

**REPORT  
OF THE  
COMMITTEE  
ON THE PEACEFUL USES  
OF OUTER SPACE**

**GENERAL ASSEMBLY**

OFFICIAL RECORDS: THIRTY-FOURTH SESSION

SUPPLEMENT No. 20 (A/34/20)



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#### **NOTE**

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

[14 August 1979]

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## I. INTRODUCTION

1. The Committee on the Peaceful Uses of Outer Space held its twenty-second session at United Nations Headquarters from 18 June to 3 July 1979 under the chairmanship of Mr. Peter Jankowitsch (Austria). Mr. Teodor Marinescu (Romania) served as Vice-Chairman 1/ and Mr. Carlos Moreira Garcia (Brazil) as Rapporteur. The verbatim records of the Committee's meetings are contained in documents A/AC.105/PV.190-203.

### Meetings of subsidiary bodies

2. The Scientific and Technical Sub-Committee held its sixteenth session at United Nations Headquarters from 5 to 22 February 1979 under the chairmanship of Professor J. H. Carver (Australia). The summary records of the Sub-Committee's meetings are contained in documents A/AC.105/C.1/SR.207-222. The report of the Sub-Committee was issued under the symbol A/AC.105/238.

3. The Legal Sub-Committee held its eighteenth session at United Nations Headquarters from 12 March to 6 April 1979 under the chairmanship of Mr. Eugeniusz Wyzner (Poland). The summary records of the Sub-Committee's meetings appear in documents A/AC.105/C.2/SR.302-319. The report of the Sub-Committee was issued under the symbol A/AC.105/240.

### Twenty-second session of the Committee

4. At its opening meeting, on 18 June 1979, the Committee on the Peaceful Uses of Outer Space adopted the following agenda:

1. Adoption of the agenda.
2. Statement by the Chairman.
3. General exchange of views.
4. Applications of space science and technology and activities in outer space:
  - (a) Remote sensing of the earth by satellites;
  - (b) Direct television broadcasting by satellites;
  - (c) Definition and/or delimitation of outer space and outer space activities, bearing in mind, inter alia, questions relating to the geostationary orbit;

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1/ Mr. Marinescu was elected Vice-Chairman of the Committee at the resumed twenty-first session of the Committee on 5 February 1979 (A/AC.105/PV.189).

- (d) Space transportation systems;
- (e) Use of nuclear power sources in outer space;
- (f) Examination of the physical nature and technical attributes of the geostationary orbit;
- (g) Draft treaty relating to the moon.

5. Programmes and activities relating to outer space in the United Nations:

- (a) United Nations programme on space applications;
- (b) Co-ordination of outer space activities within the United Nations system.

6. Preparation for the United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

7. Future work of the sub-committees.

8. Other matters.

9. Report to the General Assembly.

5. Representatives of the following Member States attended the session: Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Czechoslovakia, Ecuador, Egypt, France, German Democratic Republic, Germany, Federal Republic of, Hungary, India, Indonesia, Iran, Iraq, Italy, Japan, Kenya, Mexico, Mongolia, Netherlands, Nigeria, Pakistan, Philippines, Poland, Romania, Sierra Leone, Sweden, Turkey, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, United Republic of Cameroon, United States of America, Venezuela and Yugoslavia.

6. Representatives of the Centre for Natural Resources, Energy and Transport (CNRET) of the United Nations Secretariat and of the United Nations Development Programme (UNDP) also attended the session.

7. Representatives of the following specialized agencies attended the session: Food and Agriculture Organization of the United Nations (FAO), United Nations Educational, Scientific and Cultural Organization (UNESCO), World Meteorological Organization (WMO), International Civil Aviation Organization (ICAO) and International Atomic Energy Agency (IAEA). Representatives of the European Space Agency (ESA) and of the International Astronautical Federation (IAF) also attended the session.

8. A list of the representatives of Member States and specialized agencies attending the session is contained in document A/AC.105/XXII/INF.1.

9. In addition to the reports of its subsidiary bodies, the Committee had before it the following documents:

A/AC.105/232/Add.3	Views of members of the Committee on international centres for remote sensing, addendum;
A/AC.105/237/Add.2-3	Review of national and co-operative international space activities for the calendar year 1978, addenda;
A/AC.105/239	Report on sounding rocket launchings from the Thumba Equatorial Rocket Launching Station;
A/AC.105/241	Updating of the text of the special report on possible broadcasting satellite systems and their relative acceptability;
A/AC.105/L.107 and Corr.1-2	Provisional agenda for the twenty-second session;
A/AC.105/L.108, Add.1 and Add.1/Corr.1-2, and Add.2-3	Preparation for the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space. Financial implications of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space;
A/AC.105/L.109	Major conferences planned for the period 1981-1983. Note by the Secretariat;
A/AC.105/L.110	Other matters. Note by the Secretariat;
A/AC.105/L.111	Working paper on the United Nations Conference on the Exploration and Peaceful Uses of Outer Space submitted by Argentina, Australia, Austria, Canada, Egypt and India;
A/AC.105/L.112	Draft basic provisions of a General Assembly resolution on the delimitation of air space and outer space and on the legal status of the geostationary satellites' orbital space: working paper submitted by the Union of Soviet Socialist Republics;
A/AC.105/L.114 and Add.1	Future work of the sub-committees: working paper submitted by Australia, Belgium, Egypt, France, Germany, Federal Republic of, and the Netherlands. Methods of work of the United Nations Committee on the Peaceful Uses of Outer Space;
A/AC.105/L.115 and Add.1-2	Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space: report of the Working Group of the Preparatory Committee;
A/AC.105/L.116	Draft treaty relating to the moon: draft article for consideration of the Working Group.

10. At the opening of the session, at the 190th meeting, the Chairman of the Committee made a statement reviewing the work of the Committee's subsidiary bodies and outlining the work of the Committee. The text of the Chairman's statement is annexed to the present report (annex I).

11. The Committee held its general debate at the 190th, 191st and 193rd to 200th meetings, from 18 to 27 June 1979, in the course of which statements were made by the representatives of Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Czechoslovakia, Ecuador, Egypt, France, the German Democratic Republic, Germany, Federal Republic of, Hungary, India, Indonesia, Italy, Japan, Mexico, Mongolia, the Netherlands, Nigeria, Pakistan, the Philippines, Poland, Romania, Sweden, Turkey, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Venezuela and Yugoslavia. These statements are contained in the verbatim records of the 190th, 191st and 193rd to 200th meetings of the Committee (A/AC.105/PV.190, 191 and 193-200).

12. The Chief of the Outer Space Affairs Division and the representatives of FAO, WHO, ICAO, ESA and IAF also made statements. Those statements are contained in the verbatim records of the 190th, 191st, 198th and 200th meetings of the Committee, respectively (A/AC.105/PV.190, 191, 198 and 200).

13. At its 190th meeting, the Committee established a working group on the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space. Professor Yash Pal (India) served as its Chairman. The working group established a drafting group, and Mr. Carlos M. Garcia (Brazil) served as its Chairman.

14. At its 198th meeting, the Committee decided to set up an informal working group on the draft treaty relating to the moon, under the chairmanship of Mr. Gyula K. Szelei (Hungary).

15. At the 200th meeting, on the first anniversary of the space flight of the Polish cosmonaut Mirosław Hermaszewski and his Soviet colleague Piotr Klimuk, the representative of Poland presented to the Committee's Chairman a collection of medallions, the exact replicas of the ones that went to outer space, commemorating Poland's venture in outer space. The medallions had been cast on behalf of the seven Polish institutions involved in the preparation of the scientific programme of the flight: the Polish Academy of Sciences, the Committee of Outer Space, the Centre for Outer Space Research, the Institute of Physics of the Polish Academy of Sciences, the Air Force Institute of Medicine, the Institute of Aviation and the Institute of Landsurveying and Cartography.

16. After considering the various items before it, the Committee, at its meeting on 3 July 1979, adopted its report to the General Assembly containing the recommendations and decisions set out in the paragraphs below.



## II. RECOMMENDATIONS AND DECISIONS

### A. Applications of space science and technology and activities in outer space

#### 1. Remote sensing of the earth by satellites

17. The Committee noted with satisfaction that the Scientific and Technical Sub-Committee, in accordance with the recommendation of the Committee endorsed by the General Assembly in resolution 33/16, gave priority to the consideration of questions relating to remote sensing of the earth by satellites. The Committee also noted that the Sub-Committee had continued to consider both the current pre-operational/experimental phase of remote sensing and possible future operational satellite remote sensing systems. In this connexion, the Committee took note of the various systems in operation or planned, as described in the report of the Sub-Committee (A/AC.105/238, annex I, paras. 50-73).

18. The Committee noted in particular that the Sub-Committee had continued its consideration of questions relating to a proposal for classifying remote sensing data. The Committee noted in this connexion that in accordance with a recommendation made by it at its last session the Secretariat had prepared a report with the assistance of the Committee on Space Research (COSPAR) entitled "Characteristics and capabilities of sensors for earth resources surveys" (A/AC.105/204/Add.1), with a view to facilitating the discussions of the Sub-Committee concerning the classification and dissemination of data.

19. The Committee also took note of the varying views expressed by delegations concerning the need and method of classifying remote sensing data as reported in the Sub-Committee's report.

20. The Committee, noting the view of the Sub-Committee that it was not in a position at its last session to agree upon the need for classification of data nor the manner in which such classification might be made, agreed with the suggestion of the Sub-Committee that the work in this field could be continued. The purpose of such work would be to gather relevant information to relate different classes of data with various applications as well as to elaborate further on the relationship of system characteristics, spatial resolution, instantaneous field of view, modulation transfer functions and the new concept of effective resolution element. The Committee requested therefore that the Secretariat submit supplemental studies thereon to the Sub-Committee for consideration at its next session as requested by it (A/AC.105/238, annex I, paras. 10 and 11).

21. The Committee took note of the various views expressed on the subject of dissemination of data by both the Scientific and Technical and the Legal Sub-Committees (A/AC.105/238, annex I, paras. 12-15, and A/AC.105/240, annex I, para. 17).

22. The Committee noted that its Scientific and Technical Sub-Committee had, for a number of years, considered the extent to which the United Nations could play a co-ordinating role in future operational remote sensing systems, promoting further international co-operation in the field of remote sensing.

23. The Committee recalled in this connexion that in the last few years it had devoted particular attention to the possibility of co-ordination of activities on remote sensing by the United Nations through a panel of experts in that field and noted that, with a view to facilitating the work of the Committee, the Secretariat had prepared several reports and solicited the views of Member States on the question.

