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COMMITTEE ON THE PEACEFUL USES
OF OUTER SPACE

REPORT OF THE LEGAL SUB-COMMITTEE ON THE WORK OF ITS
TWENTIETH SESSION (16 March-10 April 1981)

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INTRODUCTION

Opening of the session

1. The Legal Sub-Committee opened its twentieth session at the United Nations Office in Geneva on 16 March 1981 under the chairmanship of Mr. Eugeniusz Wyzner (Poland).
2. The Chairman welcomed the new members of the Sub-Committee: China, Greece, Spain, Syrian Arab Republic, Upper Volta, Uruguay and Viet Nam. Their membership, he said, was an encouraging reflection of the importance they attached to the work of the United Nations in the field of the peaceful uses of outer space.
3. The Sub-Committee observed a minute of silence in memory of the late Professor Haraszti of Hungary. The Chairman, speaking on behalf of the Sub-Committee, said that the Sub-Committee had suffered a great loss. Professor Haraszti had been the leader of the delegation of Hungary for several years, the distinguished Chairman of the Sub-Committee's Working Group on the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, and a gracious colleague and friend. The Chairman conveyed the profound condolences of the Sub-Committee to the delegation of Hungary and to the family of Professor Haraszti.
4. The Chairman, in his opening statement, drew attention to the fact that the present session marked the conclusion of two decades of the Sub-Committee's work in the development and codification of the law of outer space. The progress of mankind in the past 20 years in the exploration and peaceful uses of outer space had been formidable. Over 100 astronauts and cosmonauts had been in outer space, beginning with the Soviet cosmonaut Yury Gagarin, the first to venture into outer space, and including the United States astronaut Neil Armstrong, the first to step on the moon. The achievements in outer space, the Chairman stated, continued to fascinate mankind. He extended congratulations to all countries which, since the Sub-Committee's previous session, had either individually or collectively made new progress in their space programmes.
5. The Chairman, continuing his opening statement, emphasized that there was a clear need for the law of outer space to continue to evolve and he drew attention to the important and central role the Sub-Committee had in the formulation and development of law in this field. While it was inevitable, he said, that the Sub-Committee's record should show not only its achievements but also its disappointments, the achievements of the Sub-Committee, in particular the five outer space treaties, of which four treaties were now in force, were considerable and impressive. They reflected a high degree of legal expertise and political wisdom and contributed in great measure to the strengthening of friendly relations amongst States and to international co-operation in the peaceful uses of outer space. The Chairman stated that he did not wish to underestimate difficulties and was conscious of the juridical, practical and political complexities of the work of the Sub-Committee. Yet he was certain that delegations in the Sub-Committee could, on the various and very difficult issues that lay before them, search for and identify the highest common denominator of agreement in the Sub-Committee and then

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record that level of agreement in acceptable language. It was true that each delegation might not have its own point of view reflected in the treaty or other instrument as fully as it may have wished, yet such was the very nature and essence of international co-operation, compromise and accord. Accordingly, on the occasion of the twentieth session of the Sub-Committee, he remained confident and hopeful, and conveyed his best wishes for the future to all delegations.

6. The General Assembly, in its resolution 35/14 of 3 November 1980, had recommended that the Sub-Committee at its present session should (a) continue on a priority basis: (i) its detailed consideration of the legal implications of remote sensing of the earth from space, with the aim of formulating draft principles relating to remote sensing; and (ii) its efforts to complete the elaboration of draft principles governing the use by States of artificial earth satellites for direct television broadcasting; (b) continue to consider matters relating to the definition and/or delimitation of outer space and outer space activities, bearing in mind, inter alia, questions relating to geostationary orbit; (c) include in its agenda an item entitled "Consideration of the possibility of supplementing the norms of international law relevant to the use of nuclear power sources in outer space", and that a working group should be established in connexion with this item.

Adoption of the agenda

7. At its opening meeting the Sub-Committee adopted the following agenda for the session (A/AC.105/C.2/L.128):

1. Statement by the Chairman
2. Legal implications of remote sensing of the earth from space, with the aim of formulating draft principles
3. Elaboration of draft principles governing the use by States of artificial earth satellites for direct television broadcasting
4. 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
5. Consideration of the possibility of supplementing the norms of international law relevant to the use of nuclear power sources in outer space

Organization of work

8. The Sub-Committee decided to organize its work as follows:

(a) The Sub-Committee would devote five days to each of the two priority items on its agenda, namely, agenda item 2 (Legal implications of remote sensing of the earth from space, with the aim of formulating draft principles) and agenda

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item 3 (Elaboration of draft principles governing the use by States of artificial earth satellites for direct television broadcasting); and it would divide the remainder of the time available at the present session equally between agenda item 5 (Consideration of the possibility of supplementing the norms of international law relevant to the use of nuclear power sources in outer space) and agenda item 4 (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), on the understanding that the last day of the session would be devoted to the consideration and adoption of the Sub-Committee's report. The Sub-Committee agreed that there would be a certain degree of flexibility in this arrangement. The items of the agenda would be considered in the order referred to immediately above.

(b) The Sub-Committee would maintain its practice of setting up working groups, open to all members of the Sub-Committee, for consideration of the priority items of its agenda. The Sub-Committee, accordingly, re-established its Working Group on remote sensing (agenda item 2) and its Working Group on direct television broadcast satellites (agenda item 3). The Sub-Committee agreed that Mr. Winkler, representative of Austria, would continue as Chairman of the Working Group on remote sensing; and that Mr. El-Reedy, representative of Egypt, would be Chairman of the Working Group on direct television broadcast satellites.

(c) The Sub-Committee would, as provided in General Assembly resolution 35/14, establish a working group for consideration of item 5 of its agenda (Consideration of the possibility of supplementing the norms of international law relevant to the use of nuclear power sources in outer space). The Sub-Committee, accordingly, established a working group, open to all members of the Sub-Committee, for consideration of agenda item 5. The Sub-Committee agreed that Mr. Bueno, representative of Brazil, would be Chairman of the Working Group.

(d) The Sub-Committee decided that some time should be available for a general exchange of views. Some delegations expressed the view that such a general exchange of views was not necessary and that it would be preferable for delegations to present their views under the various items on the agenda. Other delegations expressed the view that the holding of a general exchange of views was useful and helpful to the work of the Sub-Committee.

(e) The Sub-Committee would each day begin with a plenary meeting to hear those who wished to address the Sub-Committee. It would thereafter adjourn and reconvene, when appropriate, as a working group.

