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**Committee on the Peaceful  
Uses of Outer Space**  
**Sixty-second session**  
Vienna, 12–21 June 2019

**Report of the Legal Subcommittee on its fifty-eighth session,  
held in Vienna from 1 to 12 April 2019**

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## **I. Introduction**

### **A. Opening of the session**

1. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-eighth session at the United Nations Office at Vienna from 1 to 12 April 2019. The session was conducted under the chairmanship of Andrzej Misztal (Poland).
2. The Subcommittee held 19 meetings.

### **B. Adoption of the agenda**

3. At its 976th meeting, on 1 April, the Subcommittee adopted the following agenda:
  1. Adoption of the agenda.
  2. Statement by the Chair.
  3. General exchange of views.
  4. Information on the activities of international intergovernmental and non-governmental organizations relating to space law.
  5. Status and application of the five United Nations treaties on outer space.
  6. Matters relating to:
    - (a) The definition and delimitation of outer space;
    - (b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union.
  7. National legislation relevant to the peaceful exploration and use of outer space.
  8. Capacity-building in space law.
  9. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.
  10. 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.
  11. General exchange of information on non-legally binding United Nations instruments on outer space.
  12. General exchange of views on the legal aspects of space traffic management.
  13. General exchange of views on the application of international law to small-satellite activities.
  14. General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources.
  15. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-ninth session.

### C. Attendance

4. Representatives of the following 70 States members of the Committee attended the session: Albania, Algeria, Argentina, Armenia, Australia, Austria, Belgium, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Costa Rica, Cuba, Cyprus, Czechia, Denmark, Ecuador, Egypt, El Salvador, Finland, France, Germany, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kenya, Libya, Luxembourg, Malaysia, Mexico, Mongolia, Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Paraguay, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Slovakia, South Africa, Spain, Sweden, Switzerland, Thailand, 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.

5. At its 976th and 980th meetings, on 1 and 3 April, respectively, the Subcommittee decided to invite, at their request, observers for Croatia, the Dominican Republic, Honduras, Malta and Singapore to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.

6. Observers for the Food and Agriculture Organization of the United Nations and the International Civil Aviation Organization (ICAO) attended the session.

7. The session was attended by the observer for the European Union as permanent observer of the Committee and in accordance with General Assembly resolution [65/276](#).

8. The session was attended by observers for the following intergovernmental organizations having permanent observer status with the Committee: Asia-Pacific Space Cooperation Organization (APSCO), European Space Agency (ESA) and the International Organization of Space Communications (Intersputnik).

9. The session was also attended by observers for the following non-governmental organizations having permanent observer status with the Committee: European Space Policy Institute, For All Moonkind, Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation, International Institute of Space Law (IISL), International Law Association (ILA), International Organization for Standardization (ISO), National Space Society (NSS), Secure World Foundation (SWF), Space Generation Advisory Council (SGAC) and World Space Week Association.

10. A list of the representatives of States, as well as of United Nations entities and other international organizations attending the session is contained in document [A/AC.105/C.2/2019/INF/51](#) and corrigendum.

### D. Summary of the work of the Working Group on the “Space2030” Agenda of the Committee on the Peaceful Uses of Outer Space

11. In accordance with the decision of the Committee on the Peaceful Uses of Outer Space, made in 2018 at its sixty-first session, the Working Group on the “Space2030” Agenda was established under a new agenda item of the Committee entitled “‘Space2030’ agenda”, which is to remain on the Committee’s agenda until the sixty-third session of the Committee, in 2020 ([A/73/20](#), paras. 358–363).

12. The Working Group held its meetings during the fifty-eighth session of the Legal Subcommittee, in accordance with the mandate given by the Committee. A summary report on those meetings is contained in annex III to the present report.

## E. Symposium

13. On 1 April, IISL and the European Centre for Space Law (ECSL) held a symposium on the theme “The Moon Agreement revisited: the road ahead”, co-chaired by Kai-Uwe Schrogl of IISL and Sergio Marchisio of ECSL. The symposium was opened with welcoming remarks by the co-chairs of the symposium and the Chair of the Subcommittee, after which the following presentations were made to the Subcommittee: “Space activities and celestial bodies: current scientific and legal perspectives”, by Guoyu Wang; “Study of the drafting history of the Moon Agreement”, by Irmgard Marboe; “Contribution of the deep seabed mining legal regime to space resource activities”, by Arnel Kerrest; “Comparative assessment of the Antarctica treaty system: non-militarization and environmental protection”, by Olavo Bittencourt; “Challenges for the implementation of the moon agreement”, by Michelle Hanlon; and “The legacy of the Moon Agreement, revisited”, by Steven Freeland. The presentations were made available on the website of the Office for Outer Space Affairs of the Secretariat (<http://www.unoosa.org/oosa/en/ourwork/copuos/lsc/2019/symposium.html>). Following the presentations, concluding remarks were made by the co-chairs of the symposium and the Chair of the Subcommittee.

14. The Subcommittee noted with appreciation that the symposium had made a valuable contribution to its work.

## F. Adoption of the report of the Legal Subcommittee

15. At its 994th meeting, on 12 April, the Subcommittee adopted the present report and concluded the work of its fifty-eighth session.

## II. General exchange of views

16. Statements were made by representatives of the following States members of the Committee during the general exchange of views: Algeria, Australia, Austria, Brazil, Bulgaria, Canada, Chile, China, Colombia, Cuba, Czechia, Egypt, Finland, France, Germany, Greece, India, Indonesia, Iran (Islamic Republic of), Israel, Italy, Japan, Kenya, Luxembourg, Mexico, Netherlands, New Zealand, Nigeria, Pakistan, Paraguay, Poland, Republic of Korea, Russian Federation, South Africa, Spain, Thailand, Turkey, United Kingdom, United States, Venezuela (Bolivarian Republic of) and Viet Nam. A statement was made by the representative of Egypt on behalf of the Group of 77 and China. The representative of Chile made a statement on behalf of Argentina, Bolivia (Plurinational State of), Brazil, Chile, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Paraguay, Uruguay and Venezuela (Bolivarian Republic of). The observer for the European Union made a statement on behalf of the European Union and its member States. The observer for the Dominican Republic also made a statement. The observers for ESA, IISL, NSS and SGAC also made statements. A statement was made by the observer of For All Moonkind.

17. The Subcommittee heard a presentation entitled “Working together to ensure the responsible use of outer space”, by the representatives of New Zealand and the United States.

18. The Subcommittee took note of the application of the Moon Village Association, contained in conference room paper A/AC.105/C.2/2019/CRP.4, for the status of permanent observer of the Committee. The Subcommittee noted that the application would be considered by the Committee at its sixty-second session, in June 2019.

19. The Subcommittee was informed that the experiment to create an artificial crater on the surface of the asteroid Ryugu using the asteroid-exploring spacecraft Hayabusa-2 of Japan had been successful.

20. At the 976th meeting, on 1 April, the Chair made a statement in which he referred to the programme of work and the organizational matters pertaining to the current session of the Subcommittee. In his opening remarks, he stressed that General Assembly resolution 73/6, entitled “Fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space: space as a driver of sustainable development”, marked a new step in the development of a political framework for space exploration and related international cooperation. He looked ahead to the contribution the Committee could make to the governance of outer space activities in the future. The Chair pointed out that, owing to the nature of space activities, there would be higher expectations regarding legislative activity and other forms of coordination within the United Nations to arrive at a comprehensive, reliable and enduring scheme of international standards. According to the Chair, it was important to regard the system of international law as one whole and treat it accordingly and to operate within a larger legal environment that resulted from practice, cooperation among space actors and the work of other organs.

21. At the 980th meeting, on 3 April, the Subcommittee heard a statement prepared by the Director of the Office for Outer Space Affairs, in which she reviewed the role of the Office in discharging the responsibilities of the Secretary-General under the United Nations treaties on outer space, including the maintenance of the Register of Objects Launched into Outer Space. In particular, the Subcommittee was informed that in 2018, the Office registered, on behalf of the Secretary-General, 229 functional and 101 non-functional space objects, and also received 32 notifications of re-entries and 18 notifications of a change in status of space objects. Since the beginning of 2019, the Office had received registration submissions for 165 functional and 31 non-functional objects. The Director also informed the Subcommittee that, since the fifty-seventh session of the Legal Subcommittee, held in 2018, the Office had received and disseminated information from two Member States under Article V of the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (Rescue Agreement), on the recovery of space objects within its territory, and a notification under the Principles Relevant to the Use of Nuclear Power Sources in Outer Space from one Member State. Also, the Director reviewed the role and work of the Office relating to capacity-building in space law.

22. The Director of the Office informed the Subcommittee about the evaluation of the Office by the Inspection and Evaluation Division of the Office of Internal Oversight Services (OIOS), which had been completed on 8 March 2019. The evaluation report had reflected, among other things, the appreciation consistently expressed by stakeholders, with OIOS noting the “overwhelmingly positive feedback about the Office’s accomplishments despite a small budget, with no other entity within or outside the United Nations possessing a comparable mandate covering the full breadth of political, legal and scientific affairs related to the peaceful uses of outer space”. The Director noted with appreciation that in their interviews for the evaluation, stakeholders and partners, including representatives of States members of the Committee, had contributed valuable insights into the Office’s work and performance.

23. The Director of the Office referred to one of the recommendations in the report, namely that in anticipation of growth in the number of objects launched into outer space in the near future, the Office should review and modernize its registration process and capacity to maintain a high registration rate. The expected large increase in the number of space objects launched in the years to come and the related registration obligations remained an area of concern to the Office. The Register continued to serve as a common, treaty-bound mechanism to ensure that national space activities were conducted responsibly, and the United Nations and its Member States must work together to ensure that awareness of and adherence to the Register would always be as high as possible. The Office had already taken steps to implement a number of recommendations in the report. However, certain recommendations could not be implemented due to the Office’s lack of human resources. The Office had

informed OIOS accordingly in its formal response, available as annexes I and II to the evaluation report.

24. The Subcommittee welcomed the adoption by the General Assembly of its resolution 73/6 and the success of the outcome documents adopted in connection with the fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50), which had stressed the importance of strengthening international cooperation in the exploration and use of outer space for peaceful purposes.

25. Some delegations expressed the view that the five United Nations treaties on outer space constituted the foundations of international space law and that those treaties were supplemented by the Committee with sets of rules and principles for regulating issues such as remote sensing and the use of nuclear power sources in outer space. It was important that States members of the Committee continue work that would make it possible to establish long-term sustainability guidelines for space activities, which would come together in a set of non-binding instruments.

26. The Subcommittee reaffirmed the importance of implementing at the national level the principles enshrined in the United Nations treaties governing space activities and called on all States operating in outer space and States with operators conducting activities in outer space to develop and implement, to the extent that they had not already done so, national laws and regulations to govern those activities and operations.

27. Some delegations expressed the view that it would be appropriate for States that already had national space legislation to carry out periodic reviews to ensure that their legislation was up-to-date with the issues and problems posed by new space activities and that they were effectively meeting their international obligations relating to space.

28. The view was expressed that international law – including international space law – continued to be a crucial tool in that it enabled space actors, including those in the private sector, to flourish in a predictable environment.

29. Some delegations reiterated the view that the Committee and its subsidiary bodies continued to be the only forum within the United Nations for comprehensive discussions of matters related to the peaceful uses of outer space, including the Moon and other celestial bodies, and that there should be more interaction between the Scientific and Technical Subcommittee and the Legal Subcommittee in order to promote advances in space law and keep space law aligned with major scientific and technical advances. In the view of those delegations, coordinating the work of the Subcommittees and using synergies between them would also promote understanding and acceptance and would further the implementation of existing United Nations legal instruments.

30. The view was expressed that it was crucially important to strengthen the Committee and its Subcommittees as the prime international forum for multilateral cooperation in the space domain and for the development of international norms and standards regulating peaceful space activities, and that the global governance of outer space activities was an essential element of the “Space2030” Agenda. The delegation expressing that view was also of the view that it was important to make the Committee more relevant as a body promoting international cooperation in the space domain and to make it more responsive to new realities emerging in outer space activities.

31. Some delegations expressed the view that, in order to preserve outer space for generations to come so that they too could enjoy the benefits derived from the use of space technologies, the Legal Subcommittee would need to identify the legal arrangements needed to ensure the sustainability of outer space activities so that scientific and technological advances became a strength backed up by a legal framework.

32. Some delegations expressed the view that awareness among the international community of the benefits that space activities generated for socioeconomic

development continued to grow, and the Committee and its subsidiary bodies should therefore play a preponderant role in disseminating those benefits and in promoting their extension to all States. The delegations expressing that view were also of the view that the exploration, use and exploitation of outer space for exclusively peaceful purposes should be one of the fundamental means to achieve the objectives of the 2030 Agenda for Sustainable Development.

33. The view was expressed that the only way to ensure the sustainability of space activities was to develop space technology and space applications based on the principle of fair and mutual benefit as well as on full respect for territorial integrity and the sovereignty of States. The delegation expressing that view was also of the view that the transfer of space technology through, inter alia, technical assistance and the provision of adequate resources, remained important as a way to build national capacity, as it contributed to the capabilities of, in particular, developing countries to enhance their activities in outer space and their efforts to become spacefaring nations.

34. Some delegations expressed the view that it was important to foster international cooperation and transparency in outer space activities, and that capacity-building in space law and space policy continued to be of great importance in maintaining the rule of law with regard to space activities, especially with regard to new space actors and emerging space nations.

35. Some delegations expressed the view that discussions held within the Legal Subcommittee should not lead to norms, guidelines, standards or other measures that would limit the access of nations with emerging space capabilities, in particular developing countries, to outer space. The delegations expressing that view were also of the view that the international legal framework should be developed in a manner that addressed the concerns of all States and that, with assistance from the Office for Outer Space Affairs, the Committee therefore needed to devote more effort to legal capacity-building and making the required expertise available to developing countries.

36. The view was expressed that the Subcommittee's extraordinary record of success in developing and promoting space law had, to a large extent, been due to its ability to address practical problems by building consensus.