24. The Committee noted that having further discussed the matter in the light of the divergent views of Member States, the Scientific and Technical Sub-Committee had concluded that it was not in a position to recommend the establishment of the proposed panel at this time and that the Sub-Committee urged those nations or agencies operating or planning ground or space segments of satellite remote sensing systems to continue and expand the co-operation and co-ordination of their activities. The Committee also noted that Member States were urged to inform the Secretariat of any changes in their views on the question of the panel so that those views could be brought to the attention of the Sub-Committee at future sessions.

25. The Committee endorsed the view of the Scientific and Technical Sub-Committee that remote sensing from outer space should be carried out with the greatest possible international co-operation and participation. In this context, the need to provide assistance to developing countries was recognized. It was also recognized that the United Nations, through its Space Applications Programme and the Remote Sensing Centres of FAO and CNRET and other interested agencies, could play an important role in providing such assistance.

26. The Committee further noted that the principal focus of the activities of the Scientific and Technical Sub-Committee over the past few years had been the problems of the transfer of remote sensing technology to the developing countries and that it had endorsed the suggestion of the Sub-Committee that it begin to focus its attention on developing a comprehensive catalogue of the applications of remote sensing, with particular emphasis upon those in the developing countries. In this connexion, the Committee endorsed the recommendation of the Sub-Committee that the Secretariat undertake action towards the preparation of such a catalogue, as requested by the Sub-Committee (A/AC.105/238, annex I, paras. 29 and 30).

27. With respect to education and training, the Committee noted the importance of providing adequate training facilities, including on-site training in all aspects of remote sensing, particularly to the developing countries, to enable them to derive the maximum benefit from this new technology. The Committee also noted with appreciation that several Member States, specialized agencies and international organizations were conducting several educational and training programmes relating to remote sensing activities (A/AC.105/238, paras. 22-31). It particularly noted the contribution being made through the United Nations Space Applications Programme, the FAO Remote Sensing Centre, the Centre in CNRET, as well as programmes carried out within WMO, the United Nations Environment Programme (UNEP) and ESA.

28. The Committee endorsed the recommendation of the Scientific and Technical Sub-Committee that the Remote Sensing Centre in Cairo, one of the five institutions recommended by the Economic Commission for Africa (ECA) as regional training and user assistance centres serving Africa, and the four other African international remote sensing centres should receive from the United Nations the technical assistance and co-operation which could be made available for such a purpose.

29. The Committee noted with appreciation the offer made by Argentina to make its CELPA Centre at Mar del Plata available as a regional centre for research and training in remote sensing.

30. The Committee noted that the Legal Sub-Committee, in continuing its detailed consideration of legal implications of remote sensing of the earth from space, had through its Working Group III carried out a principle-by-principle reading of the draft principles formulated by the Working Group to date. The Committee noted however that several key issues remained to be agreed upon before the draft principles could be finalized. Having heard the views of Member States on the outstanding issues, the Committee recommended that the Legal Sub-Committee should continue, on the basis of priority, to give detailed consideration to the legal implications of remote sensing of the earth from space, with the aim of formulating draft principles relating to remote sensing.

## 2. Direct television broadcasting by satellites

31. The Committee noted that the Legal Sub-Committee, in accordance with General Assembly resolution 33/16, had given priority consideration to the elaboration of draft principles governing the use by States of artificial earth satellites for direct television broadcasting.

32. The Committee in particular noted that the Sub-Committee, through its Working Group II, had carried out a principle-by-principle reading of the draft principles formulated thus far. The Committee noted, however, that the Sub-Committee was once more unable to finalize the text.

33. The Committee further noted the recommendation of the Legal Sub-Committee that its parent body, while considering the question of direct television broadcasting at the present session, should also consider whether the elaboration of draft principles on this subject could be concluded, or whether further progress could be achieved during this session.

34. The Committee, having heard the views of its members on the outstanding issues, recommended that the Legal Sub-Committee at its next session continue, as a matter of priority, its efforts to consider the elaboration of principles governing the use by States of artificial earth satellites for direct television broadcasting in accordance with General Assembly resolution 33/16 and previous Assembly resolutions relating to this item.

## 3. Definition and/or delimitation of outer space and outer space activities bearing in mind, inter alia, questions relating to the geostationary orbit

35. The Committee noted that the Legal Sub-Committee, in accordance with General Assembly resolution 33/16, had continued to discuss matters relating to the definition and/or delimitation of outer space and outer space activities, bearing in mind, inter alia, questions relating to the geostationary orbit. The Committee noted, in this respect, that there was a variety of views on this matter, as reflected in the report of the Legal Sub-Committee (A/AC.105/240, paras. 39-47).

36. The Committee noted, in particular, the proposal made by the Union of Soviet Socialist Republics in the Legal Sub-Committee with regard to the establishment of a conventional boundary for air space and outer space not higher than 100 to 110 kilometres above sea level. Also on this topic, a variety of views was expressed in the Legal Sub-Committee, as reflected in its report.

37. At the current session, the Committee had an exchange of views on the subject and while some delegations expressed support for the idea of establishing a boundary between outer space and air space not higher than 100 to 110 kilometres above sea level, other delegations expressed reservations as to the need to establish a specific boundary. The representative of ICAO made a statement reflecting the interest of ICAO in this area and offered, if requested by the Committee, to undertake relevant studies.

38. With regard to the question of geostationary orbit, some delegations from equatorial countries expressed the view that they have sovereign rights over the segment of the geostationary orbit above their territories, and pointed out that in delimiting outer space, account should be taken of the sui generis nature of that orbit. Other delegations expressed the need for establishing a special régime to govern the utilization of the geostationary orbit. Some other delegations expressed the view that there is no need for the establishment of a régime for the utilization of the geostationary orbit. Still other delegations expressed the view that the provisions of the outer space treaty are applicable to the geostationary orbit which is inseparable from outer space. Some delegations, while expressing their reservations over any claims of sovereignty over the orbit, recognized the need for national and equitable consideration of the rights of all States to utilize the benefits of the orbit.

39. During the course of the Committee's current session, a working paper (A/AC.105/L.112) was submitted by the Union of Soviet Socialist Republics and supported by some delegations, proposing draft provisions for a General Assembly resolution on the delimitation of air space and outer space and on the legal status of the geostationary orbital space of satellites.

#### 4. Space transportation systems and their implications for future activities in space

40. The Committee noted that, in accordance with General Assembly resolution 33/16, the Scientific and Technical Sub-Committee had considered the item relating to space transportation systems as one of the priority items at its sixteenth session.

41. The Committee endorsed the recommendation in paragraph 61 of the report of the Scientific and Technical Sub-Committee which requested the Secretariat to prepare a study on the progress being made in the space transportation systems and their scientific, technical, economic and social implications, after obtaining the views of Member States and relevant international organizations on this question.

42. The Committee also requested the Secretariat to prepare a bibliography of the literature on activities that might be carried out using space platforms, including industrial activities, in the next few decades.

43. A view was expressed that it would be necessary to elaborate legal principles on the use of space transportation systems bearing in mind, inter alia, the prohibition of removal from orbit of space objects from foreign States without their prior consent, as well as the elaboration of rules of passage of such systems above the territories of foreign States after the first stage of launching. Another view was also expressed that these questions relate to all space transportation systems whether reusable or not and that if any future discussions were to take place on the matter, they should be on that basis.

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

44. The Committee noted that the Scientific and Technical Sub-Committee, in accordance with paragraph 8 of General Assembly resolution 33/16, had established a working group of experts of all its members in order to consider the technical aspects and safety measures relating to the use of nuclear power sources in outer space. The Committee noted that the Scientific and Technical Sub-Committee had adopted the report of the Working Group on the Use of Nuclear Power Sources in Outer Space as contained in annex II of the report of the Sub-Committee.

45. The Committee also noted the conclusion of the Working Group that nuclear power sources can be used safely in outer space, provided the safety considerations outlined in paragraphs 13, 14 and 15 of the Working Group's report are met in full. The Committee also noted the other conclusion of the Working Group as stated in paragraph 39 of its report (A/AC.105/238, annex II).

46. The Committee also noted that the Working Group had agreed that in order to assist its future work further studies should be made on the following subject areas:

- (1) Elaboration of an inventory of the safety problems involved in the use of nuclear power sources in outer space;
- (2) Implementation of the International Commission for Radiation Protection (ICRP) recommendations for populations and the environment in the context of space vehicles utilizing nuclear power sources;
- (3) Evaluation of existing methods in understanding orbital mechanics to determine if improvements may be made in predicting re-entry phenomena;
- (4) Definition of technical considerations with regard to a format for notification.

47. In this connexion the Committee endorsed the request of the Working Group that interested Member States and international agencies should contribute studies on technical aspects and safety measures of nuclear power sources in outer space, including those which have been identified by the Working Group as requiring further examination.

48. The Committee further endorsed the request made to the Secretariat to collate and summarize those studies submitted on the question so that this material could be circulated to members of the Working Group in advance of its next session.

49. In this connexion, the Committee noted that informal consultations of interested members of the Working Group would be held in December 1979 at the latest at Geneva in order to facilitate the task of collating and summarizing the studies submitted to the Working Group.

50. The Committee also endorsed the recommendation contained in paragraph 41 of the Working Group's report that arrangements should be made for the Working Group of experts to meet for one week during the seventeenth session of the Scientific and Technical Sub-Committee.

51. The Committee noted the recommendation of the Legal Sub-Committee contained in paragraph 52 of its report and decided to recommend that the Legal Sub-Committee should include in its agenda for the nineteenth session an item entitled "Review of existing international law relevant to outer space activities with a view to determining the appropriateness of supplementing such law with provisions relating to the uses of nuclear power sources in outer space".

52. The Committee decided to recommend that, in connexion with the agenda item set forth in paragraph 51, the Secretary-General should invite Member States to submit their views concerning existing international law relevant to outer space activities. Such views should be received no later than 15 December 1979, in order that they may be compiled and circulated to Member States no later than 15 February 1980.

6. Examination of the physical nature and technical attributes of the geostationary orbit

53. The Committee noted that, in accordance with General Assembly resolution 33/16, the Scientific and Technical Sub-Committee had dealt with the examination of the physical nature and technical attributes of the geostationary orbit.