9. The Chairman informed the Sub-Committee at its 340th meeting on 16 March 1981 that he had received from Cuba, Switzerland and Turkey, requests to participate in meetings of the Sub-Committee. The Sub-Committee agreed that, since the granting of observer status is the prerogative of the Committee on the Peaceful Uses of Outer Space, the Sub-Committee could take no decision on the matter, but that the representatives of Cuba, Switzerland and Turkey might attend the formal meetings of the Sub-Committee and could direct to the Chair their requests for the floor should they wish to make statements.

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10. The Sub-Committee, at its 345th meeting on 23 March 1981, considered the question of the attendance at meetings of its Working Groups of representatives of States not members of the Sub-Committee and of representatives of international organizations invited to attend sessions of the Sub-Committee. The Sub-Committee agreed that their attendance was permissible on the understanding that this would not create a precedent, would concern the formal meetings of the Working Groups and not the informal consultations or meetings of smaller groups, and would not entitle such representatives to take the floor except at the discretion of the Working Groups.
11. The Working Group on remote sensing held 11 meetings. The Working Group on direct television broadcast satellites held 7 meetings. The Working Group on agenda item 5 held 6 meetings.
12. The Chairmen of the Working Groups reported to the Sub-Committee at its 358th and 359th meetings on 9 and 10 April 1981. The Sub-Committee took note with appreciation of the reports and work done in the Working Groups.
13. The Sub-Committee considered item 4 of its agenda at its 353rd to 357th meetings on 6 to 8 April 1981.
14. The Sub-Committee held a total of 20 meetings. The views expressed in the Sub-Committee are summarized in documents A/AC.105/C.2/SR.340 to 359.
15. A list of the representatives of the States members of the Sub-Committee attending the session, of the observers for specialized agencies and other organizations, and of the secretariat of the Sub-Committee, is to be found in document A/AC.105/C.2/INF.13.
16. The Chairman, at the 340th meeting of the Sub-Committee on 16 March 1981, drew attention to the fact that late commencement and early conclusion of meetings could, over a four-week session such as that of the Sub-Committee, amount to the loss of a number of working days. The Chairman said he was certain he could rely on the co-operation of all delegations in ensuring optimum utilization of the conference facilities provided to the Sub-Committee. The United Nations Committee on Conferences and the General Assembly attached considerable importance to the optimum utilization of conference facilities made available to United Nations meetings.
17. The Sub-Committee, at its 358th meeting on 9 April 1981, returned to the question of its utilization of conference facilities. It appeared to the Sub-Committee that its non-use of conference facilities in the course of its sessions was principally attributable to the fact that it was necessary for the Sub-Committee, on many occasions during a session, to adjourn to allow for informal consultations between delegations. Such informal consultations were almost invariably held either in the conference room itself, or in a smaller room in the vicinity of the conference room, with or without interpretation, if a more informal setting was helpful.
18. As to the desirability of informal consultations, the Sub-Committee considered that such informal consultations constituted an essential and important part of its

work. The following considerations were also to be noted: the Sub-Committee, at each of its sessions, was required by the General Assembly to work on a number of subjects of legal and political complexity; it was composed of 53 Member States and decisions were reached by consensus; the work of the Sub-Committee was primarily the drafting of international treaties or the preparation of resolutions incorporating principles of a legal nature for adoption by the General Assembly; and such informal consultations were unavoidable if the Sub-Committee's work was to progress through consensus.

19. The Sub-Committee considered, therefore, that it would be helpful if the conference services provided to the Sub-Committee, during its annual session, could include not only a conference room but also an additional smaller room for informal consultations, situated in the vicinity of the conference room and provided with interpretation facilities.

20. The Sub-Committee noted with appreciation that under General Assembly resolution 35/10 of 3 November 1980 the Sub-Committee at its present session, unlike at its nineteenth session last year, was provided with summary records for its plenary meetings. The Sub-Committee noted further that the question of the provision of summary records for the plenary meetings of the Sub-Committee at its future sessions would be reviewed at the thirty-sixth session of the General Assembly.

21. The Chairman, at the 357th meeting of the Sub-Committee on 8 April 1981, informed the Sub-Committee of a communication he had received from the President of the International Institute of Space Law informing him of a resolution adopted by the Institute on 26 September 1980 with reference to the importance of the maintenance of summary records for the Sub-Committee. The resolution enumerated the following among its reasons for considering the continuation of summary records for the Sub-Committee as important. The Sub-Committee was required by the General Assembly to formulate treaties and other legal instruments with reference to space activities. The Sub-Committee, at its annual session, could only allocate a few days to each item on its agenda, necessitating consideration of such items during several sessions. Maintenance of detailed official records were essential to its work. Such records were extremely useful to States in reviewing the status of subjects on the agenda of the Sub-Committee, in formulating their positions in subsequent sessions of the Sub-Committee, and for the use of new members of delegations. Such records were also essential for maintenance of the Sub-Committee's procedure of decision-making by consensus. Summary records were important for the interpretation of the treaties and the other legal instruments formulated by the Sub-Committee. Press releases were not official records and did not form part of the negotiating history. The reports of the Sub-Committee, which used the "some delegations said" "other delegations said" formula, could not be sufficiently definitive to provide the detail necessary for supplementary means of interpretation. The records of the Committee on the Peaceful Uses of Outer Space were not a substitute, as it was only in the Sub-Committee's summary records that the detailed history of particular provisions were found.

22. The Sub-Committee took note of the above communication and decided that a reference to it and to the enumerated reasons on the question of summary records should be included in its report.

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23. At the 345th meeting of the Sub-Committee on 23 March 1981, the Chairman was joined by a number of delegations in expressing congratulations to the delegation of Mongolia on the launch into outer space of the Mongolian cosmonaut D. Goorragchar on board a Soyuz spacecraft that had been launched into orbit by the Union of Soviet Socialist Republics.

24. During the course of the session some delegations, in their general statements, expressed their concern regarding the growing dangers of the military use of outer space, stressing the need for the early consideration by the international community of measures for preventing an arms race in outer space.

25. At its 358th meeting on 9 April, the Sub-Committee decided to request its Chairman to attend the forthcoming session of the Committee on the Peaceful Uses of Outer Space with a view to acquainting the Committee with the work of the Sub-Committee at its present session and assisting the Committee in its review of the matters considered at this session of the Sub-Committee.

26. The Sub-Committee adopted the present report unanimously and concluded its work at its 359th meeting, on 10 April 1981.