37. The view was expressed that discussions at the international level had, in recent years, provided evidence for the following trends: (a) the growth in the circle of active subjects of space activities had led to the oversaturation of space activities, which threatened the freedom to explore outer space for the benefit and in the interests of all States, and the formation of a potential conflict zone, which underscored the necessity and obligation for all States to diligently and actively cooperate in the prevention of such a situation that had a great potential for the emergence of conflicts, and to resolve conflicts on the basis of a comprehensive, complex and balanced approach; (b) the development of science and technology had brought humanity to an epoch of commercial development of space resources, which was accompanied by a risk of intensification of global competition for resources in outer space, which could be prevented by the initiation in the Committee of an objective and results-oriented discussion on an international mechanism for the management of space resources that would be based on the principles and norms codified in the Outer Space Treaty; and (c) there was a definite need for the development and strengthening of inter-agency interaction between the Committee, its Subcommittees and the Office for Outer Space Affairs with other competent international organizations. For example, the prevention of the use of programmes and objects (predominantly of dual use) for purposes incompatible with the imperative of the preservation of outer space, including the Moon and other celestial bodies, for exclusively peaceful purposes, would be important within the context of the work on the problem of the definition of a regime for the management of space resources. In that connection, an interaction with competent international organizations, including the Conference on Disarmament, would be important.

38. Some delegations reaffirmed their strict adherence to the principles governing the activities of States in the exploration and use of outer space, including those outlined in General Assembly resolutions 1962 (XVIII) and 1884 (XVIII), specifically: (a) 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 and in the interests of all humankind; (b) the principle of non-appropriation of outer space, including the Moon and other celestial bodies, which could not be appropriated by any State, by claim of sovereignty, by means of use or occupation or by any other means; (c) the non-militarization of outer space, which was never to be used for the placement and/or deployment of weapons of any kind, and, as the province of humankind, its strict use for the improvement of living conditions and peace among peoples; (d) international cooperation in the development of space activities, in particular 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.

39. The view was expressed that it was important to universalize and improve the implementation of the rules established by the United Nations treaties on outer space in keeping with three main principles: (a) freedom of access to space for peaceful uses; (b) preservation of the safety and integrity of satellites in orbit; and (c) consideration of interests relating to the defence and security of States in space; and that those three principles should govern space activities.

40. Some delegations welcomed the agreement reached on a preamble and 21 guidelines for the long-term sustainability of outer space activities and encouraged all States members of the Committee to report on their implementation.

41. The view was expressed that, while the agreement by the Scientific and Technical Subcommittee on the text of 21 guidelines for the long-term sustainability of outer space activities was satisfactory, it was an as yet insufficient and fragmented move, as this was a priority item for the Committee that had not yet been closed and objective discussions should continue on a number of important points brought up by certain delegations, even though those points had not been included in the relevant compendium that, by agreement, was to be reviewed by that Subcommittee. The delegation expressing that view also expressed its dissent from the statement that the preamble and 21 guidelines had been agreed.

42. The view was expressed that consultations should be encouraged in pursuit of a consensual package solution for issues related to the long-term sustainability of outer space activities.

43. The view was expressed that a voluntary international instrument covering the security, safety and sustainability of outer space activities would make it possible to set global norms of responsible behaviour and create related transparency and confidence-building measures, including a political commitment to refrain from intentionally destroying space objects and prevent any further generation of debris.

44. The view was expressed that, by venturing into outer space, humanity had begun a new space civilization, and that this new civilization must be completely different from the culture and ethical values that currently governed relationships between humans as well as those between nations, and that this new civilization would enable people to enter an era of peace free from violence and weaponry. The delegation expressing that view proposed the establishment of a working group tasked with considering all aspects of this new era in the history of humanity.

45. Some delegations expressed the view that it was important to prevent an arms race and the placement of weapons of any kind in outer space, and called upon all States, in particular those with major space capabilities, to contribute actively and commit to preserving outer space as a peaceful environment. The delegations expressing that view were also of the view that the sustainability of outer space

activities, both in the short and in the long term, required that the international community ensure that no weapons were ever placed or used there.

46. The view was expressed that outer space belonged to all humankind, even though space capabilities differed widely among States, and that humanity would reap the benefits of space only if trust and confidence reigned among all space actors. The delegation expressing that view was also of the view that conflicts and tensions on Earth could not be transferred to space, and that one of the roles of the Subcommittee would be to advance space law to ensure that space would not become a theatre of war. Therefore, the Subcommittee should continue to strive for greater interaction with the Scientific and Technical Subcommittee, as well as with other United Nations bodies and international organizations whose participation and contribution would strengthen the Committee and its Subcommittees.

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

47. Pursuant to General Assembly resolution [73/91](#), the Subcommittee considered agenda item 4, entitled “Information on the activities of international intergovernmental and non-governmental organizations relating to space law”, as a regular item on its agenda.

48. The representatives of Mexico and the United States made statements under agenda item 4. Statements were also made under the item by the observers for APSCO, For All Moonkind, Intersputnik and SWF. During the general exchange of views, statements relating to the item were made by observers of other international intergovernmental and non-governmental organizations.

49. For its consideration of the item, the Subcommittee had before it the following:

(a) Note by the Secretariat containing information on the activities of international intergovernmental and non-governmental organizations relating to space law received from the Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation, ILA and SWF ([A/AC.105/C.2/114](#));

(b) Conference room paper containing information on the activities of international intergovernmental and non-governmental organizations relating to space law received from IISL ([A/AC.105/C.2/2019/CRP.12](#));

(c) Conference room paper containing information on the activities of international intergovernmental and non-governmental organizations relating to space law received from For All Moonkind ([A/AC.105/C.2/2019/CRP.19](#));

(d) Conference room paper containing information on the activities of international intergovernmental and non-governmental organizations relating to space law received from Intersputnik ([A/AC.105/C.2/2019/CRP.25](#)).

50. The Subcommittee heard the following presentations:

(a) “Terrestrial models for the recognition of human heritage in space”, by the observer for For All Moonkind;

(b) “Defining heritage in the space age”, by the observer for For All Moonkind;

(c) “A pragmatic, evolutionary path to international space law”, by the observer for NSS;

(d) “Views and activities of the Space Law and Policy Project Group”, by the observer for SGAC;

(e) “Thirteenth Air Navigation Conference”, by the observer for ICAO;

(f) “Overview of the activities of ECSL”, by the observer for ESA.

51. The Subcommittee noted with satisfaction that the activities of international intergovernmental and non-governmental organizations relating to space law had continued to contribute significantly to the study, clarification and development of space law and that those organizations had continued to hold conferences and symposiums, prepare publications and reports and hold training seminars for practitioners and students in order to broaden and advance knowledge of space law.

52. The Subcommittee noted that international intergovernmental and non-governmental organizations had an important role to play in the development, strengthening and furtherance of the understanding of international space law.

53. The Subcommittee welcomed the information provided by the observer for APSCO, including information on the APSCO tenth anniversary high-level forum, held in combination with the APSCO ninth international symposium in Beijing from 14 to 16 November 2018; the endorsement of the APSCO “Development vision 2030”; the creation of a new programme operation and data service department within the APSCO secretariat; and efforts to develop the talents of a new generation, including through educational degree programmes, short-term training programmes and hands-on training based on actual missions.

54. The Subcommittee welcomed the information provided by the observer for ESA including information on advice given by ESA to its member States about developing and updating national space legislation; the first ESA-ECSL workshop entitled “Space debris regulation, standards and tools”, which had been held in Darmstadt, Germany, from 19 to 21 March 2019; and two memorandums of understanding concluded between ESA and the Office for Outer Space Affairs, one enabling the free use by selected teams of the ESA Large Diameter Centrifuge and one supporting the achievement of the Sustainable Development Goals.

55. The Subcommittee welcomed the information provided by the observer for For All Moonkind (see [A/AC.105/C.2/2019/CRP.19](#)), including information on research undertaken on the intersection of space law and heritage preservation; the publication of a booklet intended for school-age children that summarized the history of human activity on the Moon; a digital catalogue of human-made items on the lunar surface; work undertaken to explore physical strategies to protect heritage sites and other sites on the Moon; and the partnership between the Stanford Student Space Initiative and For All Moonkind.

56. The Subcommittee welcomed the information provided by the observer for the Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation (see [A/AC.105/C.2/114](#)), including information on a round table on the space policy of Spain, held in Madrid on 29 May 2018; the forty-fifth Ibero-American Conference on Aeronautic and Space Law and Commercial Aviation, held in Buenos Aires from 6 to 9 November 2018; and the redesign of the Institute’s website to include a separate area devoted to space affairs.

57. The Subcommittee welcomed the information provided by the observer for IISL (see [A/AC.105/C.2/2019/CRP.12](#)), including information on the sixty-first IISL Colloquium, held in Bremen, Germany, from 1 to 5 October 2018; the world final round of the Manfred Lachs Space Law Moot Court Competition, also held in Bremen in October 2018; the thirteenth Eilene M. Galloway Symposium on Critical Issues in Space Law, held in Washington, D.C., on 5 December 2018; the formation of the new IISL Working Group on Cyberlaw; and the conclusion of a second agreement between the International Academy of Astronautics, the International Astronautical Federation and IISL in October 2018, by which those three organizations committed themselves to collaborating on issues related to space traffic management.

58. The Subcommittee welcomed the information provided by the observer for ILA on its activities relating to space law (see [A/AC.105/C.2/114](#)), including information on the seventy-eighth conference of ILA, held in Sydney, Australia, in August 2018; the terms of reference of the ILA Space Law Committee for the period 2014–2020;

and the final report of the Space Law Committee, to be submitted to the upcoming ILA conference, to be held in Kyoto, Japan, in 2020.

59. The Subcommittee welcomed the information provided by the observer for Intersputnik (see [A/AC.105/C.2/2019/CRP.25](#)), including information on the establishment of a new programme for the development of the satellite telecommunications sector in the States members of Intersputnik; the Intersputnik annual seminar on the development of domestic satellite telecommunications for its member States; and support provided to teams from the Russian Federation participating in the Manfred Lachs Space Law Moot Court Competition.

60. The Subcommittee welcomed the information provided by the observer for NSS, including information on the publication of *Ad Astra*, a quarterly magazine chronicling important developments in space; and the International Space Development Conference, on the theme “Back to the Moon to stay”, which was to be held in Arlington, United States, from 6 to 9 June 2019.

61. The Subcommittee welcomed the information provided by the observer for SGAC, including information on the “Space for youth” competition, launched together with the Office for Outer Space Affairs, with the aim of engaging youth in the discussion of how space science and technology could be used to achieve the Sustainable Development Goals; the SGAC contribution to the book entitled *Promoting Productive Cooperation between Space Lawyers and Engineers*; and the eighth annual Space Generation Fusion Forum, held in conjunction with the thirty-fifth Space Symposium, in Colorado Springs, United States, in April 2019.

62. The Subcommittee welcomed the information provided by the observer for SWF (see [A/AC.105/C.2/114](#)), including information on the yearly spring conference on space security of the United Nations Institute for Disarmament Research; the ongoing participation of SWF in the Hague International Space Resources Governance Working Group; scholarships provided to young professionals to present research papers at the International Astronautical Congress; the first Summit for Space Sustainability, to be held in Washington, D.C., on 25 and 26 June 2019; and SWF publications related to space law, including the *Handbook for New Actors in Space* and *Global Counterspace Capabilities: An Open-source Assessment*.

63. The view was expressed that overregulation would inhibit the growth of the space industry; that, at the present time, national regulation, which was focused on the safety of operations, and deconfliction with other uses of airspace was the appropriate means of regulating the commercial space transportation industry; and that it would be premature for ICAO, or any other body, to develop internationally binding rules or standards relating to suborbital or orbital space flight or commercial spaceports. The delegation expressing that view was also of the view that increased coordination between the ICAO secretariat and the Office for Outer Space Affairs would be welcomed and that dialogue and the gradual development of industry standards, coupled with national legislation and regulation, could meet the needs of populations and industry.

64. The Subcommittee agreed that it was important to continue to exchange information on recent developments in the area of space law with international intergovernmental and non-governmental organizations and that such organizations should once again be invited to report to the Subcommittee, at its fifty-ninth session, on their activities relating to space law.

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

65. Pursuant to General Assembly resolution [73/91](#), the Subcommittee considered agenda item 5, entitled “Status and application of the five United Nations treaties on outer space”, as a regular item on its agenda.

66. The representatives of Brazil, Germany, Indonesia, Mexico, the Russian Federation and the United States made statements under agenda item 5. Statements were made by the representative of Egypt on behalf of the Group of 77 and China, and by the representative of Costa Rica on behalf of Argentina, Bolivia (Plurinational State of), Brazil, Chile, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Paraguay, Uruguay and Venezuela (Bolivarian Republic of). During the general exchange of views, statements relating to the item were also made by representatives of other member States.

67. At its 976th meeting, on 1 April, the Subcommittee reconvened its Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, with Bernhard Schmidt-Tedd (Germany) as Chair.

68. At its 993rd meeting, on 11 April, the Subcommittee endorsed the report of the Chair of the Working Group, contained in annex I to the present report.

69. The Subcommittee had before it the following:

(a) Working paper submitted by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space entitled “Draft guidance document under UNISPACE+50 thematic priority 2. ‘Legal regime of outer space and global governance: current and future perspectives’” (A/AC.105/C.2/L.310);

(b) Conference room paper on the status of international agreements relating to activities in outer space as at 1 January 2019 (A/AC.105/C.2/2019/CRP.3);

(c) Conference room paper containing responses to the set of questions provided by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space received from Pakistan, the United Arab Emirates and SWF (A/AC.105/C.2/2019/CRP.11);

(d) Conference room paper containing responses to the set of questions provided by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space received from Armenia (A/AC.105/C.2/2019/CRP.18).