54. The Committee endorsed the Sub-Committee's recommendation that the study prepared by the Secretariat on the subject (A/AC.105/203 and Add.1-2) should be further brought up to date when necessary; that an informative paper on the dynamics of the population of satellites should be prepared; and that a study should be undertaken on the most efficient and economic means of using that orbit with a view to assessing its wider use, particularly by developing countries. In connexion with this last study, the Committee noted that the Secretariat would have to ask for additional financial resources to comply with this request.

7. Draft treaty relating to the moon

55. The Committee took note of the work done by the Legal Sub-Committee in accordance with General Assembly resolution 33/16 in its effort to complete the examination of the text of the draft treaty relating to the moon. The Committee also noted that Working Group I of the Sub-Committee had based its discussions on the text of a tentative draft agreement elaborated through informal consultations by the delegation of Austria and that at its eighteenth session an article-by-article reading of this text had taken place.

56. The Committee further noted the recommendation of the Legal Sub-Committee that its parent body, while considering the question of the draft treaty relating to the moon at its current session, should also consider whether the elaboration of a draft treaty could be concluded, or whether progress could be achieved during that session.

57. The Committee established an informal working group of the whole under the chairmanship of Mr. Gyula K. Szelei (Hungary) to consider the matter. The Working Group held four meetings between 26 June and 3 July 1979.

58. The Committee, through the Working Group, considered the compromise text proposed by Austria, which was annexed to the last report of the Committee, 2/ with a view to finding a consensus on that text. The Working Group also had before it the text reflecting the outcome of the review at the eighteenth session of the Legal Sub-Committee (A/AC.105/240, annex II, appendix A).

59. During the course of the discussions, several proposals were made to amend the Austrian text.

60. After informal consultations among members on the main outstanding issue, a suggestion was made that article XI, paragraph 1, in the Austrian text should be amended to read:

"The moon and its natural resources are the common heritage of mankind, which finds its expression in the provisions of this agreement and, in particular, in paragraph 5 of this article."

This proposal was adopted and article XI, paragraph 1, was amended accordingly.

61. Several further suggestions were made and amendments were agreed upon to article XI, paragraph 7; article XV, paragraph 1; and article XIX. It was also agreed that the title should remain as proposed in the Austrian text.

62. Several suggestions were made to amend article I, paragraph 1. However, after an extensive discussion of the matter, it was agreed not to amend the Austrian text but to include in the report of the Committee a statement reflecting the Committee's understanding of the interpretation that should be given to article I, paragraph 1. That understanding is as follows:

"The Committee agreed that by virtue of article I, paragraph 1, the principle contained in article XI, paragraph 1, would also apply to celestial bodies in the solar system other than the earth and to its natural resources."

63. Following a suggestion for clarification of article I, paragraph 2, the Committee agreed that the trajectories and orbits mentioned in article I, paragraph 2, do not include trajectories and orbits of space objects in earth orbits only and trajectories of space objects between the earth and such orbits.

64. With respect to article VII of the Austrian text which refers to the avoidance of harmful contamination of the moon and its environment, it was suggested to introduce a reference to "especially nuclear material". After an extensive discussion, it was agreed that the Austrian text should remain as drafted.

65. Following a suggestion for further clarification of article VII, the Committee agreed that article VII is not intended to result in prohibiting the exploitation of natural resources which may be found on celestial bodies other than the earth but, rather, that such exploitation will be carried out in such a manner as to minimize any disruption or adverse effects to the existing balance of the environment.



66. The Committee, having thus completed its work on this item, decided to submit, to the General Assembly at its thirty-fourth session, for consideration, final adoption and opening for signature, the draft agreement governing the activities of States on the moon and other celestial bodies, the text of which is annexed (annex II).

B. Programme and activities of the United Nations  
relating to outer space

1. United Nations programme on space applications

67. The Committee noted that the United Nations programme on space applications, as set out in section II of the report of the Scientific and Technical Sub-Committee, had been implemented satisfactorily, and it commended the work of the expert on space applications who had carried out the programme although the funds available to it were limited.

68. The Committee endorsed the United Nations programme on space applications for 1980, as proposed to the Scientific and Technical Sub-Committee by the expert in his report (A/AC.105/233, paras. 21-25), together with its financial implications as provided for in document A/AC.105/L.105. It noted that the view had been expressed that the programme should be extended in both its content and its scope if it were better to respond to the needs of and be of more value to the developing countries.

69. The Committee expressed its appreciation to the Government of the Philippines for hosting and to the Environment Research Institute of Michigan, United States for organizing an international seminar on the benefits of remote sensing for national development, held at Manila from 17 to 19 April 1978; to the Government of Italy and FAO for conducting the third and fourth international training courses on the application of remote sensing, from 15 May to 2 June 1978 and from 14 May to 1 June 1979 respectively; to the Government of Sweden for supporting and to the Government of Kenya for hosting a United Nations training seminar on remote sensing applications co-sponsored by UNEP, held at Nairobi from 4 to 16 September 1978 for the benefit of ECA countries; to the Government of Brazil for having hosted a United Nations regional seminar on the use of satellite technology for disaster applications, co-sponsored by the Office of the United Nations Disaster Relief Co-ordinator (UNDRO) and UNESCO, from 2 to 11 October 1978 at Sao José dos Campos; to the Government of India for hosting and organizing the United Nations/FAO training seminar on remote sensing applications for agricultural resources from 6 to 24 November 1978 for countries in the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Economic Commission for Western Asia (ECWA) regions; to the Government of Japan for hosting a United Nations/WMO training seminar on the uses of meteorological satellites, held in Tokyo from 23 October to 2 November 1978 for the benefit of countries in the ESCAP and Far East regions.

70. The Committee noted with appreciation that a joint United Nations/FAO regional seminar on remote sensing applications would be held at Ibadan, Nigeria, from 13 to 31 August 1979; a United Nations training seminar on remote sensing of earth resources would be held at Damascus, Syria, from 1 to 13 December 1979, and an international training course on the applications of remote sensing with emphasis on non-renewable resources would be held at Buenos Aires, Argentina, from 6 to 23 November 1979.



71. The Committee further shared the appreciation of the Sub-Committee for the continuation of training courses on remote sensing applications at FAO headquarters with the co-operation of the Government of Italy. It noted with appreciation that an international seminar on the benefits of remote sensing for national development would be organized in co-operation with the Environment Research Institute of Michigan at San José, Costa Rica, during April 1980; that a training course on remote sensing application for earth resources survey and land use planning would be held at Athens, hosted by the Government of Greece; that a training seminar on remote sensing for vegetation monitoring of agricultural rangeland would be held in the French language at Ouagadougou, Upper Volta, with the assistance of the Centre régional de télédétection de Ouagadougou; further, that a training workshop on remote sensing applications for agriculture and natural resources for the ESCAP region is likely to be held in Tokyo during September 1980, hosted by the Government of Japan, and finally that an international seminar on remote sensing applications in geology and hydrology will be held at Baku, hosted by the Government of the Union of Soviet Socialist Republics, in October 1980.

72. The Committee further expressed its appreciation to the specialized agencies, in particular FAO, UNESCO, UNDRO and UNEP, for the assistance they had provided in co-sponsoring or participating in the seminars and workshops. The Committee also expressed its appreciation to the Governments of Belgium, India and Italy for having offered fellowships through the United Nations to students from developing countries for advanced study and training in areas related to space applications.

73. The Committee noted the views expressed at its present session that the United Nations Space Applications Programme should assist in developing and enhancing the activities in the area of space applications among developing countries and that, for this purpose, the United Nations should as an initial measure be made the repository of information concerning co-operative programmes in the area of space applications between various countries, especially the developing countries.

74. The Committee noted that Mr. H. G. S. Murthy would be retiring as United Nations expert on space applications, expressed its gratitude to him for having directed the United Nations Space Applications Programme with outstanding success for several years and wished him well in his future undertakings. The Committee also noted that Mr. Murthy's expertise and experience could be very useful in conducting future programme activities and, in particular, in the preparatory work for the forthcoming United Nations conference on outer space. The Committee also welcomed the designation of Mr. A. Padang, Secretary of the Scientific and Technical Sub-Committee, to succeed Mr. Murthy and wished him success in his new assignment.

## 2. Co-ordination of outer space activities within the United Nations system

75. The Committee noted with appreciation the participation in its work and that of its sub-committees by representatives of United Nations bodies, the specialized agencies and other international organizations, and found the reports they had submitted helpful in enabling the Committee and its subsidiary bodies to fulfil their role as a focal point for international co-operation, especially with respect to the practical application of space science and technology in developing countries.

76. The Committee endorsed the view of the Scientific and Technical Sub-Committee that there continued to be a need for regular meetings among the organizations

concerned which would become even more important in view of the input and assistance required of specialized agencies in the preparatory work for the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

77. The Committee in this connexion drew attention to paragraph 101 of its report below and noted the observations made at its current session that the assistance of the specialized agencies, as well as their related bodies, such as the International Radio Consultative Committee (CCIR) and the International Telegraph and Telephone Consultative Committee (CCITT) of the International Telecommunication Union (ITU) could be very useful in the preparation for the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

C. Preparation for the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space

Report of the Preparatory Committee

78. The General Assembly, in paragraph 10 of its resolution 33/16, endorsed the recommendation of the Committee designating it as the Preparatory Committee for the conference and its Scientific and Technical Sub-Committee as the advisory committee to the Preparatory Committee.

79. Acting in that capacity, the Committee, at its first meeting, on 18 June 1979, established a Working Group on the Conference under the chairmanship of Professor Yash Pal (India). The Working Group, which held four meetings, decided on 25 June 1979 to set up an informal drafting group under the chairmanship of Mr. Carlos Moreira Garcia (Brazil) which met from 26 June to 2 July 1979.

80. In taking up the question of the preparation for the conference, the Preparatory Committee had before it the recommendations of the Scientific and Technical Sub-Committee (A/AC.105/238, para. 55).

81. The Preparatory Committee also had before it the following documents: A/AC.105/L.108, Add.1 and Corr.1 and 2 and Add. 2 and 3, containing the financial implications of the conference; and A/AC.105/L.111, a working paper submitted by Argentina, Australia, Austria, Canada, Egypt and India.

