresponding indicative questions, with abstracts of the presentations to be circulated in advance, and a Co-Chairs' summary of the panel discussion and interactive dialogue would be issued after the panel discussion has concluded.

# 2. Membership of the Committee

- 340. The Committee welcomed the application of Bahrain for membership in the Committee (A/AC.105/2017/CRP.3) and decided to recommend to the General Assembly at its seventy-second session, in 2017, that Bahrain should become a member of the Committee.
- 341. The Committee welcomed the application of Denmark for membership in the Committee (A/AC.105/2017/CRP.4) and decided to recommend to the General Assembly at its seventy-second session, in 2017, that Denmark should become a member of the Committee.
- 342. The Committee welcomed the application of Norway for membership in the Committee (A/AC.105/2017/CRP.6) and decided to recommend to the General Assembly at its seventy-second session, in 2017, that Norway should become a member of the Committee.
- 343. The Committee encouraged States that were considering to apply for membership in the Committee, as well as States members of the Committee, to consider the possibility of acceding to the five United Nations treaties on outer space, or at least some of them, if they had not done so.

### 3. Observer status

- 344. The Committee took note of the application of the European Science Foundation (ESF), represented by the European Space Sciences Committee, for permanent observer status with the Committee. The application and the relevant correspondence were before the Committee in conference room paper A/AC.105/2017/CRP.8.
- 345. The Committee decided to recommend that the General Assembly, at its seventy-second session, in 2017, grant to ESF, represented by the European Space Sciences Committee, the status of permanent observer with the Committee.
- 346. The Committee took note of the application of the UNISEC-Global for permanent observer status with the Committee. The application and the relevant correspondence were before the Committee in conference room paper A/AC.105/2017/CRP.9.
- 347. The Committee decided to recommend that the General Assembly, at its seventy-second session, in 2017, grant to UNISEC-Global the status of permanent observer with the Committee.
- 348. In accordance with the request of the Committee at its fifty-sixth session, in 2013, the Secretariat had compiled information on the consultative status with the Economic and Social Council of non-governmental organizations having permanent observer status with the Committee (A/AC.105/2017/CRP.12). The Committee urged non-governmental organizations having permanent observer status with it that

had not yet initiated the application process for consultative status with the Council to do so in the near future.

## 4. Draft provisional agenda for the sixty-first session of the Committee

349. The Committee recommended that the following items should be considered at its sixty-first session, in 2018:

## 20-21 June 2018

- 1. Opening of the session.
- 2. Adoption of the agenda.
- 3. Election of officers.
- 4. UNISPACE+50 high-level segment.

### 22-29 June 2018

- 5. Statement by the Chair.
- 6. General exchange of views.
- 7. Ways and means of maintaining outer space for peaceful purposes.
- 8. Report of the Scientific and Technical Subcommittee on its fifty-fifth session.
- 9. Report of the Legal Subcommittee on its fifty-seventh session.
- 10. Space and sustainable development.
- 11. Spin-off benefits of space technology: review of current status.
- 12. Space and water.
- 13. Space and climate change.
- 14. Use of space technology in the United Nations system.
- 15. Future role of the Committee.
- 16. Other matters.

# K. Schedule of work of the Committee and its subsidiary bodies

350. The Committee agreed on the following tentative timetable for its session and those of its Subcommittees in 2018:

	Date	Location
Scientific and Technical Subcommittee	29 January-9 February 2018	Vienna
Legal Subcommittee	9-20 April 2018	Vienna
Committee on the Peaceful Uses of Outer Space	20-29 June 2018	Vienna

## Annex

# Draft declaration on the fiftieth anniversary of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies

We, the States Members of the United Nations, in observing the fiftieth anniversary of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies,<sup>1</sup>

- 1. Reiterate the importance of the principles contained in General Assembly resolution 1962 (XVIII) of 13 December 1963, entitled "Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space";
- 2. Recall that the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, was adopted by the General Assembly in its resolution 2222 (XXI) of 19 December 1966, was opened for signature in London, Moscow and Washington, D.C., on 27 January 1967, and entered into force on 10 October 1967;
- 3. Note that, as at 1 January 2017, 105 States had become parties to the Treaty and an additional 25 States had signed it;
- 4. Reaffirm the fundamental role played by the Treaty in maintaining outer space for peaceful purposes and in furthering the purposes and principles of the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding;
- 5. Are convinced that the Treaty and its principles, as reflected in its articles I to XIII, will continue to provide an indispensable framework for the conduct of outer space activities, which continue to hold immense potential to deliver further advancements in human knowledge, to drive socioeconomic progress for all humankind and to contribute to achieving the Sustainable Development Goals by 2030;
- 6. Recognize that the achievements made in space exploration and the development of space science and technology for the benefit of all humankind, and international cooperation initiatives to those ends, have exceeded all expectations existing at the time of the adoption of the Treaty;
- 7. Acknowledge that there has been a significant rise in the importance to States of space science and technology applications, which enable greater understanding of the universe and of the Earth and contribute to advances in, inter alia, education, health, environmental monitoring, the management of natural resources on Earth, disaster management, meteorological forecasting, climate modelling, protection of cultural heritage, information technology and satellite navigation and communications, and to the well-being of humanity through economic, social and cultural development;
- 8. Are deeply convinced that strengthening the long-term sustainability of outer space activities requires efforts at the national, regional, interregional and international levels:
- 9. Emphasize the constantly evolving and increasingly multifaceted nature of international cooperation in the peaceful uses of outer space, with fundamentally complex scientific and technological advancements in the space field and an

<sup>1</sup> United Nations, Treaty Series, vol. 610, No. 8843.

increasing variety of actors in the space arena, and therefore encourage the building of stronger partnerships, cooperation and coordination;

- 10. Call upon all States parties to the Treaty conducting outer space activities to work under the principles of cooperation and mutual assistance, paying due regard to the corresponding interests of other parties to the Treaty;
- 11. Are inspired by the prospects that continue to open up before humankind as a result of human activities in outer space;
- 12. Urge States that have not yet become parties to the Treaty, in particular those States that are members of the Committee on the Peaceful Uses of Outer Space, to consider becoming party to it;
- 13. Emphasize, in this regard, that the benefits arising from adherence to the Treaty, as part of the legal regime of outer space, are significant for all States, irrespective of the degree of their economic or scientific development, and that being party to the Treaty would enhance the ability of States to become part of international cooperation efforts in the exploration and use of outer space for peaceful purposes;
- 14. Reiterate the role of the Treaty as the cornerstone of the international legal regime governing outer space activities and that the Treaty manifests the fundamental principles of international space law;
- 15. Affirm that the Committee on the Peaceful Uses of Outer Space, together with its Legal Subcommittee and its Scientific and Technical Subcommittee, has a distinguished historical record in the establishment and further development of the international legal regime governing outer space activities, that under that regime, outer space activities by States, international intergovernmental organizations and non-governmental entities are flourishing and that, as a result, space science and technology and their applications contribute immeasurably to economic growth and improvements in the quality of life around the world;
- 16. Call upon the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee to continue, with the support of the Office for Outer Space Affairs of the Secretariat, to promote the widest adherence to the Treaty, and its application by States, and to foster the progressive development of international space law;
- 17. Request the Office for Outer Space Affairs to continue fostering capacity-building in space law and policy for the benefit of all countries and to continue providing assistance to developing countries, at their request, in the development of national space policy and legislation, in conformity with international space law.