70. The Subcommittee noted that, as at 1 January 2019, the status of the five United Nations treaties on outer space was as follows:

(a) The Outer Space Treaty had 109 States parties and had been signed by 23 additional States;

(b) The Rescue Agreement had 98 States parties and had been signed by 23 additional States; three international intergovernmental organizations had declared their acceptance of the rights and obligations established under the Agreement;

(c) The Convention on International Liability for Damage Caused by Space Objects (Liability Convention) had 96 States parties and had been signed by 19 additional States; four international intergovernmental organizations had declared their acceptance of the rights and obligations established under the Convention;

(d) The Convention on Registration of Objects Launched into Outer Space (Registration Convention) had 69 States parties and had been signed by three additional States; four international intergovernmental organizations had declared their acceptance of the rights and obligations established under the Convention;

(e) The Agreement Governing the Activities of States on the Moon and other Celestial Bodies (Moon Agreement) had 18 States parties and had been signed by four additional States.

71. The Subcommittee commended the Secretariat for updating, on an annual basis, the status of international agreements relating to activities in outer space; the current update had been made available to the Subcommittee in conference room paper A/AC.105/C.2/2019/CRP.3.

72. The Subcommittee noted that Intersputnik had made declarations stating its acceptance of the rights and obligations provided for in the Rescue Agreement, the Liability Convention and the Registration Convention, and had also declared its acceptance of the obligation to comply with the Outer Space Treaty and the responsibility that entailed.

73. Some delegations expressed the view that wide adherence to the United Nations treaties on outer space contributed to creating a safe, secure and sustainable environment for the development of outer space activities and enhanced the effectiveness of the Legal Subcommittee as the main body for discussing and negotiating international space law.

74. Some delegations welcomed with appreciation the growing number of States parties to the United Nations treaties on outer space and encouraged those States that had not yet become parties to the treaties to consider doing so.

75. Some delegations expressed the view that, as the five United Nations treaties on outer space formed the cornerstone of international space law, the Legal Subcommittee had a mandate to review its contents in the light of scientific and technical developments, and with a view towards addressing the current challenges presented by the diversification of space actors and the increasing privatization and commercialization of space activities.

76. Some delegations expressed the view that the Registration Convention represented a key facilitator of transparency and confidence-building measures in outer space activities, and that parties to that Convention should provide complete and timely information on the objects they launched, and should maintain their national registers. Those delegations also expressed the view that training and capacity-building that focused on registration practices was vital for new space actors.

77. Some delegations expressed the view that, in the light of the growing number of new space actors, including States and intergovernmental and non-governmental entities, efforts should be made to ensure that the conduct of such actors conformed with applicable international space law.

78. The view was expressed that the five United Nations treaties on outer space continued to form the universal legal basis for present and future space exploration and use, and that the principles enshrined therein were equally valid for both countries with long-standing space programmes and emerging space actors. The delegation expressing that view also expressed the view that the five United Nations treaties on outer space contributed to the safe and peaceful conduct of space activities and were for the benefit and in the interests of all countries.

79. The view was expressed that the provisions of the five United Nations treaties on outer space had been clearly and unequivocally formulated, and that it was counterproductive to state that there were gaps in international space law, or to attempt to fill those purported gaps by enacting national space legislation.

80. The view was expressed that the likely reasons for the low adherence by States to the Moon Agreement were that the Agreement contained the pronouncement that the Moon and its natural resources were the common heritage of humankind, as a way of defining the status of the natural resources found on the Moon and other celestial bodies, and that the Agreement proposed a regime to ensure that the Moon's natural resources were exploited for the benefit and in the interests of all countries.

81. The view was expressed that, although the status of the five United Nations treaties on outer space as cornerstones of international space law remained unchallenged, it had been clear to the drafters at the time of drafting that future scientific innovations and technological developments would necessitate improvements to the treaties. The delegation expressing that view also expressed the view that, for the five United Nations treaties on outer space to remain relevant, the Subcommittee must consider the need for amendments and updates, or even additional

treaties, as well as promote even broader adherence to the legal regime governing outer space activities.

82. The view was expressed that the questionnaire presented by the Chair of the Working Group was a valuable tool that helped the Subcommittee assess the effectiveness of the legal regime governing outer space activities. The delegation expressing that view also expressed the view that the answers to the questionnaire provided by States members of the Committee made it possible to share views on important legal issues and provided a valuable basis for addressing the status and scope of, and possible gaps in, the legal regime governing outer space activities.

## **V. 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**

83. Pursuant to General Assembly resolution [73/91](#), the Subcommittee considered, as a regular item on its agenda, agenda item 6, which read as follows:

“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.”

84. The representatives of Brazil, Canada, Colombia, Cuba, Ecuador, Indonesia, Israel, Mexico, New Zealand, the Russian Federation, the United States and Venezuela (Bolivarian Republic of) made statements under agenda item 6. A statement was made by the representative of Egypt on behalf of the Group of 77 and China. The representative of Costa Rica made a statement on behalf of Argentina, Bolivia (Plurinational State of), Brazil, Chile, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Paraguay, Uruguay and Venezuela (Bolivarian Republic of). During the general exchange of views, statements relating to the item were made by representatives of other member States.

85. At its 976th meeting, on 1 April, the Legal Subcommittee reconvened its Working Group on the Definition and Delimitation of Outer Space, with André Ryppl (Brazil) as Acting Chair in the absence of the Chair, José Monserrat Filho (Brazil). Pursuant to the agreement reached by the Subcommittee at its thirty-ninth session and endorsed by the Committee at its forty-third session, both held in 2000, and pursuant to General Assembly resolution [73/91](#), the Working Group was convened to consider only matters relating to the definition and delimitation of outer space.

86. The Working Group held three meetings. The Subcommittee, at its 993rd meeting, on 11 April, endorsed the report of the Acting Chair of the Working Group, contained in annex II to the present report.

87. For its consideration of the item, the Subcommittee had before it the following:

(a) Note by the Secretariat on national legislation and practice relating to the definition and delimitation of outer space ([A/AC.105/865/Add.22](#));

(b) Note by the Secretariat on questions on suborbital flights for scientific missions and/or for human transportation ([A/AC.105/1039/Add.12](#));

(c) Note by the Secretariat entitled “Definition and delimitation of outer space: views of States members and permanent observers of the Committee” (A/AC.105/1112/Add.6);

(d) Conference room paper entitled “Matters relating to the definition and delimitation of outer space: replies of the United Arab Emirates” (A/AC.105/C.2/2019/CRP.5);

(e) Conference room paper entitled “Matters relating to the definition and delimitation of outer space: replies of Greece” (A/AC.105/C.2/2019/CRP.6);

(f) Conference room paper entitled “Matters relating to the definition and delimitation of outer space: replies of Tunisia” (A/AC.105/C.2/2019/CRP.7).

88. Some delegations expressed the view that the lack of a definition and delimitation of outer space created uncertainty regarding the applicability of space law and aeronautical law, not only at the national level, but also at the international level, and that the existence of different regimes and mutually exclusive concepts, such as territorial sovereignty and the common heritage of humanity, gave the Subcommittee a substantial reason to keep the item on its agenda for future sessions.

89. The view was expressed that a definition and delimitation of outer space would provide greater clarity, not only to States, but also to other space actors, in such matters as the positioning of satellites and suborbital flights carried out for scientific or touristic purposes, as well as in relation to the responsibilities and sovereignty of States and other space actors. In that connection, the work of the Committee and its Subcommittees should be oriented towards recognizing the existence of grey areas that included both airspace and outer space and which would require special treatment and regulation.

90. The view was expressed that the definition and delimitation of outer space would be of great assistance to States in regulating their implementation of air law and space law, exercising their sovereignty over airspace and performing space activities, and that the matter was closely linked to the issues of safety and security.

91. The view was expressed that the rationale for a delimitation of outer space and airspace at between 100 and 110 km above sea level was based on comprehensive considerations including scientific, technical and physical characteristics, namely the atmospheric layers, aircraft altitude capacity, the perigee of the spacecraft and the Karman line.

92. The view was expressed that, in the absence of a clear definition and delimitation of outer space and airspace, it was impossible to define an area of applicable law and to consistently enforce laws, rules and regulations.

93. The view was expressed that matters relating to the definition and delimitation of outer space were of great importance and that no flexible and pragmatic approach to the issue could be taken unless all States, regardless of their level of scientific, technical and economic development, arrived at a commonly agreed standpoint by taking into account all positions and views of all Member States.

94. Some delegations expressed the view that there was no need to pursue a legal definition or delimitation of outer space, that the current framework had presented no practical difficulties and that activities in outer space were flourishing. Therefore, any attempt to define or delimit outer space would be an unnecessary theoretical exercise that could unintentionally complicate existing activities. Moreover, the result might not be adaptable to continuing technological developments. The current framework had served everyone well and thus should continue to be used until there was a demonstrated need and a practical basis for developing such a definition or delimitation.

95. Some delegations expressed the view that the Subcommittee should consider ways of consulting and cooperating with ICAO in order to make progress in the definition and delimitation of outer space.

96. Some delegations expressed the view that it was important to find a solution with regard to the definition and delimitation of outer space and thus conclude the work on the issue, which had occupied the Subcommittee for a long time. The delegations expressing that view were also of the view that that could be achieved through, for example, the creation of a comprehensive working document that would provide the basis for a more concrete and pragmatic discussion of the topic.

97. Some delegations expressed the view that the lack of progress with regard to a consensus on matters relating to the definition and delimitation of outer space should not constitute an argument to suspend work on that important issue.

98. Some delegations expressed the view that the definition and delimitation of outer space was an important topic that should be kept on the agenda of the Subcommittee and that more work should be done in that regard because the legal regimes governing airspace and outer space were different.

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

100. Some delegations expressed the view that the geostationary orbit, as a limited natural resource clearly in danger of saturation, must be used rationally, efficiently, economically and equitably. That principle was deemed fundamental for safeguarding the interests of developing countries and countries in certain geographical positions, as set out in article 44, paragraph 196.2, of the ITU Constitution, as amended by the plenipotentiary conference in 1998.

101. Some delegations expressed the view that the geostationary orbit should not 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 should be governed by applicable international law and in accordance with the principle of non-appropriation of outer space.

102. The view was expressed that the principle of non-appropriation had its basis in article II of the Outer Space Treaty and had been adopted to implement the freedom-of-use doctrine, because appropriation of a resource by a single State would normally be inconsistent with the principle of freedom of use by all States. Therefore, appropriation of an orbit or spectrum resource in the geostationary orbit would constitute an exercise of exclusive control or use of that orbit on a permanent basis.

103. The view was expressed that the geostationary orbit was a limited natural resource with unique characteristics that risked saturation and that equitable access to it should therefore be guaranteed for all States, taking into account, in particular, the needs and interests of developing countries and the geographical position of certain countries.

104. The view was expressed that the geostationary orbit should be viewed as a specific area and special part of outer space that needed specific technical and legal governance and thus should be regulated by a sui generis regime. The delegation expressing that view was also of the view that for such a sui generis regime, certain legal principles should be elaborated concerning the utilization of the geostationary orbit, such as equitable access, freedom of use, non-appropriation and exclusively peaceful uses, and that the development of those principles should lay the foundation for a comprehensive legal regime that would be implemented in the form of technical regulations within the framework of ITU. In that regard, such legal principles were complementary and supported the work of ITU.

105. Some delegations expressed the view that special attention should be given to equitable access for all States to orbit and spectrum resources in the 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 and exchanging knowledge.

106. The view was expressed that the principle of equitable access was defined as proportional and non-excessive use in accordance with real needs, taking into account the specific conditions of countries, such as geographic conditions, and that the freedom-of-use principle should be implemented to guarantee that the first user of an orbit or spectrum resource would not utilize the geostationary orbit on a permanent basis, would not occupy a certain slot of that orbit on an exclusive basis, and would not violate the legitimate rights of other users or prevent subsequent users from gaining access to the geostationary orbit, or cause it environmental harm.

107. The view was expressed that examples of practical commitments to equitable access to the geostationary orbit and other uniquely situated orbits for the benefit of all included the provision of free access to the Global Positioning System; of free access to a variety of weather and warning data from meteorological satellites; of information from the polar meteorological satellites of the National Oceanic and Atmospheric Administration (NOAA) of the United States; of data from the NOAA Geostationary Operational Environmental Satellite system, including information about hurricanes, volcanic eruptions and effluent flooding, droughts and related environmental matters, and storm-tracking data; and of data from the International Satellite System for Search and Rescue (COSPAS-SARSAT) as a means for ships, aircraft and other vessels in distress to signal their locations and their need for help.

108. The view was expressed that, in the light of the unprecedented rate at which developed countries were employing satellites to exploit the latest technology, awareness of the limitations of the geostationary orbit had increased, and that despite the relatively rapid development of certain developing countries in recent years, significant disparities remained between developed and developing countries with regard to the ability to utilize satellite technology in general.

109. The view was expressed that utilization by States of the geostationary orbit on the basis of “first come, first served” was unacceptable and that the Subcommittee, with the involvement of ITU, should develop a regime guaranteeing equitable access to orbital positions for all States, in particular developing States.

110. The view was expressed that the paper entitled “Some aspects concerning the use of the geostationary orbit” ([A/AC.105/738](#), annex III), adopted by the Legal Subcommittee at its thirty-ninth session, in 2000, was aimed at solving the problems faced by equatorial countries and emerging spacefaring States. The delegation expressing that view was also of the view that it would be important for ITU to establish a legal regime that guaranteed States equitable access to orbital positions in order to meet the needs of developing countries for which that natural resource was currently inaccessible owing to the lack of technology necessary for reaching those orbital positions. Such a legal regime could be achieved by modifying the coordination processes established in the ITU Radio Regulations in the following specific circumstances: (a) in the case of comparable requests to access the orbit or spectrum resource by a State that had already gained such access and a State that had not, the latter State should have priority, without the need for a coordination process; (b) in the case of comparable requests to access the orbit or spectrum resource by a developing State and a developed State, the developing State should have priority, without the need for a coordination process; and (c) in case of comparable requests to access the orbit or spectrum resource by two developed States, priority must be given on the basis of the order of arrival.