82. The Committee noted that the United Nations Conference on Science and Technology for development would be held at Vienna from 20 to 31 August 1979. As the outcome of this Conference would be of relevance for the preparation and work of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space, it was recommended that its results should be taken into account in the preparation for the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

83. The recommendations of the Preparatory Committee are set out below:

1. Title

84. The conference should be entitled the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

## 2. Agenda

85. It has been more than a decade since the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space was held at Vienna in 1968. This period has seen rapid progress and growth in space exploration and the development of space technology and its applications. Over the years, confidence has been attained in the use of space technology, and the major areas of potential use have become clear. Use of satellites for communication, remote sensing, navigation, meteorology, scientific research, etc., has become common.

86. There is a need to assess these developments, to exchange information and experience on their present and potential impact, and to assess the adequacy and effectiveness of institutional and co-operative means of realizing the benefits of space technology.

87. There is furthermore a need, as expressed by the General Assembly in its resolution 32/196 to allow wider participation of Member States in the activities of the United Nations in outer space matters.

88. Potential benefits of space technology and its applications are undoubtedly greater than those derived at the present stage in most instances and by most countries. In particular, most developing countries are far from having the capacity to utilize fully certain applications for their needs, e.g. the data available from remote sensing satellites.

89. There is, therefore, a need to examine the requirements, such as training and infrastructure, for improved utilization of available applications, the needs of users and present obstacles for optimum utilization.

90. New developments in space science and technology are being projected and envisaged in the coming decade, such as space transportation and the manufacturing and establishment of solar power and other space stations. New applications will undoubtedly emerge from these and other future developments, opening up new opportunities and presenting new challenges.

91. There is a need to discuss such future developments and their potential benefits to mankind and possible implications for national development as well as international co-operation. It is also necessary to examine what hazards, if any, might arise from these activities.

92. While there are currently and will be in the near future forums dealing with space technology and its applications, their subjects, mandate and scope are often limited to specific questions and areas and do not encompass the entire or even a broad spectrum. In order to assess the current and potential benefits and allow countries to draw conclusions and devise priorities on an informed basis there should be an opportunity to present and evaluate a wide range of research and applications and their implications.

93. There is a need further to increase awareness of the general public, decision makers and policy planners with regard to space technology and applications. A world-wide conference entirely devoted to this subject is more likely to meet this need than would a number of meetings at different times in different places limited in scope and focused on specific aspects.

94. In order to command truly world-wide interest and participation and to assure beneficial results for all participating countries, the proposed conference should focus on matters of a global nature and the utilization of space technology with respect to them. Such matters include regional and economic development, education, communication, resources management and environment protection.

95. The conference should contribute towards orderly growth of space activities favourable to socio-economic advancement of mankind and in particular of the peoples of the developing countries through creation and reinforcement of national capacities.

96. The conference should also stimulate an enhanced co-ordinating role of the United Nations, which is eminently suited to bring about increased international co-operation and assistance to the developing countries to achieve the optimum results.

97. The conference should not be limited to discussion of science and technology but should also consider their relevance to man and his environment. The conference should invite the participation of the appropriate United Nations agencies, and also other intergovernmental and non-governmental organizations.

98. The agenda should be broad enough to encompass all the considerations set out above and permit discussion of scientific, technical, social, economic, organizational and other relevant aspects and their interrelationship.

99. It is proposed that the following provisional agenda should be adopted by the General Assembly:

1. State of space science and technology:

- (a) Review and projection of the current and future state of science and technology for space research and applications;
- (b) Evaluation of the major developments in space science, technology and applications and assessment of the usefulness of these developments so far.

2. Applications of space science and technology:

- (a) Evaluation of the current and potential applications of space technology, taking into account present and foreseeable national and international programmes in areas of space research;
- (b) Examination of the possibilities and mechanisms for enabling all States to benefit from space technology, bearing in mind their various levels of development, varying capacities to absorb new technologies and particular needs and priorities;
- (c) Examination of the choices for utilizing space technology available to countries at various stages of technological growth and of the difficulties they face in this regard;

- (d) Examination of the existing infrastructure and scientific and technological development in various countries, especially the developing countries, and of appropriate measures to augment their capabilities to develop space technology and facilitate access to such technology and to participate and co-operate in space activities so as to derive maximum benefit from space technology and its applications;
- (e) Examination of developments and system configurations appropriate to the use of space technology for education;
- (f) Discussion of compatibility and complementarity between various satellite systems, including those used for remote sensing, meteorology, communications and navigation;
- (g) Consideration of the implications of projected developments in the areas of space technology such as earth-orbiting solar power stations, space manufacturing, space transportation and manned space stations; consideration of the implications of the use of the geostationary orbit, the need and possibilities for optimizing that use, as well as of the measures to be taken to that end;
- (h) Discussion of the nature of, and ways of protecting, the near-earth environment including the upper atmosphere and magnetosphere.

2. International co-operation and the role of the United Nations:

- (a) Consideration of reports on the nature and extent of the bilateral and multilateral co-operation in outer space activities;
- (b) Consideration of reports on the activities of the United Nations, including its specialized agencies, and of other international organizations dealing with the exploration and peaceful uses of outer space;
- (c) Evaluation of the role of the United Nations, its specialized agencies, other international organizations and programmes of bilateral and multilateral co-operation in order to ensure broad international co-operation on an equal basis;
- (d) Evaluation of the role of the United Nations in the realization of benefits of space technology for all countries and examination of the need and possibilities for enhancing this role.

3. Final report

100. The conference could prepare a report for presentation to the General Assembly on its work, which might include its recommendations on conclusions and guidance for the future work of the United Nations in the field of peaceful uses of outer space. As appropriate, the General Assembly may reflect these recommendations in its guidance to the Committee on the Peaceful Uses of Outer Space for its future work.

#### 4. Preparation and organization of the conference

##### (a) Preparation

101. It is proposed that:

- (i) The above provisional agenda, following its endorsement by the General Assembly at its thirty-fourth session, should be circulated by the Secretary-General of the United Nations to all Member States in January 1980 together with an invitation to submit national papers to be received by the secretary-general of the conference by spring 1981. The national papers should contain abstracts which will be translated by the Secretariat in the working languages of the conference and, together with the national papers, circulated to Member States;
- (ii) The Secretariat should prepare a draft list of topics of background papers for the conference, to be considered by the Advisory Committee at its session early in 1980;
- (iii) The Secretary-General of the United Nations should be requested to assist in the organization of regional and topical interregional seminars on selected scientific and other substantive aspects, with a view to fostering the widest participation of Member States in the preparation of the conference. In organizing these seminars, the facilities of the United Nations Space Applications Programme should be taken into account;
- (iv) The Preparatory Committee, during its meetings in the summer of 1981, should consider the papers received and draw up an outline for the draft final report of the conference;
- (v) At the same session, the Preparatory Committee should also consider recommendations on all aspects of the organization of the conference to be approved by the General Assembly at its thirty-sixth session;
- (vi) The secretary-general of the conference should prepare a first draft of the final report, based on the outline referred to above, for submission to the Scientific and Technical Sub-Committee;
- (vii) The Scientific and Technical Sub-committee should, at its meetings in early 1982, consider this first draft and give its advice thereon to the secretary-general of the conference;
- (viii) The secretary-general of the conference, taking into account the recommendations of the Scientific and Technical Sub-Committee, should prepare a second draft for consideration by the Preparatory Committee at its last session before the conference;
- (ix) The draft final report of the conference, as considered and revised by the Preparatory Committee, should be circulated to Member States at least 90 days before the opening of the conference;
- (x) The Member States, if they deem it necessary, may also submit national papers to the conference;

- (xi) The Committee on the Peaceful Uses of Outer Space, when meeting as the preparatory body for the conference, may invite representatives of interested Member States and of the competent organs of the United Nations, its specialized agencies and recognized governmental and non-governmental international organizations to participate in its session, and may receive representations and papers directly related to the agenda of the conference from scientific organizations and individual scientists;
  - (xii) The specialized agencies of the United Nations should be invited to make appropriate contributions to the preparation of papers and studies referred to under (b) (i) (c) below.
- (b) Organization
    - (i) Secretariat of the conference

102. It is proposed that:

(a) The Secretary-General of the United Nations should appoint a secretary-general and three deputy secretaries-general of the conference at least 18 months prior to the date scheduled for the last session of its Preparatory Committee; the secretary-general of the conference and his deputies should assume office on a full-time basis as soon as possible after their appointment and in any event not less than nine months prior to this last session of the Preparatory Committee;

(b) The Outer Space Affairs Division should provide the executive secretary and the secretariat of the conference, on the assumption that the secretariat, in accordance with the relevant regulations of the United Nations, would be empowered to hire additional temporary staff as required;

(c) The secretary-general of the conference should be empowered to co-opt consultations from both developed and developing Member States on a secondment basis and, if necessary, engage the services of consultants with particular reference to the preparation of studies and reports on topics selected by the preparatory body for the conference, papers commissioned by the regional and interregional seminars and national reports on items included in the agenda of the conference.

- (ii) Bureau of the conference

103. The conference shall elect a president, chairmen of the three main committees and a rapporteur general, representative of the regional groupings of the United Nations. The conference shall also elect a number of vice-presidents, vice-chairmen of the committees and, if necessary, rapporteurs of the committees. The bureau shall comprise the president, the vice-presidents, the rapporteur general and the chairmen of the three main committees and other conference officers as may be decided by the conference. These officers shall be elected on the basis of equitable geographical distribution, experience and personal competence.

(iii) Form of the conference

104. It is envisaged that the conference would commence with a number of plenary meetings, subsequently break up into three committees corresponding to the three main groupings of agenda items, on the understanding that no more than two committees would meet simultaneously, and then conclude with further plenary meetings as required. The formal part of the conference proceedings might be supplemented by special evening lectures and/or technical expositions.

105. The review of programmes, presentation of national/international programmes, results of scientific experiments, etc., should not consume too much time. In order to achieve the objectives of the conference it is important that emphasis be placed on agenda items which relate to basic concerns of most Member States.

(iv) Procedure

106. It is proposed that best endeavours should be made to ensure that the work of the conference and the adoption of its final report are accomplished by general agreement.

5. Ceiling for the cost of the conference

107. The Preparatory Committee had before it the financial implications prepared by the Secretariat contained in documents A/AC.105/L.108, Add.1 and Corr.1-2, and Add.2-3. In estimating the ceiling for the cost of the conference, the following assumptions were made:

(a) Conference servicing

108. The conference would be held in New York for a period of two weeks in 1982; there would be four meetings a day of two committees or working groups which would meet simultaneously; interpretation would be provided in the six official languages of the General Assembly; the estimated volume of documentation for the conference would comprise 100 pages of pre-session documentation, 50 pages of in-session and 100 pages of post-session documentation. The Secretariat was also requested to provide an estimate of a three-week duration of the conference.