I. LEGAL IMPLICATIONS OF REMOTE SENSING OF THE EARTH FROM SPACE,
WITH THE AIM OF FORMULATING DRAFT PRINCIPLES

27. The Chairman made an introductory statement on agenda item 2 (Legal implications of remote sensing of the earth from space, with the aim of formulating draft principles) at the 341st meeting of the Sub-Committee on 17 March 1981. He referred to the work of the Sub-Committee on this item at its nineteenth session.

28. The Chairman drew attention to the fact that the General Assembly at its thirty-fifth session, in resolution 35/14, had recommended that the Sub-Committee should at its present session continue, as a matter of priority, its detailed consideration of the legal implications of remote sensing of the earth from space, with the aim of formulating draft principles relating to remote sensing.

29. The Sub-Committee noted that all texts of draft principles formulated by the Sub-Committee's Working Group on remote sensing, as of 1980, were set out in an appendix to the report of the Chairman of the Working Group on remote sensing at the nineteenth session of the Sub-Committee (A/AC.105/271, annex II, appendix).

30. The Sub-Committee noted further that questions relating to remote sensing of the earth by satellites were also under consideration in the Scientific and Technical Sub-Committee and that the report of the Scientific and Technical Sub-Committee on its recently concluded eighteenth session was contained in document A/AC.105/287.

31. As noted in paragraph 8 above, the Sub-Committee, at its opening meeting on 16 March 1981, re-established its Working Group on remote sensing.

32. At the 358th meeting of the Sub-Committee on 9 April 1981, the Chairman of the Working Group reported to the Sub-Committee. The Sub-Committee took note with

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appreciation of the report and work of the Working Group. In accordance with the decision taken by the Sub-Committee at the same meeting, the report of the Chairman of the Working Group is reproduced in annex I to the present report.

II. ELABORATION OF DRAFT PRINCIPLES GOVERNING THE USE BY STATES
OF ARTIFICIAL EARTH SATELLITES FOR DIRECT TELEVISION
BROADCASTING

33. The Chairman made an introductory statement on agenda item 3 (Elaboration of draft principles governing the use by States of artificial earth satellites for direct television broadcasting) at the 345th meeting of the Sub-Committee on 23 March 1981. He referred to the work of the Sub-Committee on this item at its nineteenth session.

34. The Chairman drew attention to the fact that the General Assembly at its thirty-fifth session, in resolution 35/14, had recommended that the Sub-Committee at its present session should continue, as a matter of priority, its efforts to complete the elaboration of principles governing the use by States of artificial earth satellites for direct television broadcasting.

35. The Sub-Committee noted that all texts of draft principles formulated by the Sub-Committee's Working Group on direct television broadcast satellites, as of 1980, were set out in an appendix to the report of the Chairman of Working Group on direct television broadcast satellites at the nineteenth session of the Sub-Committee (A/AC.105/271, annex I, appendix A).

36. As noted in paragraph 8 above, the Sub-Committee, at its opening meeting on 16 March 1981, re-established its Working Group on direct television broadcast satellites.

37. At the 341st meeting of the Sub-Committee on 17 March 1981, the representative of the International Telecommunication Union (ITU), in addition to a report on the activities of ITU, answered questions by members of the Sub-Committee concerning the World Administrative Radio Conferences of 1977 and 1979.

38. At the 357th meeting of the Sub-Committee some delegations proposed that an anonymous negotiating text be attached to the report to serve as a basis for concluding the elaboration of draft principles at the twenty-fourth session of the Committee on the Peaceful Uses of Outer Space. Other delegations were of the view that in the absence of an agreement only a text sponsored by a delegation or delegations could be attached to the report. Some of those delegations were of the view that the proposed anonymous text was not in any event an appropriate basis for future negotiations. At the 357th meeting of the Sub-Committee, the text was submitted as a working paper to the Sub-Committee by the delegations of Argentina, Brazil, Canada, Chile, Colombia, India, Indonesia, Iraq, Kenya, Mexico, Niger and Venezuela (A/AC.105/C.2/L.131). The working paper is set out in annex IV to this report.

39. The Sub-Committee recommended that the Committee on the Peaceful Uses of Outer Space, while considering the question of direct television broadcasting at

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its next session, should also consider whether the elaboration of draft principles on this subject could be concluded, or whether further progress could be achieved, during that session.

40. At the 358th meeting of the Sub-Committee on 9 April 1981, the Chairman of the Working Group reported to the Sub-Committee. The Sub-Committee took note with appreciation of the report and work of the Working Group. In accordance with the decision taken by the Sub-Committee at the same meetings, the report of the Chairman of the Working Group is reproduced in annex II to the present report.

41. The Sub-Committee conveyed its appreciation to the representative of Sweden, Mr. S. Danielson, who served as the moderator of the informal consultations that took place within the framework of the Working Group.

III. CONSIDERATION OF THE POSSIBILITY OF SUPPLEMENTING THE NORMS OF INTERNATIONAL LAW RELEVANT TO THE USE OF NUCLEAR POWER SOURCES IN OUTER SPACE

42. The Chairman made an introductory statement on agenda item 5 (Consideration of the possibility of supplementing the norms of international law relevant to the use of nuclear power sources in outer space) at the 349th meeting of the Sub-Committee on 30 March 1981.

43. The Chairman drew attention to the fact that the General Assembly at its thirty-fifth session, in resolution 35/14, had recommended that the Sub-Committee at its present session should include this item on its agenda and that a working group be established in connexion with this item.

44. The Sub-Committee noted that the subject of the use of nuclear power sources in outer space was an item on the agenda of the Scientific and Technical Sub-Committee at its eighteenth session in 1981 and that the report of that Sub-Committee, which included in annex II the report of its Working Group on the use of nuclear power sources in outer space, was contained in document A/AC.105/287.

45. A working paper entitled "Use of nuclear power sources in outer space" was submitted to the Sub-Committee at its present session by the delegation of Canada (A/AC.105/C.2/L.129). The working paper is appended hereto in annex IV to this report.

46. As noted in paragraph 8 above, the Sub-Committee at its opening meeting on 16 March 1981, established a Working Group on this item of its agenda.

47. At the 359th meeting of the Sub-Committee on 10 April 1981, the Chairman of the Working Group reported to the Sub-Committee. The Sub-Committee took note with appreciation of the report and work of the Working Group. In accordance with the decision taken by the Sub-Committee at the same meeting, the report of the Chairman of the Working Group is reproduced in annex III to the present report.