111. Some delegations expressed the view that, in order to ensure the sustainability of the geostationary orbit and to guarantee equitable access to it according to the

needs of all States, in particular emerging spacefaring States, it was necessary to keep the issue on the agenda of the Subcommittee.

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

112. Pursuant to General Assembly resolution 73/91, the Subcommittee considered agenda item 7, entitled “National legislation relevant to the peaceful exploration and use of outer space”, as a regular item on its agenda.

113. The representatives of Armenia, Australia, Chile, Finland, India, Indonesia, Japan, Mexico, the United Arab Emirates, the United Kingdom and the United States made statements under agenda item 7. During the general exchange of views, statements relating to the item were made by the representatives of other member States.

114. The Subcommittee heard the following presentations:

(a) “Space legislation in Japan”, by the representative of Japan;

(b) “Update on the United Arab Emirates national regulatory framework: overview of the regulation of registration of space objects”, by the representative of the United Arab Emirates;

(c) “Update on the United Arab Emirates national regulatory framework: overview of the regulation of human space flight”, by the representative of the United Arab Emirates.

115. The Subcommittee reiterated that it was important to take into account the emerging trend of non-governmental entities engaging in outer space activities. In that connection, States needed to ensure, through their national legal frameworks, that the outer space activities of those entities were in compliance with the United Nations treaties on outer space, in order to ensure the safety and security of those activities.

116. The Subcommittee noted that national space policies and implementing regulations were increasingly addressing issues raised by the rising number of non-governmental entities conducting space activities.

117. The view was expressed that striking a balance between ensuring the sustainability, safety and stability of the outer space environment and supporting innovation and entrepreneurship was crucial to the future growth of space industries.

118. The Subcommittee noted various activities of member States to review, strengthen, develop or draft national space laws and policies, as well as establish or reform their governance of national space activities. The Subcommittee also noted that those activities were aimed at improving the management and regulation of space activities; reorganizing national space agencies; increasing the competitiveness of governmental and non-governmental organizations in their space activities; increasing the involvement of academia in policy formulation; improving responses to challenges posed by the development of space activities, in particular those relating to the management of the space environment; and improving compliance with international obligations.

119. The view was expressed that, when drafting national space law, international regulatory frameworks, including the United Nations treaties and principles on outer space, the ITU Constitution and Convention and the ITU Radio Regulations, and certain non-binding instruments, including the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, should be taken into consideration in order to guarantee the safety and sustainability of outer space activities.

120. The view was expressed that as countries consider their national space policies, including their legal and regulatory frameworks, all delegations should agree to

respect the history of humans on the Moon, including the significance of Luna 2 in 1959, the first human landing on the Moon in 1969, the first soft landing on the far side of the Moon in 2019 and multiple other missions. The delegation expressing that view also expressed the view that all States should acknowledge the significance that these historic activities have had for society, and called on States to recognize and respect the historic, cultural and scientific importance of these missions and the traces they have left on the Moon as they develop their national policies.

121. The Subcommittee agreed that the discussions under agenda item 8 were important and that they enabled States to gain an understanding of existing national regulatory frameworks, share experiences on national practices and exchange information on national legal frameworks.

122. The Subcommittee agreed that it was important to continue to regularly exchange information on developments in the area of national space-related regulatory frameworks. In that regard, the Subcommittee encouraged member States to continue to submit to the Secretariat texts of their national space laws and regulations and to provide updates and input for the schematic overview of national regulatory frameworks for space activities.

## VII. Capacity-building in space law

123. Pursuant to General Assembly resolution [73/91](#), the Subcommittee considered agenda item 8, entitled “Capacity-building in space law”, as a regular item on its agenda.

124. The representatives of Austria, Chile, China, Finland, France, Germany, Greece, India, Israel, Japan, Mexico, the Russian Federation, South Africa, Spain and the United Arab Emirates made statements under agenda item 8. The representative of Egypt made a statement on behalf of the Group of 77 and China. The representative of Costa Rica made a statement on behalf of Argentina, Bolivia (Plurinational State of), Brazil, Chile, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Paraguay, Uruguay and Venezuela (Bolivarian Republic of). During the general exchange of views, further statements relating to the item were made by representatives of other member States.

125. The Subcommittee had before it the following:

(a) Report on the United Nations/Russian Federation Conference on Space Law and Policy held in Moscow from 11 to 13 September 2018 ([A/AC.105/1195](#));

(b) Conference room paper containing the directory of educational opportunities in space law ([A/AC.105/C.2/2019/CRP.9](#));

(c) Conference room paper containing information submitted by Austria, Japan, Pakistan, Tunisia and the United Arab Emirates on actions and initiatives to build capacity in space law ([A/AC.105/C.2/2019/CRP.13](#)).

126. The Subcommittee heard the following presentations:

(a) “Japan’s capacity-building in space law: recent progress”, by the representative of Japan;

(b) “United Nations/Turkey/APSCO Conference on Space Law and Policy”, by the representative of Turkey;

(c) “Legal advisory project on space law for new space actors: fostering responsible national space activities”, by representatives of the Office for Outer Space Affairs;

(d) “The first United Nations Conference on Space Law and Policy co-organized by the Government of the Russian Federation and hosted by the State Space Corporation ‘Roscosmos’”, by the representative of the Russian Federation.

127. The Subcommittee agreed that capacity-building, training and education in space law were of paramount importance to national, regional and international efforts to further develop the practical aspects of space science and technology, in particular in developing countries, and to increasing knowledge of the legal framework within which space activities were carried out. Through such capacity-building, training and education efforts, States would be encouraged to ratify the five United Nations treaties on outer space and to support the implementation of those treaties and the establishment of national institutions, thereby making international space law more accessible to and better known by all sectors of civil society. It was emphasized that the Subcommittee and the Office for Outer Space Affairs had an important role to play in that regard.

128. The Subcommittee noted with appreciation that a number of national, regional and international efforts to build capacity in space law were being undertaken by governmental and non-governmental entities. Those efforts included encouraging universities to offer modules and seminars on space law; supporting the regional centres for space science and technology education, affiliated to the United Nations, in providing opportunities for capacity-building in space law; providing fellowships for graduate and postgraduate education in space law; providing financial and technical support for legal research; preparing dedicated studies, papers, textbooks and publications on space law; organizing workshops, seminars and other specialized activities to promote greater understanding of space law; supporting space law moot court competitions; supporting the participation of young professionals in regional and international meetings relating to space law; providing training and other opportunities to build experience, in particular through internships with space agencies; and supporting entities dedicated to the study of space law in order to assist in the development of national space policies and legislative frameworks.

129. The Subcommittee noted that some member States had provided financial assistance to enable students to attend the Manfred Lachs Space Law Moot Court Competition, held each year during the International Astronautical Congress.

130. The Subcommittee noted with appreciation that the United Nations/Russian Federation Conference on Space Law and Policy had been held in Moscow from 11 to 13 September 2018, and that the United Nations/Germany High-level Forum: The way forward after UNISPACE+50 and on “Space2030”, had been held in Bonn, Germany, from 13 to 16 November 2018. The Subcommittee noted that those events had contributed to capacity-building in space law by connecting space law experts, practitioners and representatives of government, industry and civil society.

131. The Subcommittee welcomed the new project on legal advisory services launched by the Office of Outer Space Affairs. Some delegations expressed their interest in supporting the new project.

132. Some delegations expressed the view that the Office for Outer Space Affairs should conduct targeted capacity-building, education and training activities in space law and policy, building on the programme of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER), with the objective of establishing a capacity-building platform.

133. Some delegations expressed the view that the development of the “Space2030” agenda might serve as an opportunity to consider creating special programmes on capacity-building and knowledge management for developing countries.

134. Some delegations expressed the view that it would be very useful if the Office for Outer Space Affairs were to organize a basic space law training activity for officials of Vienna-based permanent missions.

135. The view was expressed that capacity-building efforts of the Office for Outer Space Affairs could focus on matters that had not been sufficiently debated, such as those relating to the character and utilization of the geostationary orbit and ways and means of ensuring the rational and equitable use of the geostationary orbit without prejudice to the role of ITU.

136. The view was expressed that the Office for Outer Space Affairs could organize a capacity-building event, in particular for developing countries, in order to raise awareness of the emerging challenges related to the new and growing uses of airspace and orbital and suborbital activities.

137. The view was expressed that, in order to enhance understanding of space law and effectively build related capacity, knowledge of the scientific and technical matters related to outer space activities was essential and, in that regard, cross-sectoral capacity-building was of importance.

138. The Subcommittee noted with appreciation the forthcoming United Nations/Turkey/APSCO Conference on Space Law and Policy, which was being organized in collaboration with Turkey and was to be hosted by the Turkish Space Agency and the Space Technologies Research Institute (TUBITAK UZAY) in Istanbul, Turkey, from 23 to 26 September 2019.

139. The Subcommittee noted that the Office for Outer Space Affairs had updated the directory of educational opportunities in space law (A/AC.105/C.2/2019/CRP.9), including the information on available fellowships and scholarships, and agreed that the Office should continue to update the directory. The Subcommittee invited member States to encourage contributions at the national level for future updates to the directory.

140. The Subcommittee recommended that States members and permanent observers of the Committee inform the Subcommittee, at its fifty-ninth session, of any action taken or planned at the national, regional or international levels to build capacity in space law.

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

141. Pursuant to General Assembly resolution [73/91](#), the Subcommittee considered agenda item 9, entitled “Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space”, as a single issue/item for discussion.

142. The representatives of Chile, Mexico and the United States made statements under agenda item 9. A statement was also made under the item by the observer for ESA. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

143. The Subcommittee noted that 2019 marked the tenth anniversary of the adoption of the Safety Framework for Nuclear Power Source Applications in Outer Space ([A/AC.105/934](#)) by the Scientific and Technical Subcommittee at its forty-sixth session, and its endorsement by the Committee at its fifty-second session.

144. The Subcommittee also noted that some States and an international intergovernmental organization were developing, or considering to develop, legal and regulatory instruments on the safe use of nuclear power sources in outer space, taking into account the content and requirements of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space and the Safety Framework.

145. The Subcommittee recalled that the General Assembly, in its resolution [73/91](#), had considered that it was essential that Member States pay more attention to the problem of the gradually increasing probability of collisions of space objects, especially those with nuclear power sources, with space debris, and had called for the continuation of national research on that question, the development of improved technology for the monitoring of space debris and the compilation and dissemination of data on space debris.

146. The Subcommittee also recalled the endorsement by the Scientific and Technical Subcommittee of the multi-year workplan of the Working Group on the Use of

Nuclear Power Sources in Outer Space of the Scientific and Technical Subcommittee for the period 2017–2021 (A/AC.105/1138, para. 237, and annex II, para. 9).

147. Some delegations expressed the view that the use of nuclear power sources in outer space should be in conformity with international law and should be limited to activities for which it was not feasible to use other sources of energy, such as deep space missions.

148. The view was expressed that the space actors responsible for deep space missions with nuclear power sources on board should ensure the traceability and control of such missions and control their potentially adverse effects.

149. The view was expressed that international cooperation was the most appropriate tool for disseminating suitable and affordable strategies for minimizing the effects of space debris, in particular debris emanating from platforms with nuclear power sources on board.

150. The Subcommittee agreed to provisionally suspend its consideration of the item entitled “Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space”, pending the outcome of the work of the Working Group on the Use of Nuclear Power Sources in Outer Space.

## **IX. 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**

151. Pursuant to General Assembly resolution 73/91, the Subcommittee considered agenda item 10, entitled “General exchange of information and views on legal mechanisms relating to space debris mitigation and remediation measures, taking into account the work of the Scientific and Technical Subcommittee”, as a single issue/item for discussion.

152. The representatives of Austria, Brazil, Canada, Chile, Finland, France, Germany, India, Iran (Islamic Republic of), Japan, Mexico, the Netherlands, New Zealand, Pakistan, the Russian Federation and the United States made statements under agenda item 10. A statement was made by the representative of Egypt on behalf of the Group of 77 and China. The representative of Costa Rica made a statement on behalf of Argentina, Bolivia (Plurinational State of), Brazil, Chile, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Paraguay, Uruguay and Venezuela (Bolivarian Republic of). The observer for the European Union made a statement on behalf of the European Union and its member States. The observer for ESA also made a statement. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

153. The Subcommittee had before it a conference room paper entitled “Compendium of space debris mitigation standards adopted by States and international organizations” (A/AC.105/C.2/2019/CRP.14).

154. The Subcommittee expressed concern at the increasing amount of space debris and noted that the endorsement by the General Assembly, in its resolution 62/217, of the Space Debris Mitigation Guidelines of the Committee had been an important step in providing all spacefaring nations with guidance on ways to mitigate the problem.

155. The Subcommittee noted with satisfaction that some States were implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines of the Committee, the Space Debris Mitigation Guidelines of the Inter-Agency Space Debris Coordination Committee (IADC), ISO standard ISO 24113:2011 (Space systems: space debris mitigation requirements) and/or ITU recommendation ITU-R S.1003 (Environmental protection of the geostationary-satellite orbit).

156. The Subcommittee noted with satisfaction that some States had taken measures to incorporate internationally recognized guidelines and standards related to space debris into the relevant provisions of their national legislation. The Subcommittee also noted that some States had strengthened their national mechanisms governing space debris mitigation by nominating governmental supervisory authorities, involving academia and industry and developing new legislative norms, instructions, standards and frameworks.

157. The Subcommittee further noted that IADC, whose initial work had served as the basis for the Space Debris Mitigation Guidelines of the Committee, continued its work to characterize the space debris environment and evaluate improvements to its own Space Debris Mitigation Guidelines. The Subcommittee noted that the thirty-sixth meeting of IADC had been hosted in Tsukuba, Japan, in June 2018 by the Japan Aerospace Exploration Agency (JAXA) and that the thirty-seventh meeting of IADC would be hosted in Rome from 7 to 10 May 2019 by the Italian Space Agency.