(b) National papers 3/

109. Approximately 400 pages of abstracts of national papers would need to be translated into five languages other than the language of the original, reproduced and distributed.

(c) Draft report of the conference

110. Translation into six languages and circulation would be required of two drafts of the final report of the conference totalling 200 pages.

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3/ Offsetting and circulation (2,700 pages) of national papers will be absorbed within the available resources of the Department of Conference Services.



(d) Conference secretariat

111. The Outer Space Affairs Division would be responsible for the substantive and administrative arrangements for the conference and would provide the executive secretary of the conference. The estimates for the additional costs should be based on the following assumptions:

- (i) A secretary-general of the conference at the Assistant Secretary-General level for a period of 18 months;
- (ii) Three deputy secretaries-general of the conference at the D-1/D-2 level for 18 months, to assist the secretary-general in the co-ordination of the work of the consultants, preparation of the national papers and background papers, and drafting of the final report;
- (iii) One officer at the P-5 level for 18 months, to act as the special assistant to the secretary-general of the conference with the responsibility, inter alia, of maintaining continuous contact with delegations and other representatives of Governments;
- (iv) One technical officer at the P-4/P-5 level for 18 months, to assist the three deputy secretaries-general of the conference as required;
- (v) One officer at the P-3 level for 18 months, to attend and supervise the flow of national papers and other conference documentation;
- (vi) One administrative and financial officer at the P-3 level for 18 months;
- (vii) Five General Service staff (1 at the G-5 level to serve as secretary to the secretary-general for 18 months, 2 at the G-3/G-4 level for 18 months each, and 2 at the G-3/G-4 level for 12 months each;
- (viii) Cost of consultancy services for a maximum of 60 work-months at the L-5/L-6 level for the period January 1980 to August 1982. (In view of the wide range and specialized nature of the subject-matter to be discussed at the conference, services of consultants of international repute will be essential in order to augment the necessary expertise that does not exist within the Secretariat. Consultancy services will be required, inter alia, in assisting in the preparation of national papers and background papers for the conference, and the preparation of papers, the provision of technical advice at the regional seminars, and provision of technical rapporteurs at the conference.)

(e) Travel cost

112. Travel and subsistence would be required for the secretary-general of the conference, the three deputy secretaries-general, the executive secretary and staff of the conference secretariat to attend the regional seminars, assist in the preparation of national papers, carry out necessary consultations with Governments, concerned organizations, regional commissions and agencies of the United Nations system and to attend other related international meetings during the preparatory period.

(f) Regional seminars

113. Funds would be required for assisting regional and interregional seminars, including those organized by the United Nations Space Applications Programme, in preparation for the conference.

(g) Publicity

(h) General operating expenses

6. Date

114. It was agreed that the conference should be held in the second half of 1982.

7. Venue

115. It was agreed that the question of venue of the conference should be held over for a recommendation by the Committee on the Peaceful Uses of Outer Space at its twenty-third session for consideration by the General Assembly at its thirty-fifth session.

D. Future work of the sub-committees

116. The Committee noted the views expressed by the Scientific and Technical Sub-Committee as contained in paragraph 77 of the report of the Sub-Committee and endorsed the recommendations contained in paragraphs 78 and 79 concerning the agenda of the seventeenth session of the Scientific and Technical Sub-Committee. In this connexion, the suggestion was made by some delegations that the item relating to geostationary orbits should be amended in the agenda to read as follows: "The examination of the physical nature and technical attributes of the geostationary satellites' orbital space". In the view of other delegations, this item should be retained as it appears on the agenda of the Scientific and Technical Sub-Committee, as the proposed change would imply a total change in the nature of the item.

117. The Committee also recommended that the title of the item concerning space transportation systems should be amended to read "Space transportation systems and their implications for future activities in space".

118. The Committee also endorsed the recommendations of the Scientific and Technical Sub-Committee that the Working Group on the Use of Nuclear Power Sources in Outer Space should meet during the seventeenth session of the Sub-Committee in order to continue its consideration of questions related to its area of expertise.

119. The Committee recommended that the Legal Sub-Committee, at its next session, should continue its work on a priority basis on items relating to: (a) Legal implications of remote sensing of the earth from space, with the aim of formulating draft principles and (b) Elaboration of draft principles governing the use by States of artificial earth satellites for direct television broadcasting, as recommended in paragraphs 30 and 34 above. The Committee further recommended that the Legal Sub-Committee should continue to consider the following additional item: Matters relating to the definition and/or delimitation of outer space and outer space activities, bearing in mind, inter alia, questions relating to the geostationary orbit. The Committee also recommended that, in accordance with

paragraph 51 above, the Legal Sub-Committee should include on its agenda for the next session an item entitled "Review of existing international law relevant to outer space activities with a view to determining the appropriateness of supplementing such law with provisions relating to the uses of nuclear power sources in outer space". In addition, it was recommended by the Committee that the Legal Sub-committee should continue to include on its agenda an item entitled "Other matters".

120. In connexion with the agenda item relating to the geostationary orbit, some delegations suggested that the title of that item should be amended to read as follows: "Matters relating to the delimitation of air space and outer space and to the legal status of the geostationary satellites' orbital space". For the next session, the Committee decided that the Legal Sub-Committee should retain the item as it now appears in its agenda, on the understanding that the proposal to change it would be debated during that session.

121. The Committee noted particularly the proposal made by some delegations to have the meetings of the Sub-Committee held simultaneously, in view of the fact that the current situation does not enable experts of the Sub-Committees to consult one another. A working paper (A/AC.105/L.114 and Add.1) presented in this connexion is reproduced as annex III of the present report. Strong doubts were expressed as to the advisability of holding sessions of the two Sub-Committees simultaneously and as to the inadequacy of interactivity between the two Sub-Committees.

122. Some delegations proposed that each Sub-Committee discuss, at its next session, whether or not it should necessarily begin each of its sessions with a general debate.

#### E. Other matters

123. The Committee shared the satisfaction expressed by the Scientific and Technical Sub-Committee in paragraph 75 of its report on the work carried out at the Thumba Equatorial Rocket Launching Station of the Vikram Sarabhai Space Centre in India and the CELPA Mar del Plata Rocket Launching Station in Argentina relative to the use of sounding rocket facilities for international co-operation and training in the peaceful scientific exploration of outer space. The Committee, accordingly, recommended that the General Assembly should continue to grant sponsorship to these two ranges.

124. The Committee noted with appreciation the reports submitted by Member States on their national and co-operative space programmes during the calendar year 1978 (A/AC.105/237 and Add.1-3).

125. The Committee also noted with appreciation the participation in its work and that of its Sub-Committees by representatives of United Nations bodies, the specialized agencies and other international organizations, and found the reports they had submitted helpful in enabling the Committee and its subsidiary bodies to fulfil their role as a focal point for international co-operation, especially with respect to the practical application of space science and technology in developing countries.

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

126. The Committee agreed on the following time-table for 1980:

	<u>Time</u>	<u>Location</u>
Scientific and Technical Sub-Committee	28 January to 15 February*	New York
Legal Sub-Committee	10 March to 3 April	Geneva
Committee on the Peaceful Uses of Outer Space	23 June to 3 July**	New York

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\* The Working Group on the Use of Nuclear Power Sources in Outer Space will meet during the first week (28-1 February).

\*\* If required, facilities can be made available up to 11 July.

Opening statement by the Chairman of the Committee on the  
Peaceful Uses of Outer Space

I use this occasion first of all to welcome you most cordially to the twenty-second session of the Committee on the Peaceful Uses of Outer Space. I am happy to see here many familiar faces, those of delegates who have attended previous sessions of the Committee, and also to see the many new persons who have come to strengthen our deliberations.

Let me also welcome the observers from organizations which in the past have given a great deal of assistance to the work of this Committee and its subsidiary bodies. I look forward to working with all of you over the forthcoming two and a half weeks, and I hope that together we can make substantial progress in the work before us.

Let me now for the benefit of all of you review briefly, as we have done on past occasions, the work of our subsidiary bodies, which have provided a great deal of assistance to the Committee. Credit for this is due, above all, to their Chairmen. I wish to pay tribute here to Mr. Carver of Australia, Chairman of the Scientific and Technical Sub-Committee, and to Mr. Eugeniusz Wyzner of Poland, who again presided over the Legal Sub-Committee.

In accordance with General Assembly resolution 33/16, the Legal Sub-Committee, under the chairmanship of Mr. Wyzner, at its last session gave priority to three principal areas of work: first, to the elaboration of draft principles governing the use by States of artificial earth satellites for direct television broadcasting; secondly, to the consideration of the legal implications of remote sensing of the earth from space, with the aim of formulating draft principles; and, thirdly, to the draft treaty relating to the moon.

In order to speed up work on these subjects, the Sub-Committee resorted to the well-tried method of establishing working groups, and these were presided over by Mr. Haraszti of Hungary, Mr. Elaraby of Egypt and Mr. Winkler of Austria. I wish to pay a tribute to the work of these Chairmen of working groups.

The three working groups completed several readings of the full texts of the three drafts before the Sub-Committee. On remote sensing, for one, a principle-by-principle reading of the text elaborated by the working group last year, a report on which can be found in an annex to the Legal Sub-Committee's report, was undertaken and some additional provisions were incorporated on a tentative basis. Members will find the resulting text in appendix A to annex I of the report of the Sub-Committee (A/AC.105/240).

On direct television broadcasting by satellite, the working group made an article-by-article reading of the text elaborated upon last year and reproduced as annex II to last year's report, as well as of the clean text presented by Canada and Sweden. The Canadian/Swedish draft incorporated the text previously elaborated by the Sub-Committee and the Committee, but added compromise formulas for the unresolved issues. The result of the readings was again inconclusive, I regret to

say, and the text that was produced is to be found as appendix A to annex II to this year's report of the Legal Sub-Committee. The Canadian/Swedish clean text is also reproduced as appendix B to annex II to that report.

On the draft moon treaty, members will recall that the representative of Austria presented a consolidated text reflecting the level of compromise that it had been possible to attain at the conclusion of the last session of the Sub-Committee. This text was reproduced as annex I to the report of the Sub-Committee last year, and Governments were called upon to study the possibility of accepting that text as a compromise. Unfortunately, there was no such consensus this year and the working group therefore studied the text article by article.