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IV. 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

48. The Chairman made an introductory statement on agenda item 4 (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) at the 353rd meeting of the Sub-Committee on 6 April 1981. He referred to the work of the Sub-Committee on this item at its nineteenth session.

49. The Chairman drew attention to the fact that the General Assembly at its thirty-fifth session, in resolution 35/14, had recommended that the Sub-Committee should at its present session continue to consider 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.

50. The Sub-Committee noted that the subject of the "physical nature and technical attributes of the geostationary orbit" was an item on the agenda of the Scientific and Technical Sub-Committee at its eighteenth session in 1981 and was considered in chapter IV of its report (A/AC.105/287).

51. The Sub-Committee also had before it a working paper entitled "Approach to the solution of the problems of the delimitation of air space and outer space" submitted to the Sub-Committee at its eighteenth session by the delegation of the USSR (A/AC.105/C.2/L.121).

52. The Sub-Committee considered agenda item 4 at its 353rd to 357th meetings on 6 to 8 April 1981.

53. Some delegations stated that it was necessary for a definition and/or delimitation of outer space to be established. The following were among their reasons: the legal régime applicable to outer space differs from the legal régime applicable to airspace; the sovereignty of States over their air space would be strengthened if the outer limit of air space was clearly established; a definition and/or delimitation of outer space would reduce the probability of disputes between States; there would in the future be vehicles that would travel both in airspace and outer space and it would be necessary to know which legal régime was applicable at different stages; the question of the definition and/or delimitation of outer space had been on the agenda of the Sub-Committee for over 15 years and it was now urgent, having regard also to the fact that international space law was a well-recognized branch of international law, for a definition and/or delimitation to be established.

54. Some delegations who considered a definition and/or delimitation of outer space necessary believed that a "conventional" boundary between airspace and outer space (namely a boundary established by agreement between States) was the most appropriate method for defining or delimiting outer space. They were of the opinion that a boundary established on the basis of scientific and technical criteria exclusively would not be possible. They considered that a mesospace or intermediate zone between airspace and outer space would be necessary. Some delegations were

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of the view that a "conventional" boundary should be supplemented by "functional" definitions of the terms "space flight" and "space object". Some delegations stated that a definition and/or delimitation of outer space should also contain provisions on the character sui generis of the geostationary orbit.

55. Some delegations expressed support for the proposal made by the delegation of the USSR in its working paper A/AC.105/C.2/L.121 that, as a beginning, a boundary between airspace and outer space be placed at an altitude not higher than 100 to 110 kilometres above sea level. There was reference to the discussion of the working paper of the USSR in the report of the Sub-Committee at its nineteenth session in 1980 (A/AC.105/271). Some delegations were of the view that some further consideration would need to be given to: the particular altitude at which the boundary between airspace and outer space should be established, and an altitude of 90 kilometres above sea level was mentioned; and the passage in transit of a space object, immediately following launch or in the course of descent, over underlying States.

56. Other delegations stated that, notwithstanding the fact that the question of the definition and/or delimitation of outer space had been on the agenda of the Sub-Committee for several years, the question could not even at the present time be satisfactorily resolved. They believed that, although from a theoretical point of view the absence of a definition and/or delimitation of outer space might seem to leave a logical gap, no practical difficulties had hitherto arisen from the absence of a definition and/or delimitation. Furthermore, as discussions in the Scientific and Technical Sub-Committee had shown, there was no scientific or technical justification for the designation of a particular altitude as the boundary between airspace and outer space. They were of the view that establishment of a "conventional" boundary between air space and outer space at a particular altitude, such as at the 100 to 110 kilometre altitude proposed, would be premature and arbitrary. Some delegations expressed the view, in this connexion, that such a definition and/or delimitation would create difficulties in the transit of a space object, immediately after launch or in the course of descent, over underlying States. They were also of the view that a "functional" approach to the question of definition and/or delimitation would not be possible until such terms as "space object" and "space flight" had been defined.

57. Some delegations stated that a definition and/or delimitation of outer space should be acceptable to all States and take account of the sovereignty and security interests of States and the development of outer space science and technology. It was a matter of importance for all States which required careful study. Some delegations were of the opinion that the time was not yet ripe for any decisive action in order to establish a delimitation between air space and outer space. Other delegations were of the opinion that the time was ripe.

58. Questions relating to the geostationary orbit were also discussed. Some delegations reaffirmed views they had expressed at earlier sessions of the Sub-Committee to the effect that the geostationary orbit was a limited national resource of a character sui generis and the legitimate interests of the equatorial countries in the geostationary orbit should be taken into account in a definition of outer space. The view was expressed in this connexion that the stationing of a satellite in a geostationary orbit should only be with the consent of the underlying State.

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59. Other delegations, also reaffirming views expressed at earlier sessions of the Sub-Committee, stated that they were unable to agree that the geostationary orbit, which was situated approximately 36,000 kilometres above the surface of the earth, was not part of outer space and subject to the Outer Space Treaty of 1967. They saw no basis for national claims to sovereignty over such orbit.
60. Some delegations stated that they recognized that the geostationary orbit was of a character sui generis and a limited national resource and were of the view that a legal régime, taking account of the interests of the equatorial countries, ought to be established to ensure that conflicts as to the use of the orbit were avoided and that the orbit was utilized for the benefit of all countries and in particular the developing countries.
61. Some delegations were of the view that, as the number of satellites that could be placed in the geostationary orbit was not unlimited, the question of utilization of geostationary orbital positions should be the subject of agreements within the framework of ITU.
62. A statement on the question of the definition and/or delimitation of outer space was made by the observer for the International Civil Aviation Organization (ICAO) who stated that the subject of what constituted airspace had not been discussed in the representative bodies of ICAO. He pointed out that questions relating to the geostationary orbit were outside the competence of ICAO.
63. Some delegations considered that agenda item 4, which, as formulated at present, covered both the question of the definition and/or delimitation of outer space and the question of the geostationary orbit, should in future be divided into two agenda items, or into two subitems of one agenda item (one concerning the definition and/or delimitation of outer space and the other concerning the geostationary orbit), with the item on the definition and/or delimitation of outer space receiving priority consideration in the Sub-Committee. They felt that associating the question of the geostationary orbit with the question of the definition and/or delimitation of outer space had caused delay in the Sub-Committee's examination of the latter question which had been on the Sub-Committee's agenda for over 15 years.
64. Some delegations, while expressing readiness to agree to the proposed division of present agenda item 4 into two items, were of the view that it was difficult to determine questions of priority without regard to the other items on the Sub-Committee's agenda.
65. Some delegations considered that agenda item 4 should continue to remain as now formulated, and they stated that there could be no definition and/or delimitation of outer space without the solution of the question of the geostationary orbit. They proposed that a recommendation be made by the Sub-Committee to the Committee on the Peaceful Uses of Outer Space that a working group of the Sub-Committee be established for future priority consideration of agenda item 4 as now formulated.
66. Other delegations were of the view that the item, whether or not divided, should not be given priority and that a working group should not be established.
67. The Sub-Committee considered the proposals referred to in paragraphs 63 to 66 above, but believed they were properly matters for determination by the Committee on the Peaceful Uses of Outer Space. The Sub-Committee decided to so recommend.