158. The Subcommittee noted with satisfaction that the compendium of space debris mitigation standards adopted by States and international organizations, developed at the initiative of Canada, Czechia and Germany, enabled all interested stakeholders to benefit from access to a comprehensive and structured set of current instruments and measures on space debris mitigation. The Subcommittee expressed its appreciation to the Secretariat for updating and maintaining the compendium and keeping the latest version available on a dedicated web page.

159. Some delegations expressed the view that it was necessary to update and amend the Space Debris Mitigation Guidelines of the Committee, taking into account the current practice of States and international organizations with relevant expertise.

160. Some delegations expressed the view that transparency and confidence-building measures in outer space activities provided an important contribution to the security, safety and sustainability of activities in outer space.

161. Some delegations expressed the view that the outcome of the work of the Working Group on the Long-term Sustainability of Outer Space Activities, which included guidelines directly applicable to issues of space debris, represented a significant step forward in preserving outer space for future generations, and called on Member States to fully implement those guidelines.

162. The view was expressed that it was the responsibility of all States to enforce the internationally agreed standards at the national level by making them mandatory for all space activities within their national purview, in particular those carried out by private operators.

163. The view was expressed that, since spacefaring States had an interest in preserving the safety and long-term sustainability of space activities, they took sound approaches to mitigating the problem of space debris. The delegation expressing that view also expressed its view that, since those approaches were linked to evolving technologies, and given the cost-benefit trade-offs of using them, it was not necessary to develop legally binding space debris mitigation standards at present.

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

165. The view was expressed that, while the current non-legally binding guidelines and standards were the best way forward at present, a rules-based system and binding guidance for the sustainable conduct of space activities, to be developed at the international level, could bring predictability, create conditions for tackling global problems in a coherent manner, and ensure that space law was developed uniformly.

166. Some delegations expressed the view that mitigation of the problem of space debris, as well as its remediation in the form of removal of debris appeared to be a good method to prevent accidental collisions with space objects and avoid the contamination of outer space. The delegations expressing that view also recognized that there were contentious issues regarding that matter.

167. Some delegations expressed the view that there was a need to develop an international legal regime for the active removal of space debris.

168. Some delegations expressed the view that the Subcommittee should discuss legal issues relating to space debris and space debris removal, including: the legal definition of space debris; the legal status of space debris fragments; the role of the State of registry; jurisdiction and control over the space objects to be declared as space debris; and responsibility and liability for active removal activities, including liability for damage caused as a result of debris remediation operations.

169. Some delegations expressed the view that the definition of space debris needed to be arrived at in a consultative process involving all States members of the Committee.

170. The view was expressed that the Subcommittee could discuss the application of legal concepts established in the United Nations treaties on outer space, in particular the concepts of jurisdiction and control, and responsibility and liability in relation to space debris remediation activities, without redefining or reinterpreting those concepts.

171. The view was expressed that the Subcommittee should explore whether inter-agency cooperation was possible with the International Institute for the Unification of Private Law (Unidroit) on the subject of international registration and protection of international interests in space assets.

172. Some delegations expressed the view that it was important that all States register all space objects they launched into outer space and that no object should be removed from its orbit without the prior authorization of the State of registry.

173. The view was expressed that there was a need for a transparent international mechanism enabling States to exchange reliable and regularly updated information about objects and events in outer space, and that such a mechanism needed to be accessible on an equal and non-discriminatory basis to all States and competent international organizations. In that regard, it was necessary to enhance the existing system of registering space objects; to develop unified international rules and standards for identifying, monitoring, cataloguing and tracking fragments of space debris with the use of modern technology; and to set uniform criteria for assessing and processing data regarding space debris and their use for operational decision-making.

174. The view was expressed that all actors needed to coordinate and share information at all levels to overcome issues that were causing uncertainty, as well as avoid any fragmentation in the regulation of space activities at the national and international levels.

175. The view was expressed that, in order to keep the available information on space debris up to date, it was necessary that all States take internal measures to ensure that all space objects were registered with the United Nations as soon as those objects had been launched into outer space, that the United Nations was notified whenever a space object reached the end of its useful life, and that the status of a space object was catalogued before the responsible State lost control over it, regardless of the object's size or its applications.

176. Some delegations expressed the view that, in decongesting outer space through space debris remediation, States should act in line with the principle of common but differentiated responsibilities, which was based on the recognition that the actors that were largely responsible for creating space debris should be most involved in space debris removal activities and should make their scientific and legal expertise available

to countries with a lower level of space development by concluding cooperation agreements with them.

177. Some delegations expressed the view that the actors that were largely responsible for creating space debris should be most involved in space debris removal activities and that those actors should make their scientific and legal expertise available to countries with a lower level of space development by concluding cooperation agreements with them in order to ensure that the necessary measures were implemented with regard to the design of spacecraft and end-of-life disposal.

178. Some delegations expressed the view that, since much of the orbital space debris was the result of past operations conducted by major spacefaring countries; those countries had a moral responsibility to assist emerging spacefaring countries in the implementation of space debris mitigation guidelines. The delegations expressing that view also expressed the view that, to enable emerging spacefaring countries to absorb the additional costs of implementing those guidelines, such assistance should be both technical and financial in nature.

179. Some delegations expressed the view that the increase in small-satellite activity and the predicted growth in the number of large constellations and megaconstellations in the low-Earth orbits were increasing the risk of collisions between space objects.

180. The view was expressed that space debris could be viewed as a space resource, in particular in the context of the ongoing discussion of the Subcommittee on that subject.

181. Some delegations expressed the view that under the internationally accepted standards, including, in particular, guideline 4 of the Space Debris Mitigation Guidelines of the Committee, responsible space actors were urged to avoid intentional destruction and other harmful activities.

182. The view was expressed that States should be mindful of their obligation under article IX of the Outer Space Treaty to undertake appropriate international consultations before proceeding with any planned activity if they have reason to believe that it would cause potentially harmful interference with activities of other States parties in the peaceful exploration and use of outer space.

183. The view was expressed that any intentional destruction of spacecraft contrary to the Space Debris Mitigation Guidelines of the Committee could be an indicator of fault for the purpose of determining the liability of the launching State for damage caused by space debris created by that intentional destruction, and that, in that context, the definition of the term “damage” contained in article I, paragraph (a), of the Liability Convention applied.

184. The view was expressed that the energy converted at the impact of anti-satellite weapons, even in low-Earth orbits, would render any resulting space debris uncontrollable and would increase the risk of collision, including in higher orbits. The delegation expressing that view was also of the view that the intentional destruction of space objects resulting in long-lasting debris should be prohibited, including in situations of armed conflict, and that such a prohibition should be legally binding.

185. The Subcommittee 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 legislation or standards adopted with regard to space debris mitigation, using the template provided for that purpose. The Subcommittee 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.

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

186. Pursuant to General Assembly resolution 73/91, the Subcommittee considered agenda item 11, entitled “General exchange of information on non-legally binding United Nations instruments on outer space”, as a single issue/item for discussion.

187. The representatives of Chile and Japan made statements under agenda item 11. A statement was also made by the representative of Egypt on behalf of the Group of 77 and China. During the general exchange of views, statements relating to the item were made by representatives of other member States.

188. For its consideration of the item, the Subcommittee had before it a conference room paper submitted by Japan containing a compendium of mechanisms adopted in relation to non-legally binding United Nations instruments on outer space (A/AC.105/C.2/2019/CRP.16).

189. The Subcommittee noted with appreciation that the Office for Outer Space Affairs had a web page dedicated to non-legally binding United Nations instruments, which included the compendium on mechanisms adopted by States and international organizations in relation to non-legally binding United Nations instruments on outer space. In that connection, the Subcommittee encouraged States members of the Committee and international intergovernmental organizations having permanent observer status with the Committee to share information on their practices related to non-legally binding United Nations instruments on outer space.

190. The Subcommittee noted that non-legally binding United Nations instruments related to outer space activities complemented and supported the existing United Nations treaties on outer space.

191. The view was expressed that, in order to address contemporary challenges in the peaceful exploration and use of outer space, it was necessary to gain a better understanding of non-legally binding instruments and related practices.

192. The view was expressed that, in the light of rapid developments in outer space activities, and the increasing number and diversity of space actors, non-legally binding instruments helped to ensure the safe and sustainable use of outer space. The delegation expressing that view was also of the view that consensus, good faith and trust among international actors formed the basis of “soft law”, and that non-binding instruments could often provide timely, effective and efficient solutions that were in step with technological progress.

193. The view was expressed that, despite their non-legally binding status, some non-legally binding instruments had particular legal importance because they comprised norms and standards of positive law, and that they became more valuable through use and practice, which could be evidence of an emerging custom and contribute to the progressive development of international law.

194. The view was expressed that it was important for non-legally binding United Nations instruments on outer space to be respected and implemented by all space actors.

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

196. Some delegations recalled the Principles Relating to Remote Sensing of the Earth from Outer Space and underscored the importance of promoting the availability

of remote sensing data on a non-discriminatory basis as such data were essential for sustainable development in areas such as agriculture and disaster management and promoted transparency and confidence among States.

197. Some delegations recalled General Assembly resolutions 1721 A and B (XVI) on international cooperation in the peaceful uses of outer space, and Assembly resolution 1962 (XVIII) on the Declaration of Legal Principles Governing the Activities of States and the Exploration and Use of Outer Space, and encouraged States launching objects into orbit to furnish information on those objects to the Secretary-General and to consider establishing a national registry for the purpose of exchanging information on space objects, as appropriate.

198. The view was expressed that the guidelines for the long-term sustainability of outer space activities represented a recent and important example of a non-legally binding instrument on outer space activities and that the preamble and 21 guidelines that had been arrived at by consensus (A/AC.105/C.1/L.366) should be adopted by the Committee at its sixty-second session, in June 2019, and submitted to the General Assembly for its endorsement later in the same year.

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

199. Pursuant to General Assembly resolution 73/91, the Subcommittee considered agenda item 12, entitled “General exchange of views on the legal aspects of space traffic management” as a single issue/item for discussion.

200. The representatives of Austria, Brazil, China, Egypt, Germany, Japan, Mexico, the Netherlands, the Russian Federation and the United States made statements under agenda item 12. During the general exchange of views, statements relating to the item were made by representatives of other member States.

201. The Subcommittee heard the following presentations:

(a) “Space traffic management”, by the representative of the United Arab Emirates;

(b) “JAXA activities on ensuring stable use of outer space”, by the representative of Japan.

202. The Subcommittee noted that the space environment was becoming increasingly complex and congested, owing to the growing number of objects in outer space, the diversification of actors in outer space and the increase in space activities, and that the issue of space traffic management could be considered in that context.

203. The Subcommittee took note of a number of measures that were being undertaken at both the national and international levels to improve the safety and sustainability of spaceflight, including the implementation of a national space traffic management policy, international coordination efforts to manage radiofrequency and geostationary orbits through ITU, efforts to enhance capabilities and share information related to space situational awareness, the reporting of annual launch plans and the submission of pre-launch notifications regarding space launch vehicles.

204. Some delegations expressed the view that a multilateral, comprehensive approach to space traffic management would meet the needs of the growing global space economy in terms of safety, predictability and sustainability.

205. The view was expressed that space traffic management, which entailed developing and implementing a set of technical and regulatory provisions to promote safe access to and return from outer space, and to maintain operations in space secure and free from physical or radio interference, was of utmost importance for ensuring the safety, stability and sustainability of the outer space environment.

206. The view was expressed that a comprehensive international space traffic management system could enhance the safe and sustainable conduct of space activities and could include the following: improved multilateral sharing of information on space situational awareness; enhanced international registration procedures; international mechanisms for the notification and coordination of launches, in-orbit manoeuvres and re-entry of space objects; and safety and environmental provisions.

207. The view was expressed that, although existing international space law already contained provisions that were of relevance to space traffic management, for such management to be effective, the gaps in the international regulatory frameworks and initiatives would need to be filled.

208. The view was expressed that internationally agreed guidelines and technical standards had proved to be the most suitable tools for managing international traffic-related matters efficiently and sustainably, that both the Air Navigation Commission of the ICAO and the Maritime Safety Committee of the International Maritime Organization were examples of institutional mechanisms useful for developing the technical aspects of such guidelines and standards while at the same time giving due consideration to the specific national interests of Member States, and that it was time to consider how the development of guidelines and standards specifically applicable to the management of traffic in outer space could be achieved.

209. The view was expressed that space traffic management involved not only the development of appropriate rules and procedures for conducting space operations, but also mechanisms for related international cooperation. The delegation expressing that view was also of the view that, from a practical point of view, space traffic management entailed an entire range of technical, operational and administrative tasks, some of which required international cooperation, that facilitated the technological tasks of each individual spacecraft, as well as of the mission overall.

210. The view was expressed that the discussions on space traffic management held during the meetings of the Subcommittee were complemented by academic research and interactions between practitioners and decision makers, as well as by contributions from international institutions such as the International Academy of Astronautics, and that together, those efforts should guide consideration of an international regime for space traffic management.

211. The view was expressed that the Subcommittee should avoid rushing into any premature theoretical discussions on space traffic management and that it should instead prioritize discussions on the most pressing matters that could jeopardize space activities.

212. The view was expressed that space traffic management was not an end in itself, and that any space traffic management rules put in place would need to be feasible in terms of their implementation.

213. The view was expressed that it was imperative to promote the broad participation of developing countries and emerging spacefaring nations in substantive discussions on space traffic management.

214. The view was expressed that the agenda item on space traffic management provided an opportunity for States with advanced space traffic management capabilities to disseminate their expertise and experiences and thus raise awareness of the importance of the issue.

215. The view was expressed that the development by member States of an internationally agreed model for space traffic management would represent a major step towards the preservation of space for peaceful uses, as the exchange of information on space objects constituted a concrete transparency and confidence-building measure.

216. The view was expressed that certain existing agenda items were highly relevant to space traffic management, such as those relating to the long-term sustainability of

outer space activities, and that conflicting or duplicative efforts should be avoided. The delegation expressing that view was also of the view that a productive working method could be to continue related discussions within a working group devoted to the topic of the long-term sustainability of outer space activities.

