



**Committee on the Peaceful
Uses of Outer Space
Legal Subcommittee
Fifty-eighth session
Vienna, 1–12 April 2019****Draft report****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**

1. 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.”

2. 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.

3. At its 976th meeting, on 1 April, the Legal Subcommittee reconvened its Working Group on the Definition and Delimitation of Outer Space, with André Rypł of 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.



4. The Working Group held [...] meetings. The Subcommittee, at its [...] meeting, on [...] April, endorsed the report of the Acting Chair of the Working Group, contained in annex [...] to the present report.
5. 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](#)).
6. 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.
7. The view was expressed that the 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 tourism purposes, as well as in establishing 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”, which included both airspace and outer space and which would require special treatment and regulation.
8. 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.
9. The view was expressed that the rationale for the delimitation of outer space and airspace at the level between 100 and 110 km above sea level was based on comprehensive aspects, including scientific, technical and physical characteristics, namely the atmospheric layers, aircraft altitude capacity, the perigee of the spacecraft and the Karman line.
10. 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.
11. The view was expressed that matters relating to the definition and delimitation of outer space were of a 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.
12. 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.

13. Some delegations expressed the view that the Subcommittee should consider ways of consulting and cooperating with the International Civil Aviation Organization in order to make progress in the definition and delimitation of outer space.

14. 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 been carried out by the Subcommittee for a long time, and 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.

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

16. 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.

17. Some delegations expressed the view that the geostationary orbit – 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.

18. 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.

19. 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.

20. 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.

21. 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.

22. The view was expressed that the geostationary orbit should be considered 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 elaboration 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.

23. Some delegations expressed the view that special attention should be given to equitable access for all States to orbit and spectrum resources in geostationary orbit while recognizing the potential of those resources to contribute to social programmes that benefited the most underserved communities, making educational and medical projects possible, ensuring access to information and communications technology and improving links to necessary sources of information in order to strengthen social organization, as well as promoting knowledge and the exchange of that knowledge.

24. 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.

25. 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 following: the provision of free access to the Global Positioning System; the provision of free access to a variety of weather and warning data from meteorological satellites; the provision of information from the polar meteorological satellites of the National Oceanic and Atmospheric Administration (NOAA) of the United States; the provision 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 the International Satellite System for Search and Rescue (COSPAS-SARSAT), as a means for ships, aircraft and other vessels in distress to signal their need for help and their locations.

26. The view was expressed that, in the light of the unprecedented rate at which developed countries were employing satellites to exploit the latest technology, there had been increasing awareness of the limitations of the geostationary orbit, 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.

27. 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.

28. 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.

29. 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.

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

30. 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.

31. 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.

32. 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.

33. 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.

34. 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.

35. 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.

36. 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.

37. 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.
38. 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.
39. The Subcommittee noted that the activities of small satellites, regardless of their size, 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.
40. Some delegations expressed the view that the evolving nature of space technologies and the growing number of space actors required clarity in the application of existing space law and administration procedures, in order to address the opportunities and challenges arising from small-satellite activities.
41. 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.
42. The view was expressed that the relevant international standards needed to be adjusted and that, to that end, attention should be drawn to the “statement on large constellations of satellites in low Earth orbit” of the Inter-Agency Space Debris Coordination Committee.
43. Some delegations expressed the view that the elaboration of provisions on small satellites, including the possibility of an ad hoc legal regime in that regard, could be considered. Such provisions could address the operations of small satellites, including the consideration of ways and means of ensuring the rational and equitable use of the low Earth orbit and frequency spectrum.
44. 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.
45. 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.
46. The view was expressed that, under the present agenda item, the Subcommittee should also consider the question of how to register mega-constellations of satellites.