Annex I

REPORT OF THE CHAIRMAN OF THE WORKING GROUP ON REMOTE SENSING

1. The Sub-Committee, at the first meeting of its present session on 17 March 1981, re-established its Working Group on remote sensing.
2. The Working Group noted that the Legal Sub-Committee was required, under paragraph 5 of General Assembly resolution 35/14 of 3 November 1980, to continue as a matter of priority its detailed consideration of the legal implications of remote sensing of the earth from space, with the aim of formulating draft principles relating to remote sensing.
3. The Working Group held its 1st meeting on 17 March 1981 and concluded its work on 3 April 1981, having held a total of nine meetings. There were also informal consultations.
4. The Working Group had before it the report of the Legal Sub-Committee on its nineteenth session in 1980 which contained the report of the Chairman of the Working Group and, in the appendix to the report of the Chairman, the texts of the draft principles as they appeared at the conclusion of the nineteenth session (A/AC.105/271, annex II, appendix).
5. The Working Group noted that the subject of remote sensing was an item on the agenda of the Scientific and Technical Sub-Committee at its eighteenth session held in February 1981, and that chapter IV was the relevant section of the Scientific and Technical Sub-Committee's report on that session (A/AC.105/287).
6. The following working papers were submitted in the course of the discussions of the Working Group at its present session: a working paper submitted by the delegation of Colombia (WG/RS(1981)/WP.1) with respect to principle I and principle XV; and a working paper, entitled "Principles relating to remote sensing of the earth, its natural resources and its environment", submitted by the delegation of Mexico (WG/RS(1981)/WP.2). The working papers are included in section B of the appendix to this report.
7. As to the organization of its work, the Working Group agreed that it would, beginning with principle I, review the texts of the draft principles set out in the appendix to the report of the Chairman of the Working Group at the nineteenth session of the Sub-Committee (A/AC.105/271, annex II, appendix). Principles II to X, however, in which the words "shall" / "should" alone appeared in square brackets, would not be reviewed unless a delegation wished a particular principle considered. The views expressed in and the results of the discussions of the Working Group are summarized below.
8. Principle I. The suggestion was made to delete the asterisk appearing in the present text and relating to the term "analysed information". Other delegations were of the view, however, that consideration of a proposal to delete the asterisk was premature since the Working Group had not yet adequately determined the content of this term and the necessity of retaining it.

With the aim of introducing a new approach to the definitions contained in this principle, the delegation of Colombia tabled a working paper in which new definitions of the terms used in the draft principles were suggested. These new definitions, it was held, took better account of the existing distinction between "macroscopic" and "microscopic" remote sensing as well as the fact that there existed information collected by other sources than satellites. While some delegations indicated their agreement with the basic approach of the Colombian proposal inasmuch as a distinction was drawn between different types of remote sensing activities and conclusions were drawn from this distinction as to the régime for the dissemination of data, other delegations felt that the new definitions proposed by Colombia were likely to create more problems than they could solve because by introducing new concepts such as "macroscopic" and "microscopic" remote sensing and drawing certain conclusions from these concepts they attempted to encompass too much, thereby complicating matters still further. Still other delegations felt that in attempting to regulate activities which could not be considered "space activities" the Colombian proposal was going beyond the mandate of the Legal Sub-Committee. Since there was no consensus on the Colombian proposal, the present text, including the foot-notes, was retained and it was decided to attach the working paper submitted by Colombia to the report of the Chairman of the Working Group.

9. Principles II to X. These principles were not specifically discussed although references were made by some delegations to some of these principles in the course of the discussion of other principles.

10. Principle XI. It was suggested that, as a first step, brackets now appearing around this principle as a whole should be deleted and that the Working Group should then try to eliminate the remaining brackets in the text. Other delegations also stressed the importance of retaining this principle relating to the international responsibilities of States for remote sensing activities, some of these delegations indicating their preference for using the expression "shall" rather than "should". Furthermore, it was stated that this principle should also apply to the activities of non-governmental organizations. Other delegations were of the view that this principle should not go beyond what is already regulated in other legal instruments, e.g., article VI of the Outer Space Treaty of 1967, and should therefore be eliminated. To the extent that the principle went beyond article VI of the Outer Space Treaty of 1967, it was, in the view of those delegations, unacceptable in its present form. Reference was also made in this connexion to principle III which had been tentatively agreed upon. Since there was no consensus, the present text was retained.

11. Principle XII. In view of the relevance of this principle to other principles, in particular principles XIII and XV, the Group again decided to permit delegations to refer to related principles in the course of the discussion of principle XII if they so desired. Although there was agreement that sensed States should have timely and non-discriminatory access to primary data obtained from remote sensing and relating to their territory on reasonable terms, no consensus could be reached on a specific language for this principle because

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opinions were divided as to the necessity of such terms being agreed upon between the sensing and the sensed States and as to the time element involved. Some delegations, proposing to delete the square brackets around the word "agreed", stressed the importance of reaching agreement on the practical aspects of the transfer of data without, however, such an agreement in any case obstructing access to the data by the sensed State. Other delegations, speaking in favour of deleting the term "agreed", pointed out that a requirement to reach agreement on the terms for the transfer of data could lead to the refusal of the sensing State to grant access to data and would therefore be tantamount to a right of veto. The view was expressed that, for some civil remote sensing programmes, which the principles cover, the requirement of specific agreements with the sensed States on terms of access was impracticable. In this connexion the view was expressed that the above definition of remote sensing programmes lacked precision. To advance the discussion it was then suggested to delete "agreed" from principle XII and to treat the concept underlying this term in the context of principle XV. Although the link between these two principles was recognized, the suggestion did not, however, meet with general support because of the controversial nature of principle XV. Principle XII was therefore left unchanged.