217. The view was expressed that substantive elements of the guidelines for the long-term sustainability of outer space activities represented robust first building blocks for a space traffic management structure, including elements of guidelines B.1 (Provide updated contact information and share information on space objects and orbital events) and B.2 (Improve accuracy of orbital data on space objects and enhance the practice and utility of sharing orbital information on space objects) (see [A/AC.105/C.1/L.366](#)). The delegation expressing that view was also of the view that, as work continued on the long-term sustainability of outer space activities, additional building blocks for a comprehensive international space traffic management regime would certainly emerge.

218. The view was expressed that, in order for an operator's decisions on the operation and control of a spacecraft to be as relevant and timely as possible to the current situation, information on the operational environment and data on objects and events in outer space must be timely, reliable, precise and accurate. The delegation expressing that view was also of the view that the more accurate and reliable the data were, and the faster they became available, the more likely it was that correct and responsible decisions would be taken.

219. The view was expressed that it was impossible to ignore the question of responsibility for the deliberate provision of inaccurate information on space objects and events, especially when its use by another participant in outer space activities led to negative consequences.

220. The view was expressed that States should analyse proposals made to establish, under the auspices of the United Nations, an international platform for the exchange of information on objects and events in outer space, as well as guidelines for the long-term sustainability of outer space activities relating to the safety of space operations, as those proposals and guidelines could inform a responsible and systematic approach to space traffic management.

221. The view was expressed that one State's forthcoming transfer of responsibilities for providing government-derived, basic space situational awareness data and basic space traffic management services for most users from its department of defence to its department of commerce would enable civilian government agencies, international organizations and the private sector to access a new open-architecture data repository that would improve the interoperability of space situational awareness data and enhance the sharing of space situational awareness data.

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

222. Pursuant to General Assembly resolution [73/91](#), the Subcommittee considered agenda item 13, entitled "General exchange of views on the application of international law to small-satellite activities", as a single issue/item for discussion on its agenda.

223. The representatives of France, Germany, Indonesia, Japan, Mexico, the Russian Federation, South Africa and the United Kingdom made statements under agenda item 13. The representative of Egypt also made a statement on behalf of the Group of 77 and China. During the general exchange of views, statements relating to the item were made by the representatives of other member States.

224. The Subcommittee agreed that the continuation of its work under the item would provide valuable opportunities for addressing a number of topical issues relating to

international and national policy and regulation measures regarding the use of small satellites by various actors.

225. The Subcommittee noted with appreciation the questionnaire on the application of international law to small-satellite activities (contained in [A/AC.105/1177](#), annex I, appendix II), considered by the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space. The Subcommittee noted that both the questionnaire and the replies received from member States, which were contained in two conference room papers (A/AC.105/C.2/2019/CRP.8 and A/AC.105/C.2/2019/CRP.15), enhanced the discussion of the international legal issues raised with regard to small-satellite activities.

226. The Subcommittee reaffirmed that small-satellite activities had provided opportunities and benefits in relation to accessing space. In particular, developing States and associated governmental and non-governmental organizations, including universities, education and research institutes and private industries with limited funds, now had the opportunity to join in the exploration and peaceful uses of outer space and become developers of space technology.

227. The Subcommittee recognized that technological progress had made the development, launch and operation of small satellites increasingly affordable and that such satellites could provide substantial assistance in various areas, including education, telecommunications, Earth observation and disaster mitigation. Such satellites could also be used to test and demonstrate new technologies, thus playing an important role in fostering technological progress in the area of space activities.

228. The Subcommittee noted with appreciation the programmes of the Office for Outer Space Affairs, including the United Nations/Japan Cooperation Programme on CubeSat Deployment from the International Space Station Japanese Experiment Module (Kibo), known as “KiboCUBE”, which provided opportunities to educational and research institutions in developing countries that were States members of the Committee. The Subcommittee welcomed the announcement that the fifth round of the Programme had been opened and that applications were due in September 2019.

229. The Subcommittee reiterated that the guidance on space object registration and frequency management for small and very small satellites, which had been jointly developed by the Office for Outer Space Affairs and ITU, served as a useful guide for developers and operators of small satellites.

230. The Subcommittee was informed about existing and emerging practices and regulatory frameworks applicable to the development and use of small satellites, and about the programmes of States and international organizations in that field.

231. The Subcommittee noted that activities involving small satellites, regardless of the size of those satellites, should be carried out in compliance with existing international regulatory frameworks, including the United Nations treaties and principles on outer space, the ITU Constitution and Convention and the ITU Radio Regulations, and certain non-binding instruments, including the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, in order to guarantee the safety and sustainability of outer space activities.

232. Some delegations expressed the view that, because space technologies were evolving and the number of space actors was growing, clarity was required in the application of existing space law and administrative procedures in order to address the opportunities and challenges arising from small-satellite activities.

233. The view was expressed that the exchange of views under agenda item 13 could help to improve national regulatory measures. Such measures could be aimed at defining domestic administrative procedures in compliance with the Outer Space Treaty, in particular articles VI, VII and VIII, and all other relevant international instruments, for the purpose of ensuring the orderly and safe conduct of space activities.

234. The view was expressed that the relevant international standards needed to be adjusted and that, to that end, attention should be drawn to the IADC statement on large constellations of satellites in low-Earth orbit.

235. Some delegations expressed the view that consideration could be given to the development of provisions on small satellites and to the possibility of an ad hoc legal regime. Such provisions could address operations with small satellites and the consideration of ways and means to ensure the rational and equitable use of the low-Earth orbit and frequency spectrum.

236. Some delegations expressed the view that the existing legal regime on outer space provided safety, transparency and sustainability of operations involving small-satellite activities and that no ad hoc legal regime should be created, nor should any other mechanisms that could impose limitations on the design, building, launch or use of space objects.

237. Some delegations expressed the view that there was the potential risk of physical accidents and frequency interference owing to the increasing concentration of small satellites.

238. The view was expressed that, under the present agenda item, the Subcommittee should also consider the question of how to register megaconstellations of satellites.

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

239. Pursuant to General Assembly resolution [73/91](#), the Subcommittee considered agenda item 14, entitled “General exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources”, as a single issue/item for discussion.

240. The representatives of Australia, Austria, Belgium, Brazil, China, Colombia, France, Germany, Greece, Indonesia, Italy, Japan, Luxembourg, Mexico, the Netherlands, the Russian Federation, the United Kingdom and the United States made statements. Statements were also made by the representative of Egypt on behalf of the Group of 77 and China and the representative of Costa Rica on behalf of Argentina, Bolivia (Plurinational State of), Brazil, Chile, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Paraguay, Uruguay and Venezuela (Bolivarian Republic of). During the general exchange of views, statements relating to the item were also made by representatives of other member States.

241. The Subcommittee had before it the following:

(a) Working paper by Belgium and Greece containing a proposal for the establishment of a working group on the development of an international regime for the utilization and exploitation of space resources ([A/AC.105/C.2/L.311](#));

(b) Addendum to the working paper by Belgium and Greece containing a proposal on the working methods and workplan for the proposed working group on the development of an international regime for the utilization and exploitation of space resources ([A/AC.105/C.2/2019/CRP.22](#)).

242. Some delegations expressed the view that activities relating to the exploration, exploitation and utilization of space resources should not depart from the basic principles of international space law, namely, the principles of non-appropriation and equitable access and the principle that the exploration and use of outer space is the province of all humankind. The delegations expressing that view also expressed the view that newly enacted national laws that provided for the exploitation of celestial bodies for economic purposes had given rise to an urgent need to develop a common understanding of the legal obligations of States through constructive, collaborative and consensus-based discussions within the Committee.

243. Some delegations expressed the view that the principle of freedom of exploration, use and exploitation was not absolute, but, rather, was limited by the principles of non-discrimination, equality among States and observance of international law established under the Outer Space Treaty. The delegations expressing that view also expressed the view that any national legislation should be based on the guiding principle that space is to be used and explored in a sustainable manner and exclusively for the benefit of all countries, regardless of their level of economic and scientific development.

244. Some delegations expressed the view that national legislation that safeguarded international obligations related to the exploration, exploitation and utilization of space resources in general terms only was not sufficient to ensure compliance with the spirit of the Outer Space Treaty. The delegations expressing that view also expressed the view that the Committee needed to analyse the provisions of the treaties on outer space in good faith, so that interpretations and approaches to implementation in national legislation that were contrary to that spirit would be avoided, and that the Committee needed to propose model provisions that precisely and explicitly reflected the principles set out in the international treaties on outer space, including provisions on the establishment of effective institutional mechanisms to ensure that those principles were observed.

245. The view was expressed that the utilization of space-based resources, including their commercial utilization, was consistent with the United Nations treaties on outer space and that, although the Outer Space Treaty shaped the manner in which space resource utilization activities could be carried out, it did not broadly preclude such activities.

246. The view was expressed that the Outer Space Treaty did not provide for a comprehensive international regime governing activities relating to the utilization of space resources and that, given the current state of technological and industrial development, there was neither a need for such a regime nor a practical basis for creating one. The delegation expressing that view also expressed the view that the existing legal framework for outer space activities was sufficient for interested States to conduct activities that included the utilization of space resources.

247. The view was expressed that, while the consensus was that the appropriation of outer space, including the Moon and other celestial bodies, was prohibited under international law, it still remained to be discussed and determined whether non-renewable space resources could be subjected to an ownership regime. The delegation expressing that view also expressed the view that, with regard to the exploration, exploitation and utilization of space resources, it was necessary to address the following non-exhaustive list of issues arising under various provisions of the Outer Space Treaty: (a) how to ensure that space resource activities were carried out for the benefit of and in the interests of all countries; (b) how to ensure that space as a whole remained free for exploration and use by all States without discrimination of any kind; (c) how to ensure free access to all areas of all celestial bodies; (d) how to ensure that space resource mining did not amount to national appropriation of territories in outer space; (e) how to ensure that due regard was given to the interests of all other States parties to the Treaty; and (f) how to ensure that all stations, installations, equipment and space vehicles would be open to representatives of other States on the basis of reciprocity.

248. Some delegations expressed the view that, with regard to the exploration, exploitation and utilization of space resources, the Subcommittee must not limit itself to simply exchanging views, but should fulfil its proper role by developing the legal framework necessary for the conduct of space activities while striving for multilateral consensus. The delegations expressing that view also expressed the view that such a framework must be aligned with the Outer Space Treaty and provide legal certainty and predictability to all public and private actors intending to explore, exploit and/or utilize space resources.

249. The Subcommittee was informed that, between 2016 and 2018, the Hague International Space Resources Governance Working Group had developed

19 building blocks for the governance of space resource activities and had sought comments from the public and input from a technical panel made up of universities, space agencies and industrial stakeholders. The Subcommittee was also informed that that Working Group would continue to explore the need for any future mechanisms for the governance of space resource activities and the form they should take.

250. The view was expressed that, while a discussion within the Committee on an international regulatory framework for the exploration, exploitation and utilization of space resources was welcome, it was not desirable to designate one particular body as the unique forum for developing such a regulatory framework and that, whatever the forum, the views of civil society and industry would have to be included for the resulting regime to be successful.

251. Some delegations expressed the view that there was a growing need to initiate a proper and substantial debate on the issue of the exploration, exploitation and utilization of space resources within the Committee, in particular within the Legal Subcommittee, as the Subcommittee was the primary forum for intergovernmental discussions and negotiations on a future legal framework for space resource exploitation.

252. The view was expressed that the terms “exploration” and “utilization” should be clearly defined and that an understanding should be reached regarding the way in which the concept “exploitation of space resources” was related to those terms. The delegation expressing that view also expressed the view that mining activities for commercial purposes went beyond exploration and use, and that commercial mining was fundamentally different from the use of probes to take scientific samples or from the use of planetary resources to maintain a planetary station in the context of an exploration mission.

253. The view was expressed that there were three distinct types of space resource activities: (a) collecting and removing samples of minerals or other substances for scientific purposes, which was a generally accepted practice; (b) using minerals and other substances in the course of scientific investigations in quantities appropriate to sustain the missions in question, so long as their use did not encroach on the legitimate space activities of others and did not amount to undue appropriation; and (c) exploiting minerals and substances for commercial purposes, for which an international legal framework was deemed to be required to ensure that the general principles of the Outer Space Treaty would be upheld, in particular the principle of non-appropriation.

254. The view was expressed that, at present, space resources were accessible only to a very limited number of States and to a few private sector actors within those States, and that it was therefore relevant to assess the impact on the world economy of applying a doctrine of “first come, first served”, as it would create a de facto monopoly and would thus be in absolute contradiction with the letter and spirit of the Outer Space Treaty.

255. The view was expressed that a debate on rules and norms for the exploration, exploitation and utilization of space resources should be guided by the wish to encourage the flourishing of the space resource industry as a whole and to ensure that such activities were consistent with existing international law. The delegation expressing that view also expressed the view that the discussion should evolve in a way that reflected the technological and economic reality, as well as the needs of industry.

256. The view was expressed that, in the future, the exploration, exploitation and utilization of space resources could prove to be worthwhile activities that governmental as well as non-governmental actors may wish to pursue, and that it lay therefore within the Subcommittee’s mandate to define and develop the legal framework for space resource activities.

257. The view was expressed that, before the objective of establishing an international regime for space resource exploitation was realized, it must first be ensured that the international community as a whole would benefit from space

resource exploitation in conformity with accepted international principles of space law, while at the same time ensuring that neither governmental nor private actors would lose their incentive to invest in space activities and, finally, that any international regime for space resource exploitation must ensure that such activities were conducted in an orderly, safe and sustainable manner.

258. Some delegations expressed the view that the work of the Hague International Space Resources Governance Working Group was of great importance and that consideration of its 19 building blocks for the governance of space resource activities would greatly enhance discussions in the Subcommittee.