The resulting text still contains several square brackets and is now reproduced as appendix A to annex III of the Legal Sub-Committee's report this year.

Members will note, therefore, that while a useful exercise of an article-by-article or principle-by-principle reading of these drafts was conducted, this exercise failed to resolve the outstanding issues, which remain essentially the same as last year and which are too well known to the Committee to deserve repetition. Indeed, the end result of the work was not altogether encouraging, and we have to face this fact here quite squarely. It would seem, as was noted by several delegations at the Sub-Committee's final session, that what we in fact did was even take some steps backwards.

Although a number of factors contributed to this lack of progress, one problem remains central: the positions of various members on key issues remain virtually the same as the positions taken by them in previous years. In essence, this might have been expected, because the issues which were most easily reconcilable have now been resolved and the hard core issues therefore remain. The latter are the very issues - sometimes just a single issue or subject - that are most complex and that are basic to the fundamental but divergent views of Member States.

The natural consequence of this is that progress by the Sub-Committee on the outstanding issues will take place only as Member States display an active desire and, let me say, a somewhat stronger political will to achieve the necessary compromises. We should take courage from the arduous negotiations that so successfully produced, over 10 years ago now, the Outer Space Treaty and other international agreements, and we should not fail to seek acceptable compromises, in the spirit of our Committee, in order to complete the three important international instruments on which we have been working so hard over the past few years.

In this connexion, the time might even have come for us to reassess our respective positions in order to see whether we cannot really bridge this gap. And if in all honesty we find ourselves unable to do so, the time might also have come to devote our energies - at least for the time being - to other important areas of concern which deserve our attention.

Two such items were discussed in the Sub-Committee this year. First, there was a further exchange of views on the question of the definitions and delimitations of outer space, bearing in mind questions relating to the geostationary orbit. The views of Member States on this matter are reflected in section IV of the report of the Sub-Committee. Although the Sub-Committee made no formal recommendations concerning this item, extensive discussions were held; particular attention was focused this year on the proposal by the Union of Soviet

Socialist Republics to delimit air and outer space at an altitude not higher than 100 to 110 kilometres, leaving the area below that to be the subject of negotiation among States, while providing for freedom of transit for space objects in that region. Many members expressed their support for the serious effort on the part of the Sub-Committee to determine a boundary. However, many recognized the arbitrariness of the selection of criteria for such a boundary and recommended that other criteria also be examined. For instance, it was pointed out that satellites have already orbited at 90 kilometres; as a result, discussions were concluded without any formal action being recommended.

Secondly, there was an active discussion relating to the use of nuclear power sources in outer space under the item "other matters" and the views of Member States on this question are reflected in section V of the report of the Legal Sub-Committee. A proposal was made that this question should be included as a separate item on the agenda of the Sub-Committee next year. There was no consensus on this proposal and, in view of the diverse opinions expressed during the debate, the Sub-Committee considered that the parent Committee, at the current session should, unless it decided otherwise, resume discussion on the matter, in particular, on the advisability of including on the agenda of the Legal Sub-Committee a separate item dealing with the use of nuclear power sources in outer space.

Accordingly, members might wish to consider what action should be taken in this connexion, as well as determine whether further progress can be made at the current session on the questions relating to the draft treaty on the moon and draft principles on direct television broadcast satellites, as requested by the Legal Sub-Committee. The Chairman will, of course, make himself available for any formal or informal discussions which members may wish to have on these matters.

Looking at these subjects, we should be conscious of the fact that our efforts are being closely monitored by world public opinion. The importance that is increasingly attached to the elaboration of modern principles of space law is demonstrated by the attention given to this subject by bodies which are as vitally representative, as, for instance, the Inter-Parliamentary Union. The sixty-sixth Conference of the Inter-Parliamentary Union, which will be held in Caracas next September, will have before it an important resolution on space law, which was adopted by the recent meeting of the Council and Committees of the Inter-Parliamentary Union held in Prague, Czechoslovakia. We welcome the interest expressed in our work by representative bodies such as the Inter-Parliamentary Union, as close co-operation between Governments and parliaments is one of the essential prerequisites for the successful further development of space law.

I shall turn now briefly and summarily to the work of the Scientific and Technical Sub-Committee. Here again we note that priority was given to questions relating to remote sensing. The Sub-Committee had before it several reports prepared by the Secretariat which helped in its discussions. Particular consideration was given to the classification and dissemination of remote sensing data. The Sub-Committee, however, was not able to agree upon specific recommendations concerning the need for the classification of data or the manner in which such a classification might be made. The Sub-Committee therefore agreed that the Secretariat should be requested to submit a supplemental study for consideration at its next session.

The Sub-Committee further noted the importance of providing adequate training facilities, including on-site training, in all aspects of remote sensing, particularly to the developing countries, in order to enable them to derive the maximum benefit from this new important technology.

The Sub-Committee also considered the co-ordinating role of the United Nations in the area of remote sensing. A report was submitted by the Secretariat as requested concerning a proposed panel of experts, to be established under United Nations auspices, which would co-ordinate international activities. Although this matter has been under consideration for several years in the Sub-Committee, no consensus was reached on the establishment of such a panel this year.

In regard to the United Nations Space Applications Programme, continued vigorous efforts were made within its limited financial resources, which have often been the subject of comments in this Committee, to provide to developing countries increased access to space applications. The principal instruments for the achievement of this aim have remained the educational and training activities which can be carried out under the Programme in order to assist the developing countries in all regions of the world. Among the highlights of the Programme during the course of last year were the training seminars and workshops held in Rome with the co-operation of the Food and Agriculture Organization of the United Nations (FAO), in Manila, in Nairobi with the assistance of the United Nations Environmental Programme (UNEP), in Sao Jose dos Campos with the assistance of UNESCO, in India again with the assistance of FAO, and in Tokyo with the assistance of the World Meteorological Organization (WMO). Several other such seminars and workshops are planned for the immediate future, two on remote sensing applications in agriculture to be held in Ibadan, Nigeria, and Damascus, Syria, and another on the use of remote sensing in the area of non-renewable resources, to be held in Argentina later this year. Several other panel meetings and seminars are also scheduled for the coming year, 1980, and these will be held in Costa Rica, Japan, Greece, Upper Volta and the Union of Soviet Socialist Republics. In addition, the United Nations Space Applications Programme administers a number of fellowships offered by Member States in various disciplines relating to space applications. The transfer of technology, which is of such crucial importance to economic and social development in many member countries, will thus receive strong assistance from such efforts.

In concluding my remarks on the Space Applications Programme, I should like to express, on behalf of the Committee, our appreciation to the expert on space applications, Mr. Murthy, for the excellent manner in which he has conducted a very useful programme on space applications, particularly for the member countries of the developing world. We recognize the importance of the work he has accomplished, not only during the last year, but during the past seven years in which he has directed the space applications programme. I make particular note of this today because I have learned, as other members may have done, that Mr. Murthy will retire from United Nations services at the end of this year. I therefore wish to thank Mr. Murthy for the assistance he has given this Committee, particularly for conducting the United Nations Space Applications Programme in such an outstanding manner, and to wish him every success in the future. At the same time, it is with great pleasure that we welcome the news that Mr. Padang, the Secretary of the Scientific and Technical Sub-Committee, will take over as the head of the United Nations Space Applications Programme. I have no doubt that, under his able guidance, the Programme will continue to give useful assistance to the developing countries and, on behalf of the Committee, I wish Mr. Padang every success in his future activities.



I now revert to the work of the Scientific and Technical Sub-Committee. That body also gave consideration to questions relating to space transportation and to the views of Member States on those questions. Those views are reflected in section IV of its report (A/AC.105/238). Similarly, the Committee considered the question of the physical nature and the technical attributes of the geostationary orbit, and the views of Member States on this matter can be found in section VI of the report of the Sub-Committee. On both items, the Sub-Committee proposes to continue its consideration at the next session and has requested the Secretariat to prepare a number of reports in order to assist it in its discussions.

The Scientific and Technical Sub-Committee also discussed questions relating to the use of nuclear power sources in outer space and for this purpose it established a working group of experts as called for in General Assembly resolution 33/16. The report of the Working Group is reproduced as annex II of the report of the Sub-Committee. As members will note, the Working Group has carried out extensive preliminary work on this question and concluded that nuclear power sources can be used safely in outer space, provided certain safety considerations specified in the report are fully met. It stated that the decision to use nuclear power sources in outer space should be based on technical considerations, provided that safety requirements can be satisfied while mission requirements are fulfilled. The conclusions and recommendations of the Working Group are set out in paragraphs 39 to 44 of its report. It has recommended that arrangements be made for it to meet for another week during the next session of the Scientific and Technical Sub-Committee and that Member States and international agencies be invited to contribute studies on the technical aspects and safety of nuclear power sources, particularly regarding four areas of concern which the Working Group has identified for further consideration. These arrangements seem to augur well for successful completion of the future work of this Working Group. In considering the recommendations of the Working Group we must also bear in mind the relevant recommendation made by the Legal Sub-Committee to which I referred earlier.

Finally, I come to what is perhaps the most important subject considered by the Scientific and Technical Sub-Committee. The Sub-Committee was, as members will recall, particularly active this year in serving in its capacity as the Advisory Committee to the Preparatory Committee of the Second United Nations Conference on the Peaceful Uses of Outer Space. Several important recommendations have been submitted in connexion with the convening of this conference, in accordance with General Assembly resolution 33/16, and these can be found in paragraph 55 of the Sub-Committee's report. They relate most specifically to the title of the conference, its agenda, its preparation and organization, including the form it is to take, its date and venue, as well as its bureau and secretariat.

I am happy to say that on some of these issues the Sub-Committee was able to agree upon detailed recommendations such as those regarding the subjects to be included in the agenda of the conference. However, some of the key issues relating to the preparation of the conference, such as the date, the venue, the form and the secretariat of the conference, were not agreed upon. As a result, this Committee, which is entrusted with the task of acting as the Preparatory Committee under resolution 33/16, is expected to make most of these decisions at the current session. I trust that, with the co-operation of all the members of the Committee, we shall be able to agree expeditiously on at least those questions that must be decided so that the arrangements for the conference can go forward without delay. I am, of course, open to suggestions as to how we may best accomplish this task.