12. Principle XIII. Reference was made to two proposals relating to this principle submitted by the USSR and the United States, respectively, in 1979. In the course of the discussion, basically three ways of notification in connexion with remote sensing programmes became apparent: prior notification of the general nature of such programmes and their geographical coverage, notification after commencement of the programme, and giving notification that primary data had been received from such programmes. Each of the approaches mentioned received support from some delegations, some delegations also supporting various combinations of those alternatives. In the course of the debate it became evident, however, that some delegations would insist on some form of prior notification of remote sensing programmes and that other delegations could not accept such an obligation. These delegations pointed out that practical and technical circumstances might prevent States from carrying out remote sensing programmes in the exact manner described in the notification prior to the actual beginning of the remote sensing activity. Those delegations who supported prior notification pointed out, on the other hand, that such prior notification involved respect for the sovereignty of States and also would give States the opportunity to participate in the remote sensing programme so being notified and to co-operate with the sensing State. In the view of some delegations the concept of prior notification to States, the territories of which were intended to be sensed, was also contained in the second sentence. The Working Group decided to delete the first sentence of the principle. The remaining part of this principle was left unchanged in view of the failure to achieve consensus on any specific language.

13. Principle XIV. There was a short discussion on this principle. Some delegations, pointing out that similar ideas were already contained in other principles, in particular principle IV, expressed the view that principle XIV could be deleted or, at least, the language at present proposed streamlined. Other delegations, while not excluding the possibility of ultimately deleting this

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principle, felt that it would be premature to take a decision on the deletion before other principles, in particular principle XV, had been agreed upon. It was therefore decided to retain this principle in its present form.

14. Principle XV. Opinions were again divided in the Working Group with regard to the contents of this principle. Some delegations felt that there should be no restrictions on the dissemination of data obtained by remote sensing of the earth by satellites or analysed information derived therefrom since a system of unrestricted dissemination would be in the best interests of all States and that prohibitions on dissemination were impractical. These delegations therefore held the view that principle XV should be excluded from the set of draft principles. Other delegations, on the other hand, felt that making the dissemination of certain data and information subject to the approval of the State whose territory was affected by the remote sensing activity was necessary, this being a corollary to the principle of the sovereignty of States. Some of these delegations, while accepting in principle the approach suggested by principle XV as at present drafted felt, however, that the concept underlying the proposal made by the delegation of the USSR in 1979, which introduced spatial resolution as a criterion to describe the types of data whose dissemination should be subject to consent, might be preferable since it used an objective criterion to define the categories of data to which the consent régime would be applicable. Some of the delegations who spoke in favour of a system of unrestricted dissemination pointed out, with regard to the Soviet proposal, that notwithstanding their objection in principle against a consent régime, spatial resolution would not provide a reliable and standard reference because of technical and practical difficulties in establishing the actual spatial resolution in each instance.

Those delegations supporting the requirement of prior consent for certain types of data further pointed out that those data which are of use or beneficial to all countries should indeed be freely disseminated but that certain data obtained through remote sensing of the territory of the State, the unrestricted dissemination of which could cause damage to that State, should only be disseminated with the consent of that State. Reference was made in this connexion by way of example to data relating to harvests or crop yields. Other delegations felt on the other hand, taking account of developments in recent years, that at present all States would benefit from a system of unrestricted dissemination of data because attempts to conceal such data could be used to manipulate the market unfairly and because in a restrictive system some States would have more data, thereby obtaining an advantage over other States which would not possess these data. Some of these delegations were of the opinion that a restrictive system would be an obstacle to international co-operation and participation in remote sensing systems. Other delegations were of the opinion that international legal regulations of dissemination of remote sensing data was hardly a hindrance to co-operation between States in the field of remote sensing of States. Still other delegations felt that because at present only a relative small number of States had access to remote sensing data or were in a position to do their own analysis of such data, it would be to the disadvantage of those States which did not have access to data, in particular developing countries, if

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data pertaining to their natural resources would be freely disseminated to third States. These delegations could, however, foresee in the future, when a greater number of States would participate in remote sensing programmes, that the consent régime might be changed so as to allow unrestricted dissemination of remote sensing data. Other delegations, while considering that a wide unrestricted dissemination of data from remote sensing would be able to serve the interests of sensed States, in particular developing countries, felt that it was necessary to restrict the dissemination of certain data obtained with a resolution below a certain threshold.

The delegation of Colombia, pointing out the inadequacies which, in the view of that delegation, existed in the present text of principle XV, as well as in the proposal of the Soviet Union, tabled a working paper proposing new language for this principle. Some delegations indicated general support for the thrust of the Colombian proposal, but some of these delegations thought that the introduction of new concepts such as "agricultural crops" would create additional difficulties in the application of this principle. Other delegations felt that the proposal was unacceptable because it again provided for the consent of sensed States with regard to the dissemination of certain data. It was also suggested to replace the present text of this principle with the text proposed by Colombia. However, since there was no consensus on the proposed new text, it was decided, in accordance with past practice, to retain the present text and to attach the Colombian working paper to the report of the Chairman of the Working Group.

15. Principle XVI. Some delegations indicated their support for the retention of this principle which, in the opinion of these delegations, was a natural complement of other principles, in particular principles XII and XV. Other delegations, noting that the meaning of the principle was not clear and that the concept of permanent sovereignty over natural resources was being discussed in various other forums without consensus having been achieved so far, held the view that the principle should be deleted. The view was also advanced that the contents of this principle should be placed in the context of the preamble without prejudice, however, to the final acceptance of this concept. Some delegations also proposed to delete the reference in this principle to "natural and juridical persons" but other delegations felt that this reference was necessary and should be retained. Since there was no consensus it was decided to retain the principle as drafted at present.

16. Principle XVII. It was suggested to delete the words "of activities covered by" and replace them with the words "or interpretation of". Other delegations preferred not to restrict the application of this principle to legal disputes. It was also felt that the present text gave undue preference to only one means of dispute settlement. Finally, attention was drawn to the asterisk relating to this principle, which stated that this principle was subject to review in the light of the full set of agreed principles and a decision on the legal nature of the principles, it being felt that the present text should be retained unchanged. Since no consensus was reached on the present text or on any alternative formulation, it was decided to leave this principle unchanged.

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17. There was only a brief and preliminary exchange of views on the working paper submitted by the delegation of Mexico. Some delegations supported the working paper in principle, reserving the right however to comment in detail on the proposed principles at the next year's session of the Legal Sub-Committee.
18. The Working Group held its final meeting on 3 April 1981, when it considered and approved the report to be made by its Chairman to the Sub-Committee.
19. The texts of the draft principles as they appeared at the conclusion of the work of the Working Group are set out in section A of the appendix to this report.