259. The view was expressed that the Committee and its Subcommittees were unique in the sense that they had the experience and expertise required to address the legal challenges of space activities and, as such, embodied the spirit of multilateralism that was a prerequisite for negotiations on a governance model that could foster the exploration, exploitation and utilization of space resources in accordance with the international legal regime for outer space. The delegation expressing that view also expressed the view that, as the Subcommittee was the only forum with the necessary level of governmental representation, ways should be found to improve its interaction with industry, academia and other organizations.

260. Some delegations supported the initiative of Belgium and Greece to establish a working group to discuss the legal aspects of the exploration, exploitation and utilization of space resources.

261. Some delegations expressed the view that, if a working group were to be established under the Subcommittee, a clear timeline and a results-based work programme would have to be discussed and agreed prior to its formation.

262. The view was expressed that, with regard to such a working group, the exploration, exploitation and utilization of space resources were in their technological infancy and that the Subcommittee should not move too quickly in establishing that working group, as regulation might stifle innovation.

263. The view was expressed that the current legal framework was sufficient for current and contemplated space activities, including resource extraction and utilization, and that, to the extent that additional mechanisms could complement the existing legal regime, the Subcommittee could benefit from the ongoing work of the legal experts involved with the Hague International Space Resources Governance Working Group, and that the Subcommittee should consider those topics only after that Group had made its recommendations.

264. The view was expressed that, should a working group on space resources be established under the Subcommittee, its discussions should be enriched by the views of various scientific, economic, technical and legal expert groups in order to establish a shared factual basis from which to proceed and that input from the Hague International Space Resources Governance Working Group in particular could prove valuable in that regard.

265. The view was expressed that a working group on the exploration, exploitation and utilization of space resources, to be established under the Subcommittee, should be guided by two main policy principles, namely: (a) that it was necessary to promote public and private investment in technological, operational and economic solutions that would make it possible to use space resources; and (b) that it was necessary to recognize both individual rights and collective interests in the exploration and use of space resources.

266. The view was expressed that the Scientific and Technical Subcommittee should play a permanent and significant role consistent with its mandate in collecting, systematizing and evaluating information about the state of the scientific, technological, economic and financial capabilities of the international community to explore, exploit and utilize space resources, so that the consideration of both the legal

and the technical aspects of activities related to the use of space resources remained within the Committee.

267. The view was expressed that a working group on the exploration, exploitation and utilization of space resources should be established as an open-ended intergovernmental group and that the objective of its consultations and negotiations should be to arrive at draft articles for a universal treaty establishing a legally binding international framework for the exploration, exploitation and utilization of space resources.

#### **XIV. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-ninth session**

268. Pursuant to General Assembly resolution [73/91](#), the Subcommittee considered agenda item 15, entitled “Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-ninth session”, as a regular item on the agenda. Under the item, the Subcommittee also considered matters related to the organization of work.

269. The representatives of Australia, Belgium, Brazil, Canada, China, Costa Rica, Czechia, Egypt, France, Germany, Greece, Iran (Islamic Republic of), Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Romania, the Russian Federation, South Africa, the United Arab Emirates, the United Kingdom and the United States made statements under agenda item 15. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

270. The Subcommittee had before it the following:

(a) Note by the Secretariat containing a categorization of topics relating to the governance and method of work of the Committee and its subsidiary bodies ([A/AC.105/C.1/L.377](#));

(b) Working paper by Belgium and Greece containing a proposal for working methods and a workplan for a new working group on legal aspects of the exploration, utilization and exploitation of space resources ([A/AC.105/C.2/2019/CRP.26](#)).

271. The Subcommittee agreed that the following items be proposed to the Committee for inclusion in the agenda of the Subcommittee at its fifty-ninth 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. 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.
11. General exchange of information on non-legally binding United Nations instruments on outer space.
12. General exchange of views on the legal aspects of space traffic management.
13. General exchange of views on the application of international law to small-satellite activities.
14. General exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources.

*New items*

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

272. The Subcommittee recalled that, at its sixty-first session, in 2018, the Committee on the Peaceful Uses of Outer Space had agreed to the multi-year workplan on the governance and method of work of the Committee and its subsidiary bodies.

273. The Subcommittee noted that, in accordance with the multi-year workplan, the Scientific and Technical Subcommittee, at its fifty-sixth session, held from 11 to 22 February 2019, had considered the note by the Secretariat on the categorization of topics relating to the governance and method of work of the Committee and its subsidiary bodies ([A/AC.105/C.1/L.377](#)). The Legal Subcommittee took note of the indicative list of proposals on the governance and method of work of the Committee and its subsidiary bodies made at that session ([A/AC.105/1202](#), annex I, appendix).

274. In accordance with the multi-year workplan, the Legal Subcommittee continued its consideration of the governance and method of work of the Committee and its subsidiary bodies and noted that there was agreement about recommending to the Committee that it upload, on a voluntary basis, statements delivered by delegations to the web page dedicated to the session, on the website of the Office for Outer Space Affairs.

275. The Subcommittee took note of an additional proposal relating to the governance and method of work of the Committee and its subsidiary bodies to request the Secretariat to invite States Members of the United Nations to inform it (a) about their current activities in outer space and their plans for the future in that regard; (b) whether they are parties to the five United Nations treaties on outer space; and (c) whether they are members of the Committee on the Peaceful Uses of Outer Space or plan to become members. The Subcommittee agreed that consideration of those matters would continue at the sixty-second session of the Committee, to be held in 2019.

276. The Subcommittee commended the Secretariat for its flexibility in scheduling agenda item 15 for the current session. Doing so had made it possible to make progress in the consideration of the agenda item and to make efficient use of the available interpretation resources. The Subcommittee also commended the Secretariat for making the schedule of meetings of the working groups available in advance of the session.

277. The Subcommittee noted that the Secretariat was consulting with the Conference Management Service of the United Nations Office at Vienna on possible measures to be instituted in order to enhance the administration and logistical arrangements of the sessions of the Committee and its Subcommittees. The Secretariat was also consulting with the secretariats of other intergovernmental bodies in Vienna about their practices and methods of work in that regard. As far as practicable, the Secretariat would inform the Committee on the progress of those consultations at its sixty-second session, in the context of work under the present multi-year workplan.

278. The Subcommittee agreed that, under the item on its agenda entitled “General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources”, scheduled informal consultations were to be held at the fifty-ninth session of the Subcommittee, in 2020. Those scheduled informal consultations were to be conducted with interpretation services from and into all official languages of the United Nations and be coordinated by a moderator assisted by the Secretariat. The moderator was to be nominated by Belgium and Greece at the sixty-second session of the Committee on the Peaceful Uses of Outer Space, in 2019.

279. The Subcommittee also agreed that the aim of those consultations was to have a broad and inclusive exchange of views on the future deliberations concerning the exploration, exploitation and utilization of space resources, including the possible establishment of a working group under the relevant agenda item, taking into account possible future coordination with the Scientific and Technical Subcommittee, as appropriate.

280. The Subcommittee noted that Belgium and Greece would submit a revised proposal for the establishment of a working group under the item “General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources” for further consideration at the fifty-ninth session of the Subcommittee. The Subcommittee encouraged those two delegations to conduct consultations with interested delegations on the margins of the sixty-second session of the Committee.

281. The Subcommittee took note of a proposal by the delegation of Egypt to add a new item to the agenda of the Subcommittee, to be entitled, “Space culture, a new era for human civilization”. Under such an item, views could be exchanged on ways and means to ensure that any future civilization humanity may establish in space would be founded on a culture of ethics and moral principles and that the negative traits of human civilization as it currently existed on Earth would not be passed on to the new space civilization. The Subcommittee requested the delegation to submit a written proposal for consideration during the fifty-ninth session of the Subcommittee.

282. The Subcommittee agreed that IISL and ECSL should again be invited to organize a symposium, to be held during the fifty-ninth session of the Subcommittee, with due account being taken of equitable geographical and gender representation among the participants in order to reflect a broad range of opinions and that the organizers should seek the cooperation of interested academic entities for that purpose.

283. The Subcommittee noted that its fifty-ninth session had been tentatively scheduled to be held from 23 March to 3 April 2020.

## Annex I

# Report of the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space

## I. Introduction

1. At its 976th meeting, on 1 April 2019, the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space reconvened its Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, with Bernhard Schmidt-Tedd (Germany) as Chair.
2. From 2 to 11 April 2019, the Working Group held 6 meetings. The Working Group considered the following items:
  - (a) The status of the five United Nations treaties on outer space;
  - (b) UNISPACE+50 thematic priority 2, entitled “Legal regime of outer space and global space governance: current and future perspectives”;
  - (c) The set of questions of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space;
  - (d) Questionnaire on the application of international law to small-satellite activities.
3. The Working Group had before it the following:
  - (a) Working paper submitted by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, entitled “Draft guidance document under UNISPACE+50 thematic priority 2. ‘Legal regime of outer space and global governance: current and future perspectives’” ([A/AC.105/C.2/L.310](#));
  - (b) Conference room paper on the status of international agreements relating to activities in outer space as at 1 January 2019 ([A/AC.105/C.2/2019/CRP.3](#));
  - (c) Note by the Secretariat containing responses to the set of questions provided by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space received from Pakistan, the United Arab Emirates and SWF ([A/AC.105/C.2/2019/CRP.11](#));
  - (d) Note by the Secretariat containing responses to the set of questions by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space received from Armenia ([A/AC.105/C.2/2019/CRP.18](#));
  - (e) Note by the Secretariat containing responses to the questionnaire on the application of international law to small-satellite activities received from Brazil and Czechia ([A/AC.105/C.2/2019/CRP.8](#));
  - (f) Note by the Secretariat containing responses to the questionnaire on the application of international law to small-satellite activities received from Armenia and Indonesia ([A/AC.105/C.2/2019/CRP.15](#));
  - (g) Conference room paper containing comments on the working paper submitted by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space entitled “Draft guidance document under UNISPACE+50 thematic priority 2. ‘Legal regime of outer space and global governance: current and future perspectives’” received from Canada, Mexico, the Netherlands and the United States ([A/AC.105/C.2/2019/CRP.20](#));
  - (h) Conference room paper containing comments on the working paper submitted by the Chair of the Working Group on the Status and Application of

the Five United Nations Treaties on Outer Space entitled “Draft guidance document under UNISPACE+50 thematic priority 2. ‘Legal regime of outer space and global governance: current and future perspectives’” received from Austria (A/AC.105/C.2/2019/CRP.21);

(i) Conference room paper containing comments on the working paper submitted by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space entitled “Draft guidance document under UNISPACE+50 thematic priority 2. ‘Legal regime of outer space and global governance: current and future perspectives’ received from Japan (A/AC.105/C.2/2019/CRP.23).

4. The Working Group also had before it a series of non-papers by the Chair of the Working Group on the text of paragraph 9 of the draft guidance document submitted by the Chair of the Working Group (A/AC.105/C.2/L.310).

5. At its 6th meeting, on 11 April, the Working Group adopted the present report.

6. The Working Group considered UNISPACE+50 thematic priority 2 (work for 2019 as reflected in the multi-year workplan contained in A/AC.105/1122, annex I, paragraph 8), by collecting comments from States members of the Committee to the draft guidance document.

7. The Working Group took note with appreciation of the draft guidance document and commended the Chair of the Working Group and the Secretariat for having provided a very good basis for further considering and finalizing the document at the fifty-ninth session of the Subcommittee (work for 2020 as reflected in the multi-year workplan).

8. The Working Group noted that the draft guidance document, when finalized, would constitute a useful tool for guidance and capacity-building in space law and policy and would increase awareness among decisionmakers and policymakers at the national level.

9. In that regard, the Working Group considered in particular paragraph 9 of the draft guidance document and, after extensive discussions on the extent of that paragraph, agreed that it should not be included in the next revision of the draft guidance document.

10. The Working Group agreed that, in addition to the written comments on the draft guidance document received from States during the fifty-eighth session of the Subcommittee, States members of the Committee were to submit written comments during the sixty-second session of the Committee, in 2019. The Chair of the Working Group, in close consultation with the Secretariat, would thereafter prepare a revised version of the draft guidance document, to be issued in all official languages of the United Nations, in advance of the fifty-ninth session of the Subcommittee, and an advance edited version, together with an informal version in English showing the changes made, would be made available on the website of the Office for Outer Space Affairs.

11. The Working Group noted that the document “Set of questions provided by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, taking into account the UNISPACE+50 process”, contained in appendix I to the present report, provided for an exchange of views on a broad range of topics related to the status and application of the treaties, and that continued discussions under thematic priority 2 would benefit from more contributions being made to the questions by States members and permanent observers of the Committee. The Working Group agreed that States members and permanent observers of the Committee should continue to be invited to contribute to the questions. Any replies received would be made available in conference room papers.

12. The Working Group agreed that States members of the Committee and international intergovernmental and non-governmental organizations having permanent observer status with the Committee should continue to be invited to

provide comments and responses to the questionnaire on the application of international law to small-satellite activities, as contained in appendix II to the present report. Any replies received would be made available in conference room papers.

13. In that regard, and in relation to the sets of questions as contained in appendices I and II to the present report, the Working Group agreed that the issue of large constellations and megaconstellations should receive specific consideration in the responses to both sets of questions.

## Appendix I

### **Set of questions provided by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, taking into account the UNISPACE+50 process**

#### **1. The legal regime of outer space and global space governance**

1.1 What is the main impact on the application and implementation of the five United Nations treaties on outer space of additional principles, resolutions and guidelines governing outer space activities?

1.2 Are such non-legally binding instruments sufficiently complementing the legally binding treaties for the application and implementation of rights and obligations under the legal regime of outer space? Is there a need for additional actions to be taken?

1.3 What are the perspectives for the further development of the five United Nations treaties on outer space?

#### **2. United Nations treaties on outer space and provisions related to the Moon and other celestial bodies**

2.1 Do the provisions 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 (Outer Space Treaty) constitute a sufficient legal framework for the use and exploration of the Moon and other celestial bodies or are there legal gaps in the treaties (the Outer Space Treaty and the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Agreement))?