Before concluding the summary of the work of the Scientific and Technical Sub-Committee, I should like to refer members to the recommendations which it made concerning its future work and which are reflected in paragraphs 76 to 82 of its report. Members will note that the Sub-Committee has recommended a slightly different agenda from that which it had last year, and we shall have to consider this question along with that of the agenda of the Legal Sub-Committee. Here members will note that the Legal Sub-Committee has made no recommendations this year concerning its agenda. Similarly, we must decide upon the scheduling of the meetings of the two Sub-Committees, the Working Group and this Committee for next year. So there is a great deal of work to be done.

I hope that I have been able to give the Committee, though in many instances in very brief and succinct form, some of the highlights of the work performed by our subsidiary bodies. Members will note that we have much work ahead of us during the next few days. With the co-operation of members, I have no doubt that we shall be able to accomplish much.

But let us also cast, as we sometimes do, a look at the future work of this Committee. Several thoughts come to mind in this respect, and I should like to share with the Committee some reflections, which I expressed at the recent space affairs event, the Goddard Memorial Symposium held in Washington, D.C., the purpose of which was to consider new opportunities for international co-operation in the exploration and peaceful use of outer space.

The principal consideration is perhaps that the impact of satellite technology upon global politics, which has already become apparent over the past two decades, is now growing at an increasing rate. This becomes evident when one considers the significance of some of the future space ventures which are being discussed today, and not by science-fiction writers but by scientists and engineers who have participated in every aspect of space research from its very outset.

We are now seriously considering daily flights to orbit which might serve and supply large technical facilities such as research laboratories, astronomical laboratories, earth resources observatories, manufacturing facilities or communication centres. We are also considering expanding direct-to-home television broadcasting throughout the world; and erecting large structures in space, stabilizing them and moving them about. The possible early demonstration of a large structure that could be part of a large solar experiment is under active consideration. And, finally, we are examining the possibility of setting up large earth-like communities several hundred thousand miles up in space.

For the realization of projects of this magnitude, there can be no doubt that an essential element will be international agreement and co-operation not only in formulating political and legal policies but also in co-ordinating financial and technical assistance. And this is, I believe, where we should focus our attention in looking forward to the future, because it seems that the international community has a right to expect that the men and women who have so brilliantly developed mankind's ability to venture into outer space should also accept the responsibility for developing appropriate means for increasing participation by all nations in future space activities. And, indeed, the vast potential for technological innovation that space technology provides should be used for no less bold innovations in international co-operation than the joint flight of Apollo and Soyuz.

We who represent Governments in this international forum can play an important role in developing and promoting international co-operation in outer space. Like our scientists and engineers, we have to be bold and imaginative. But, like them, we must also be realistic and practical.

In taking this role seriously we must of course recognize that no one country or even a group of countries can assume that its interpretation of the peaceful uses of outer space and its benefits is necessarily shared by all. We must also recognize that a way must be found to engage all countries of the world at the very outset of any major new space project, especially if such a project is at all related to practical benefits which can be enjoyed by all.

As these new means of co-ordination are developed, I believe that we can at the same time look with satisfaction on the progress we have made so far. And, indeed, substantial progress has been made. However, this is not the time to become complacent about the state of international space co-operation, as new technological developments are expanding the possibilities of such co-operation every day. And in outer space, as in world politics in general, co-operation can be used successfully to preclude confrontation.

The exploration and use of outer space for peaceful purposes will therefore certainly remain an essential concern of efforts to give international co-operation a new quality with broader scope. As the focal point for such efforts, this Committee in the more than 20 years of its existence has succeeded in laying the foundations of an international legal framework as well as of a number of institutions that can serve this purpose.

In the next few weeks - perhaps even during the time that this Committee is assembled for its twenty-second session - this framework for international co-operation that the Committee has created might be called upon to play its part in the mastering of an event linked to the exploration of outer space - the re-entry into the earth's atmosphere of the SKYLAB orbital workshop. Not only the members of this Committee but also international institutions at large have given great attention to this event and to the great variety of efforts made by the launching State to make this as safe as possible.

On the one hand, the history of SKYLAB certainly holds important lessons for the future and provides dramatic illustrations of the present limits on the control that space technology can set over objects launched into outer space. On the other hand, we can certainly take satisfaction from the fact that the measure of uncertainty linked to events of this nature can be reduced by the legal and political framework for space co-operation that this Committee has created.

I therefore express, on behalf of all representatives, our fervent wish that this return may proceed safely with the minimum of damage and with human lives unharmed, our hopes enhanced by the knowledge that we no longer face space contingencies empty-handed and powerless.

Looking realistically at the current state of world affairs, one must recognize that the degree to which confrontation can be replaced by co-operation depends to a large extent on the relations between the major industrial and military Powers. Efforts to strengthen and deepen détente in outer space should therefore be pursued no less energetically than similar efforts for détente here on

earth. In order to preserve outer space as a predominantly peaceful environment, every effort should therefore be made to negotiate meaningful space arms control agreements.

It is perhaps not inappropriate to remind ourselves of these urgent necessities on the very day on which an important and wide-ranging agreement on the limitation of strategic arms has been signed, in the same room in which this Committee met two years ago in Vienna; and we can take heart from the words of peace that President Brezhnev and President Carter have exchanged on this historic occasion. The fact that we start our tasks on a day so auspicious for world peace will, I hope, augur well for our work and I therefore invite representatives to embark together on a new effort at peaceful co-operation in outer space.

## ANNEX II

### Draft agreement governing the activities of States on the moon and other celestial bodies

The States Parties to this Agreement,

Noting the achievements of States in the exploration and use of the moon and other celestial bodies,

Recognizing that the moon, as a natural satellite of the earth, has an important role to play in the exploration of outer space,

Determined to promote on the basis of equality the further development of co-operation among States in the exploration and use of the moon and other celestial bodies,

Desiring to prevent the moon from becoming an area of international conflict,

Bearing in mind the benefits which may be derived from the exploitation of the natural resources of the moon and other celestial bodies,

Recalling the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, the Convention on International Liability for Damage Caused by Space Objects, and the Convention on Registration of Objects Launched into Outer Space,

Taking into account the need to define and develop the provisions of these international instruments in relation to the moon and other celestial bodies, having regard to further progress in the exploration and use of outer space,

Have agreed on the following:

#### Article I

1. The provisions of this Agreement relating to the moon shall also apply to other celestial bodies within the solar system, other than the earth, except in so far as specific legal norms enter into force with respect to any of these celestial bodies.

2. For the purposes of this Agreement reference to the moon shall include orbits around or other trajectories to or around it.

3. This Agreement does not apply to extraterrestrial materials which reach the surface of the earth by natural means.

## Article II

All activities on the moon, including its exploration and use, shall be carried out in accordance with international law, in particular the Charter of the United Nations, and taking into account the Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations, adopted by the General Assembly on 24 October 1970, in the interest of maintaining international peace and security and promoting international co-operation and mutual understanding, and with due regard to the corresponding interests of all other States Parties.

## Article III

1. The moon shall be used by all States Parties exclusively for peaceful purposes.
2. Any threat or use of force or any other hostile act or threat of hostile act on the moon is prohibited. It is likewise prohibited to use the moon in order to commit any such act or to engage in any such threat in relation to the earth, the moon, spacecraft, the personnel of spacecraft or man-made space objects.
3. States Parties shall not place in orbit around or other trajectory to or around the moon objects carrying nuclear weapons or any other kinds of weapons of mass destruction or place or use such weapons on or in the moon.
4. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on the moon shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration and use of the moon shall also not be prohibited.

## Article IV

1. The exploration and use of the moon shall be the province of all mankind and shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development. Due regard shall be paid to the interests of present and future generations as well as to the need to promote higher standards of living conditions of economic and social progress and development in accordance with the Charter of the United Nations.
2. States Parties shall be guided by the principle of co-operation and mutual assistance in all their activities concerning the exploration and use of the moon. International co-operation in pursuance of this Agreement should be as wide as possible and may take place on a multilateral basis, on a bilateral basis, or through international intergovernmental organizations.

## Article V

1. States Parties shall inform the Secretary-General of the United Nations as well as the public and the international scientific community, to the greatest

extent feasible and practicable, of their activities concerned with the exploration and use of the moon. Information on the time, purposes, locations, orbital parameters and duration shall be given in respect of each mission to the moon as soon as possible after launching, while information on the results of each mission, including scientific results, shall be furnished upon completion of the mission. In case of a mission lasting more than 60 days, information on conduct of the mission including any scientific results shall be given periodically at 30 days' intervals. For missions lasting more than six months, only significant additions to such information need be reported thereafter.

2. If a State Party becomes aware that another State Party plans to operate simultaneously in the same area of or in the same orbit around or trajectory to or around the moon, it shall promptly inform the other State of the timing of and plans for its own operations.

3. In carrying out activities under this Agreement, States Parties shall promptly inform the Secretary-General, as well as the public and the international scientific community, of any phenomena they discover in outer space, including the moon, which could endanger human life or health, as well as of any indication of organic life.

#### Article VI

1. There shall be freedom of scientific investigation on the moon by all States Parties without discrimination of any kind, on the basis of equality and in accordance with international law.

2. In carrying out scientific investigations and in furtherance of the provisions of this Agreement, the States Parties shall have the right to collect on and remove from the moon samples of its mineral and other substances. Such samples shall remain at the disposal of those States Parties which caused them to be collected and may be used by them for scientific purposes. States Parties shall have regard to the desirability of making a portion of such samples available to other interested States Parties and the international scientific community for scientific investigation. States Parties may in the course of scientific investigations also use mineral and other substances of the moon in quantities appropriate for the support of their missions.

3. States Parties agree on the desirability of exchanging scientific and other personnel on expeditions to or installations on the moon to the greatest extent feasible and practicable.

#### Article VII

1. In exploring and using the moon, States Parties shall take measures to prevent the disruption of the existing balance of its environment whether by introducing adverse changes in such environment, its harmful contamination through the introduction of extra-environmental matter or otherwise. States Parties shall also take measures to prevent harmfully affecting the environment of the earth through the introduction of extraterrestrial matter or otherwise.

2. States Parties shall inform the Secretary-General of the United Nations of the measures being adopted by them in accordance with paragraph 1 of this article and shall also to the maximum extent feasible notify him in advance of all placements by them of radio-active materials on the moon and of the purposes of such placements.

3. States Parties shall report to other States Parties and to the Secretary-General concerning areas of the moon having special scientific interest in order that, without prejudice to the rights of other States Parties, consideration may be given to the designation of such areas as international scientific preserves for which special protective arrangements are to be agreed in consultation with the competent organs of the United Nations.