APPENDIX

Section A

TEXTS OF DRAFT PRINCIPLES AS CONTAINED IN THE REPORT OF THE
LEGAL SUB-COMMITTEE ON THE WORK OF ITS NINETEENTH SESSION
(A/AC.105/271, ANNEX II, APPENDIX), WITH CHANGE MADE AT THE
PRESENT SESSION

Principle I 1/

For the purpose of these principles with respect to remote sensing of the natural resources of the earth and its environment: 2/

(a) The term "remote sensing of the earth" means "remote sensing of the natural resources of the earth and its environment". 3/

(b) The term "primary data" means those primary data which are acquired by satellite-borne remote sensors and transmitted from a satellite either by telemetry in the form of electromagnetic signals or physically in any form such as photographic film or magnetic tape, as well as preprocessed products derived from those data which may be used for later analysis.

(c) The term "analysed information"* means the end-product resulting from the analytical process performed on the primary data as defined in paragraph (b) above combined with data and/or knowledge obtained from sources other than satellite-borne remote sensors.

Principle II

Remote sensing of the earth from outer space and international co-operation in that field /shall/ /should/ be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and taking into consideration, in international co-operation, the particular needs of the developing countries.

* The content, definition and necessity of the term "analysed information" is still to be clarified.

1/ The question of the application of these principles to international intergovernmental organizations will be considered later.

2/ The formulation "with respect to remote sensing of the natural resources of the earth and its environment" will be reviewed in light of the title to be given to the principles.

3/ This term is still subject to further discussion. In the view of some delegations, it would be necessary in the future work to further define the meaning of the words "remote sensing of the earth and its environment".

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Principle III

Remote sensing of the earth from outer space /shall/ /should/ be conducted in accordance with international law, including the Charter of the United Nations and 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 relevant instruments of ITU.

Principle IV

1. States carrying out programmes for remote sensing of the earth from outer space /should/ /shall/ promote international co-operation in these programmes. To this end, sensing States /should/ /shall/ make available to other States opportunities for participation in these programmes. Such participation should be based in each case on equitable and mutually acceptable terms due regard being paid to principles ...

2. In order to maximize the availability of benefits from such remote sensing data, States are encouraged to consider agreements for the establishment of shared regional facilities.

Principle V

Remote sensing of the earth from outer space /should/ /shall/ promote the protection of the natural environment of the earth. To this end States participating in remote sensing /should/ /shall/ identify and make available information useful for the prevention of phenomena detrimental to the natural environment of the earth.

Principle VI

States participating in remote sensing of the earth from outer space /should/ /shall/ make available technical assistance to other interested States on mutually agreed terms.

Principle VII

1. The United Nations and the relevant agencies within the United Nations system should promote international co-operation, including technical assistance, and play a role of co-ordination in the area of remote sensing of the earth.

2. States conducting activities in the field of remote sensing of the earth /shall/ /should/ notify the Secretary-General thereof, in compliance with article XI 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.

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Principle VIII

Remote sensing of the earth from outer space should promote the protection of mankind from natural disaster.*** To this end, States which have identified primary data from remote sensing of the earth and/or analysed information in their possession which would be useful in helping to alert States to impending natural disasters, or in assisting States to deal with natural disasters should, as promptly as possible, notify those States affected or likely to be affected of the existence and availability of such data and/or information. Such data and/or information should, upon request, be disseminated as promptly as possible.

Principle IX 1/

Taking into account the principles II and III above, remote sensing data or information derived therefrom /shall/ /should/ be used by States in a manner compatible with the legitimate rights and interests of other States.* **

Principle X

States participating in remote sensing of the earth either directly or through relevant international organization /shall/ /should/ be prepared to make available to the United Nations and other interested States, particularly the developing countries, upon their request, any relevant technical information involving possible operational systems which they are free to disclose.

Principle XI

/States /shall/ /should/ bear international responsibility for /national/ activities of remote sensing of the earth /irrespective of whether/ /where/ such activities are carried out by governmental /or non-governmental/ entities, and /shall/ /should/ /guarantee that such activities will/ comply with the provisions of these principles./

* Some delegations were of the view that, for the sake of consistency it was necessary to consider this principle in the light of draft principles II and III.

** A delegation reserved its position on removing the square brackets around the words "in a manner compatible with" and on the deletion of the words "not" and "to the detriment of".

*** The meaning of this term is subject to further discussion.

1/ Should be considered in connexion with the formulation of a principle on dissemination of data or information and subject to later discussion of the terms "information" and "data".

Principle XIII

A sensed State [shall] [should] have timely and non-discriminatory access to primary data obtained by remote sensing of the earth from outer space, concerning its territory, on [agreed] reasonable terms and [no later than] [before] access is granted to any third State. 1/ 2/ [To the greatest extent feasible and practicable,] this principle shall also apply to analysed information.]

Principle XIII

[A State [intending to conduct] [conducting] remote sensing activities of the earth from outer space shall notify the Secretary-General of the United Nations and [upon request] the States whose territory is intended to be covered by such activities [to the fullest extent feasible and as soon as practicable] of the intended launch, [nature of the] mission, duration and coverage of such activities. The Secretary-General shall publish information thus received.]

Principle XIV

[A State carrying out remote sensing of the earth [shall] [should] without delay consult with a State whose territory is sensed upon request of the latter in regard to such activity, [in particular dissemination of data and information,] in order to promote international co-operation, friendly relations among States and to enhance the mutual benefits to be derived from this activity.]

Principle XV

[States carrying out remote sensing of the earth shall not, without the approval of the States whose territories are affected by these activities, disseminate or dispose of any data or information on the natural resources of these States to third States, international organizations, public or private entities.]

Principle XVI

[Without prejudice to the principle of the freedom of exploration and use of outer space, as set forth in 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, remote sensing of the earth [should] [shall] be

1/ The question of from which States access to and provision of data should be obtained, needs further consideration.

2/ Subject to review in the light of the discussion on access by third States.

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conducted with respect for the principle of full and permanent sovereignty of all States and peoples over their own wealth and natural resources /with due regard to the rights and interests of other States and their natural and juridical persons in accordance with international law/ /as well as their inalienable right to dispose of their natural resources/ /and of information concerning those resources/.