2.2 What are the benefits of being a party to the Moon Agreement?

2.3 Which principles or provisions of the Moon Agreement should be clarified or amended in order to allow for wider adherence to it by States?

#### **3. International responsibility and liability**

3.1 Could the notion of “fault”, as featured in articles III and IV of the Convention on International Liability for Damage Caused by Space Objects (Liability Convention), be used for sanctioning non-compliance by a State with the resolutions related to space activities adopted by the General Assembly or its subsidiary bodies, such as Assembly resolution [47/68](#), on the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, and the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space? In other words, could non-compliance with resolutions adopted by the General Assembly or with instruments adopted by its subsidiary bodies related to space activities be considered to constitute “fault” within the meaning of articles III and IV of the Liability Convention?

3.2 Could the notion of “damage”, as featured in article I of the Liability Convention, be used to cover loss resulting from a manoeuvre performed by an operational space object in order to avoid collision with a space object or space debris not complying with the Space Debris Mitigation Guidelines of the Committee?

3.3 Are there specific aspects related to the implementation of international responsibility, as provided for in article VI of the Outer Space Treaty, in connection with General Assembly resolution [41/65](#), on the Principles Relating to Remote Sensing of the Earth from Outer Space?

3.4 Is there a need for traffic rules in outer space as a prerequisite to a fault-based liability regime?

#### **4. Registration of space objects**

4.1 Is there a legal basis to be found in the existing international legal framework applicable to space activities and space objects, in particular the provisions of the Outer Space Treaty and the Convention on Registration of Objects Launched into Outer Space (Registration Convention), which would allow the transfer of the registration of a space object from one State to another during its operation in orbit?

4.2 How could a transfer of activities or ownership involving a space object during its operation in orbit from a company of the State of registry to a company of a foreign State be handled in compliance with the existing international legal framework applicable to space activities and space objects?

4.3 What jurisdiction and control are exercised, as provided for in article VIII of the Outer Space Treaty, over a space object registered by an international intergovernmental organization in accordance with the provisions of the Registration Convention?

4.4 Does the concept of megaconstellations raise legal and/or practical questions, and is there a need to react with an adapted form of registration?

4.5 Is there a possibility, in compliance with the existing international legal framework, based on the existing registration practices, of introducing a registration “on behalf” of a State of a launch service customer, based on its prior consent? Would this be an alternative tool to react to megaconstellations and other challenges in registration?

#### **5. International customary law in outer space**

5. Are there any provisions in the five United Nations treaties on outer space that could be considered to form part of international customary law and, if yes, which ones? Could you explain the legal and/or factual elements on which your answer is based?

#### **6. Proposal for other questions**

6. Please suggest additional questions that could be inserted into the set of questions above to meet the objective of the UNISPACE+50 thematic priority on the legal regime of outer space and global space governance.

## **Appendix II**

### **Questionnaire on the application of international law to small-satellite activities**

#### **1. Overview of small-satellite activities**

1.1 Are small satellites serving the needs of your society? Has your country determined whether small satellites could serve an identified technological or development need?

1.2 Is your country involved in small-satellite activities such as designing, manufacturing, launching and operating? If so, please list projects, as appropriate. If not, are there future plans to do so?

1.3 Which kind of entity in your country is carrying out small-satellite activities?

1.4 Is there a focal point in your country responsible for coordinating small-satellite activities as part of your national space activities?

1.5 Are small-satellite activities carried out in the framework of international cooperation agreements? If so, what type of provisions specific to small-satellite activities are included in such cooperation agreements?

#### **2. Licensing and authorization**

2. Do you have a legal or regulatory framework to supervise any aspect of small-satellite activities in your country? If so, are they general acts or specific rules?

#### **3. Responsibility and liability**

3.1 Are there new challenges for responsibility and liability in view of small-satellite activities?

3.2 How are liability and insurance requirements enforced on an operator in your country, for a small satellite under your country's responsibility, in the event that "damage" occurs on the surface of Earth, to aircraft in flight or to another space object in orbit?

#### **4. Launching State and liability**

4.1 Since small satellites are not always deployed into orbit with dedicated rockets as in the case of larger satellites, there is a need for clarification in the understanding of the definition of "launch". When a launch of a small satellite requires two steps – first, launching from a site to an orbit and, second, deploying the small satellite to another orbit – in your view, would the first step be regarded as the "launch" within the meaning of the United Nations treaties on outer space?

4.2 Do you think that the current international regulatory regime is sufficient to regulate operators of small satellites or that there should be a new or different international regulatory approach to address operations of small satellites?

#### **5. Registration**

5. Does your country have a practice of registering small satellites? If so, does your country have a practice of updating the status of small satellites? Is there any legislation or regulation in your country that requires non-governmental entities to submit to the Government information for the purpose of registration, including updating of the status of small satellites they operate?

#### **6. Space debris mitigation in the context of small-satellite activities**

6. How has your country incorporated specific requirements or guidelines into its national regulatory framework to take into account space debris mitigation?

## Annex II

### Report of the Acting Chair of the Working Group on the Definition and Delimitation of Outer Space

1. Pursuant to General Assembly resolution [73/91](#), the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space, at its 976th meeting, on 1 April 2019, reconvened its Working Group on the Definition and Delimitation of Outer Space, with André Rypl (Brazil) as Acting Chair in the absence of the Chair, José Monserrat Filho (Brazil).
2. The Acting Chair drew the attention of the Working Group to the fact that, pursuant to the agreement reached by the Subcommittee at its thirty-ninth session and endorsed by the Committee at its forty-third session, both in 2000, and pursuant to General Assembly resolution [73/91](#), the Working Group had been convened to consider only matters relating to the definition and delimitation of outer space.
3. The Working Group had before it the following:
  - (a) Note by the Secretariat on national legislation and practice relating to the definition and delimitation of outer space ([A/AC.105/865/Add.22](#));
  - (b) Note by the Secretariat on questions on suborbital flights for scientific missions and/or for human transportation ([A/AC.105/1039/Add.12](#));
  - (c) Note by the Secretariat entitled “Definition and delimitation of outer space: views of States members and permanent observers of the Committee” ([A/AC.105/1112/Add.6](#));
  - (d) Conference room paper entitled “Matters relating to the definition and delimitation of outer space: replies of the United Arab Emirates” ([A/AC.105/C.2/2019/CRP.5](#));
  - (e) Conference room paper entitled “Matters relating to the definition and delimitation of outer space: replies of Greece” ([A/AC.105/C.2/2019/CRP.6](#));
  - (f) Conference room paper entitled “Matters relating to the definition and delimitation of outer space: replies of Tunisia” ([A/AC.105/C.2/2019/CRP.7](#)).
4. The Acting Chair expressed the view that the constant evolution of technology gave rise to concrete case studies relevant to the long-standing debate on the definition and delimitation of outer space, and that as science advanced, the law should follow. In that connection, the Subcommittee and the Working Group should devote particular attention to novel scientific developments, in particular those that increasingly intertwined aeronautic and astronautic activities. In that connection, the Acting Chair brought to the attention of the Working Group the issue of high-altitude pseudo-satellites, which operated at an altitude of 20 km and were capable of providing services formerly the reserve of satellites, such as remote sensing, navigation and telecommunication. Because high-altitude pseudo-satellites functioned as aircraft as defined by the Convention on International Civil Aviation but could deliver the services of space objects, the Acting Chair expressed the view that the Working Group could take a more practical approach, irrespective of theoretical considerations regarding the territorial scope of space law and the delimitation of outer space, although such considerations were certainly important in their own right.
5. Some delegations expressed the view that the issue of high-altitude pseudo-satellites was under consideration by the International Telecommunication Union and that the Working Group should not exceed the limits of its competence and avoid overlapping with the work of other entities within the United Nations system.
6. The view was expressed that States clearly held divergent views on not only the need to define and delimit outer space, but also on what constituted the best way to do so. The delegation expressing that view was also of the view that neither spatial

nor functional approaches could be regarded as viable solutions to the problem anymore, and that the issue thus had to be approached from another angle, perhaps by combining both spatial and functional methods, or by some other means.

7. The view was expressed that the Working Group could prepare a document synthesizing views expressed thus far on ways to delimit and delineate outer space. Such a document could serve as a starting point for further discussions.

8. The view was expressed that, in the absence of a clear definition and delimitation of outer space and airspace, it was impossible to define an area of applicable law, to consistently enforce laws, rules and regulations, and hence to efficiently address legal problems that may arise.

9. On the basis of its deliberations, the Working Group agreed:

(a) To request the Secretariat to do the following:

(i) Update the document “Historical summary on the consideration of the question on the definition and delimitation of outer space” ([A/AC.105/769](#) and [A/AC.105/769/Corr.1](#)) with the work done by the Subcommittee and the Working Group between 2002 and 2019, and the responses of States and international intergovernmental organizations to various requests made by the Working Group during the same period;

(ii) Update the dedicated section of the website of the Office for Outer Space Affairs by adding the responses from States and international organizations to the requests made by the Working Group between 2014 and 2019. The Working Group agreed to assess the information referred to under (a) (i) and (a) (ii) above at the fifty-ninth session of the Legal Subcommittee, to be held in 2020, and take a decision regarding the future of its work until new developments in the exploration and use of outer space would justify renewing the consideration of matters pertinent to the definition and delimitation of outer space;

(b) To continue to invite States members of the Committee to submit information on national legislation or any national practices that may exist or were being developed that related directly or indirectly to the definition and/or delimitation of outer space and airspace;

(c) To continue to invite States members and permanent observers of the Committee to submit concrete and detailed proposals regarding the need to define and delimit outer space, or justifying the absence of such a need, or to provide the Working Group with specific cases of a practical nature relating to the definition and delimitation of outer space and the safety of aerospace operations. Such structured, consistent and grounded contributions would be considered by the Working Group at its future meetings;

(d) To continue to invite States Members of the United Nations and permanent observers of the Committee to provide their replies to the following questions:

(i) Is there a relationship between plans to establish a system of space traffic management and the definition and delimitation of outer space?

(ii) Is there a relationship between suborbital flights for scientific missions and/or for human transportation and the definition and delimitation of outer space?

(iii) Will the legal definition of suborbital flights for scientific missions and/or for human transportation be practically useful for States and other actors with regard to space activities?

(iv) How could suborbital flights for scientific missions and/or for human transportation be defined?

(v) Which legislation applies or could be applied to suborbital flights for scientific missions and/or for human transportation?

(vi) How will the legal definition of suborbital flights for scientific missions and/or for human transportation impact the progressive development of space law?

(vii) Please propose other questions to be considered in the framework of the legal definition of suborbital flights for scientific missions and/or for human transportation;

(e) To invite States Members of the United Nations and permanent observers of the Committee to provide information relating to any practical case known to them that would warrant the definition and delimitation of outer space.

## Annex III

### Summary report of the Working Group on the “Space2030” Agenda of the Committee on the Peaceful Uses of Outer Space

1. In accordance with the decision of the Committee on the Peaceful Uses of Outer Space at its sixty-first session, held from 20 to 29 June 2018, the Working Group on the “Space2030” Agenda was established under a new agenda item of the Committee, entitled “‘Space2030’ agenda”, which is to remain on the Committee’s agenda until its sixty-third session, in 2020 ([A/73/20](#), paras. 358–364).
2. The Working Group met during the fifty-eighth session of the Legal Subcommittee, in plenary meetings and in informal consultations, to consider a zero draft of the “Space2030” agenda and implementation plan, prepared by the Bureau of the Working Group with the assistance of the Secretariat.
3. The Working Group had before it the following documents:
  - (a) Summary report of the Working Group on the “Space2030” Agenda of the Committee on the Peaceful Uses of Outer Space ([A/AC.105/1202](#), annex IV);
  - (b) Working paper submitted by the Bureau of the Working Group on the “Space2030” Agenda entitled “Draft structure of a ‘Space2030’ agenda and implementation plan (revised)” ([A/AC.105/C.2/L.307](#));
  - (c) Working paper submitted by the Bureau of the Working Group on the “Space2030” Agenda entitled “Zero draft: ‘Space2030’ agenda – space as a driver of sustainable development” ([A/AC.105/C.2/2019/CRP.10](#));
  - (d) Conference room paper containing a proposal made by Japan to the Bureau of the Working Group on the “Space2030” Agenda ([A/AC.105/C.2/2019/CRP.17](#));
  - (e) Working paper submitted by the Bureau of the Working Group on the “Space2030” Agenda entitled “Revised zero draft: ‘Space2030’ agenda – space as a driver of sustainable development” ([A/AC.105/C.2/2019/CRP.24](#)).
4. The Working Group noted the broad support and took note of the constructive proposals expressed by States members of the Committee regarding the zero draft of the “Space2030” agenda and implementation plan, as well as the revised zero draft, and commended the Bureau of the Working Group, assisted by the Secretariat, for all its efforts to advance the work of the Working Group and for its efficient leadership in conducting the meetings of the Working Group at the fifty-eighth session of the Subcommittee.
5. The Working Group exchanged ideas on the “Space2030” agenda and implementation plan and noted that the agenda should be developed collectively by States members of the Committee as a high-level, forward-looking document that highlighted the role of space and the broad societal benefits it brought. It should be intended to raise awareness throughout the world of the contributions of space technologies and applications to sustainable development, and of the importance of global governance of outer space activities based on international law.
6. The Working Group noted that, in accordance with the workplan of the Working Group (see [A/AC.105/1202](#), annex IV, appendix), a consolidated draft of the “Space2030” agenda and implementation plan was to be prepared by the Bureau with the assistance of the Secretariat. It was to be based on the discussions at the meetings of the Working Group held thus far and take into account contributions made by States members of the Committee. The consolidated draft was to be made available in all official languages of the United Nations for further negotiations during the meetings of the Working Group at the sixty-second session of the Committee, to be held from 12 to 21 June 2019.

7. The Working Group noted that States members of the Committee were invited to provide further written comments on the revised zero draft of the “Space2030” agenda and implementation plan to the Bureau of the Working Group by 1 May 2019.

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