#### Article VIII

1. States Parties may pursue their activities in the exploration and use of the moon anywhere on or below its surface, subject to the provisions of this Agreement.

2. For these purposes States Parties may, in particular:

(a) Land their space objects on the moon and launch them from the moon;

(b) Place their personnel, space vehicles, equipment, facilities, stations and installations anywhere on or below the surface of the moon.

Personnel, space vehicles, equipment, facilities, stations and installations may move or be moved freely over or below the surface of the moon.

3. Activities of States Parties in accordance with paragraphs 1 and 2 of this article shall not interfere with the activities of other States Parties on the moon. Where such interference may occur, the States Parties concerned shall undertake consultations in accordance with article XV, paragraphs 2 and 3.

#### Article IX

1. States Parties may establish manned and unmanned stations on the moon. A State Party establishing a station shall use only that area which is required for the needs of the station and shall immediately inform the Secretary-General of the United Nations of the location and purposes of that station. Subsequently, at annual intervals that State shall likewise inform the Secretary-General whether the station continues in use and whether its purposes have changed.

2. Stations shall be installed in such a manner that they do not impede the free access to all areas of the moon of personnel, vehicles and equipment of other States Parties conducting activities on the moon in accordance with the provisions of this Agreement or of article I 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.



## Article X

1. States Parties shall adopt all practicable measures to safeguard the life and health of persons on the moon. For this purpose they shall regard any person on the moon as an astronaut within the meaning of article V of the Treaty on Principles Governing the Activities of States on the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies and as part of the personnel of a spacecraft within the meaning of the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space.

2. States Parties shall offer shelter in their stations, installations, vehicles and other facilities to persons in distress on the moon.

## Article XI

1. The moon and its natural resources are the common heritage of mankind, which finds its expression in the provisions of this Agreement and in particular in paragraph 5 of this article.

2. The moon is not subject to national appropriation by any claim of sovereignty, by means of use or occupation, or by any other means.

3. Neither the surface nor the subsurface of the moon, nor any part thereof or natural resources in place, shall become property of any State, international intergovernmental or non-governmental organization, national organization or non-governmental entity or of any natural person. The placement of personnel, space vehicles, equipment facilities, stations and installations on or below the surface of the moon, including structures connected with their surface or subsurface, shall not create a right of ownership over the surface or the subsurface of the moon or any areas thereof. The foregoing provisions are without prejudice to the international régime referred to in paragraph 5 of this article.

4. States Parties have the right to exploration and use of the moon without discrimination of any kind on a basis of equality, and in accordance with international law and the terms of this Agreement.

5. States Parties to this Agreement hereby undertake to establish an international régime, including appropriate procedures, to govern the exploitation of the natural resources of the moon as such exploitation is about to become feasible. This provision shall be implemented in accordance with article XVIII of this Agreement.

6. In order to facilitate the establishment of the international régime referred to in paragraph 5 of this article, States Parties shall inform the Secretary-General of the United Nations as well as the public and the international scientific community to the greatest extent feasible and practicable of any natural resources they may discover on the moon.

7. The main purposes of the international régime to be established shall include:

- (a) The orderly and safe development of the natural resources of the moon;
- (b) The rational management of those resources;
- (c) The expansion of opportunities in the use of those resources;

(d) An equitable sharing by all States Parties in the benefits derived from those resources, whereby the interests and needs of the developing countries as well as the efforts of those countries which have contributed either directly or indirectly to the exploration of the moon shall be given special consideration.

8. All the activities with respect to the natural resources of the moon shall be carried out in a manner compatible with the purposes specified in paragraph 7 of this article and the provisions of article VI, paragraph 2, of this Agreement.

#### Article XII

1. States Parties shall retain jurisdiction and control over their personnel, vehicles, equipment, facilities, stations and installations on the moon. The ownership of space vehicles, equipment, facilities, stations and installations shall not be affected by their presence on the moon.

2. Vehicles, installations and equipment or their component parts found in places other than their intended location shall be dealt with in accordance with article V of the Agreement on Assistance to Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space.

3. In the event of an emergency involving a threat to human life, States Parties may use the equipment, vehicles, installations, facilities or supplies of other States Parties on the moon. Prompt notification of such use shall be made to the Secretary-General of the United Nations or State Party concerned.

#### Article XIII

A State Party which learns of the crash landing, forced landing or other unintended landing on the moon of a space object, or its component parts, that were not launched by it, shall promptly inform the launching State Party and the Secretary-General of the United Nations.

#### Article XIV

1. States Parties to this Agreement shall bear international responsibility for national activities on the moon whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Agreement. States Parties shall ensure that non-governmental entities under their jurisdiction shall engage in activities on the moon only under the authority and continuing supervision of the appropriate State Party.

2. States Parties recognize that detailed arrangements concerning liability for damage caused on the moon, in addition to 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 and the Convention on International Liability for Damage Caused by Space Objects, may become necessary as a result of more extensive activities on the moon. Any such arrangements shall be elaborated in accordance with the procedure provided for in article XVIII of this Agreement.

#### Article XV

1. Each State Party may assure itself that the activities of other States Parties in the exploration and use of the moon are compatible with the provisions of this Agreement. To this end, all space vehicles, equipment, facilities, stations and installations on the moon shall be open to other States Parties. Such States Parties shall give reasonable advance notice of a projected visit, in order that appropriate consultations may be held and that maximum precautions may be taken to assure safety and to avoid interference with normal operations in the facility to be visited. In pursuance of this article, any State Party may act on its own behalf or with the full or partial assistance of any other State Party or through appropriate international procedures within the framework of the United Nations and in accordance with the Charter.

2. A State Party which has reason to believe that another State Party is not fulfilling the obligations incumbent upon it pursuant to this Agreement or that another State Party is interfering with the rights which the former State has under this Agreement may request consultations with that Party. A State Party receiving such a request shall enter into such consultations without delay. Any other State Party which requests to do so shall be entitled to take part in the consultations. Each State Party participating in such consultations shall seek a mutually acceptable resolution of any controversy and shall bear in mind the rights and interests of all States Parties. The Secretary-General of the United Nations shall be informed of the results of the consultations and transmit the information received to all States Parties concerned.

3. If the consultations do not lead to a mutually acceptable settlement which has due regard for the rights and interests of all the States Parties, the parties concerned shall take all measures to settle the dispute by other peaceful means of their choice and appropriate to the circumstances and the nature of the dispute. If difficulties arise in connexion with the opening of consultations or if consultations do not lead to a mutually acceptable settlement, any State Party may seek the assistance of the Secretary-General without seeking the consent of any other State Party concerned, in order to resolve the controversy. A State Party which does not maintain diplomatic relations with another State Party concerned shall participate in such consultations, at its choice, either itself or through another State Party or the Secretary-General, as intermediary.

#### Article XVI

With the exception of articles XVII to XXI, references in this Agreement to States shall be deemed to apply to any international intergovernmental organization which conducts space activities if the organization declares its acceptance of the

rights and obligations provided for in this Agreement and if a majority of the States members of the organization are States Parties to this Agreement and to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. States members of any such organization which are States Parties to this Agreement shall take all appropriate steps to ensure that the organization makes a declaration in accordance with the foregoing.

#### Article XVII

Any State Party to this Agreement may propose amendments to the Agreement. Amendments shall enter into force for each State Party to the Agreement accepting the amendments upon their acceptance by a majority of the States Parties to the Agreement and thereafter for each remaining State Party to the Agreement on the date of acceptance by it.

#### Article XVIII

Ten years after the entry into force of this Agreement, the question of the review of the Agreement shall be included in the provisional agenda of the United Nations General Assembly in order to consider, in the light of past application of the Agreement, whether it requires revision. However, at any time after the Agreement has been in office for five years, the Secretary-General of the United Nations, as depository, shall, at the request of one third of the States Parties to the Agreement and with the concurrence of the majority of the States Parties, convene a conference of the States Parties to review this Agreement. A review conference shall also consider the question of the implementation of the provisions of article XI, paragraph 5, on the basis of the principle referred to in paragraph 1 of that article and taking into account in particular any relevant technological developments.

#### Article XIX

1. This Agreement shall be open for signature by all States at United Nations Headquarters in New York.

2. This Agreement shall be subject to ratification by signatory States. Any State which does not sign this Agreement before its entry into force in accordance with paragraph 3 of this article may accede to it at any time. Instruments of ratification or accession shall be deposited with the Secretary-General of the United Nations.

3. This Agreement shall enter into force on the thirtieth day following the date of deposit of the fifth instrument of ratification.

4. For each State depositing its instrument of ratification or accession after the entry into force of this Agreement, it shall enter into force on the thirtieth day following the date of deposit of any such instrument.

5. The Secretary-General shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification or accession to this Agreement, the date of its entry into force and other notices.

#### Article XX

Any State Party to this Agreement may give notice of its withdrawal from the Agreement one year after its entry into force by written notification to the Secretary-General of the United Nations. Such withdrawal shall take effect one year from the date of receipt of this notification.

#### Article XXI

The original of this Agreement, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations, who shall send certified copies thereof to all signatory and acceding States.

IN WITNESS WHEREOF the undersigned, being duly authorized thereto by their respective Governments, have signed this Agreement, opened for signature at New York on

### ANNEX III

#### Methods of work of the United Nations Committee on the Peaceful Uses of Outer Space

Australia, Belgium, Egypt, France, Germany, Federal Republic of,  
and Netherlands: working paper  
(A/AC.105/L.114 and Add.1)

The need for closer co-ordination of the work of the Scientific and Technical Sub-Committee and that of the Legal Sub-Committee has been stressed on a number of occasions. The present situation does not give the scientific and legal experts any opportunity to consult together and benefit from each other's experience and knowledge.

This lack of contact also impairs the effectiveness of the work of the full Committee.

In order to rectify this, it is proposed that the next sessions of the two Sub-Committees should be held in conjunction, on a trial basis. Their convening simultaneously will also enable the two bodies to hold joint meetings, whenever the members of either Sub-Committee need to obtain the views of the members of the other. In addition, the two Sub-Committees will be asked to consider directly each of the agenda items allocated to them, without a general debate. Save in exceptional circumstances, the session should not be longer than three weeks, and the meetings of the two Sub-Committees could be scheduled to overlap to some extent.

The full Committee will then hold its session. It will begin with a general debate, before taking up the other items on its agenda.

At the end of this trial, it would be decided whether that method of work should be continued or whether the present procedure should be reverted to.

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