Principle XVII

/Any dispute that may arise with respect to the application of /Activities covered by/ these principles /shall/ /should/ be resolved by prompt consultations among the parties to the dispute. Where a mutually acceptable solution cannot be found by such consultations it /shall/ /should/ be sought through other /established/ /existing/ procedures for the peaceful means of settlement of disputes mutually agreed upon by the parties concerned./*

* Subject to review in the light of the full set of agreed principles and a decision on the legal nature of the principles.

APPENDIX

Section B

COLOMBIA: WORKING PAPER
(WG/RS(1981)/WP.1 of 18 March 1981)

Principle I

For the purpose of the following principles, remote sensing of the earth means an exploratory function which is performed from satellites, or by means of airborne platforms and other aeronautical or ballistic devices, whereby:

1. Information on the characteristics of the earth and its natural phenomena is obtained from outer space by passive and active sensors located on board satellites which encircle the earth in gravitational orbit, this being termed "macroscopic remote sensing". Prompt and general dissemination of the information so obtained may not be restricted, inasmuch as the international community benefits from it.

2. Information of a similar nature, but with a much greater resolution or definition of details, is collected by airborne platforms or any other aeronautical or ballistic devices operating from any altitude above the earth up to the limit at which outer space commences, this being termed "microscopic remote sensing". Such data and information may be used and/or communicated to third parties only with the express consent of the State within whose jurisdiction the area which has been the subject of remote sensing or analysis is situated.

3. The term "primary data" means those primary data which are acquired by satellite-borne remote sensors and transmitted from a satellite either by telemetry in the form of electromagnetic signals or physically in any form such as photographic film or magnetic tape, as well as preprocessed products derived from those data which may be used for later analysis.

4. "Analysed information" means any intellectual or material product resulting from the evaluation performed on the primary data referred to in paragraph 3 above, combined where appropriate with other data and/or knowledge obtained from sources other than satellite-borne remote sensors and devices.

Principle XV

No State, or entity responsible to or belonging to one or more States, which carries out remote sensing of the earth from outer space or which analyses primary data or information derived from such remote sensing may on any account communicate to third parties information on specific natural resources or agricultural crops in any other State or country which has been the subject of remote sensing, without obtaining its prior consent.

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MEXICO: WORKING PAPER

(WG/RS(1981)/WP.2 of 19 March 1981)

Principles relating to remote sensing of the earth, its
natural resources and its environment

Principle I

For the purposes of these principles, the term "remote sensing of the earth" means remote sensing of the earth, its natural resources and its environment from outer space.

Principle II

Remote sensing of the earth and international co-operation in that field shall be carried out for the benefit and in the interests of all States, irrespective of their degree of economic or scientific development and taking into consideration the needs of the developing countries.

Principle III

International law, including the Charter of the United Nations, 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 present principles shall be applicable to remote sensing of the earth.

Principle IV

1. States carrying out programmes for remote sensing of the earth shall promote international co-operation in these programmes.
2. States carrying out programmes for remote sensing of the earth shall make available to sensed States opportunities for participation in these programmes.
3. In order to maximize the availability of benefits from remote sensing of the earth, States are urged to consider agreements for the establishment of shared regional facilities.

Principle V

Remote sensing of the earth shall promote the protection of the environment. To this end States participating in remote sensing of the earth shall identify and make available to the competent United Nations authorities any information useful for the prevention and control of phenomena detrimental to the environment of the earth.

Principle VI

States participating in remote sensing of the earth shall make available technical assistance to other interested States on mutually agreed terms. This principle is without prejudice to the rights of sensed States, as set forth in the present principles.

Principle VII

1. The United Nations and the relevant agencies within the United Nations system should promote international co-operation, including technical assistance, and play a role of co-ordination in the area of remote sensing of the earth.

2. States carrying out programmes for remote sensing of the earth shall, prior to the execution of these programmes, give notification thereof to the Secretary-General of the United Nations, who shall publish such notification.

Principle VIII

1. States carrying out programmes for remote sensing which have knowledge of the threat of a natural disaster shall immediately inform all States which might be affected and the United Nations authorities competent for natural disasters.

2. Likewise, States carrying out programmes for remote sensing shall communicate to States which have been affected by a natural disaster and to the competent United Nations authorities all information which would be useful in assisting the States affected to take measures to remedy the situation.

Principle IX

The results of remote sensing of the earth shall be used by States with strict respect for sovereign rights and in a manner compatible with the legitimate interests of other States.

Principle X

States participating in remote sensing of the earth either directly or through the relevant international organizations shall make available to the Secretary-General of the United Nations and other interested States, particularly the developing countries, upon their request, any technical information involving possible operational systems.

Principle XI

States conducting remote sensing of the earth shall bear international responsibility for national activities carried on by governmental agencies or by non-governmental entities, and for ensuring that national activities are carried out in conformity with the present principles. The activities of non-governmental entities shall require authorization and continuing supervision by the State which has jurisdiction or control over those non-governmental entities. In the case of activities carried on by an international organization, responsibility shall be borne both by the international organization and by the States members of such

organization (text taken from article VI of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies).

Principle XII

A State which intends to carry out or authorize programmes for remote sensing of the earth shall give advance notification to the States whose territory, territorial sea or maritime areas under their jurisdiction will be sensed.

Principle XIII

Upon request of the sensed State, the State carrying out remote sensing shall consult with the said State in regard to such activity in order to comply with principle XIV and thus to promote international co-operation and friendly relations among States and to enhance the mutual benefits to be derived from this activity.

Principle XIV

States carrying out programmes for remote sensing of the earth shall provide States which are subject to remote sensing with the preliminary information and final results and conclusions relating to the natural resources of the territory, territorial sea and maritime areas under the jurisdiction of the sensed State.

Principle XV

States carrying out remote sensing of the earth shall not, without the approval of the sensed State, disseminate information or results and conclusions regarding the natural resources of that State.

Principle XVI

1. Without prejudice to the principle of the freedom of exploration and use of outer space, as recognized in 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, remote sensing of the earth, which also constitutes exploration and use of the earth, including the territories and resources of sovereign States, shall be conducted with strict respect for the full and permanent sovereignty which every State has and freely exercises over its wealth, natural resources and economic activity.

Principle XVII

1. The Charter of the United Nations and the Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations shall be applicable to any dispute that may arise with respect to remote sensing of the earth.

2. In the event that a dispute related to remote sensing of the earth arises, the States which are parties to that dispute shall hold consultations with a view to arriving at a peaceful solution.

3. In the event that such consultations are not successful, the States shall have recourse to other means until a peaceful solution to the dispute is found.

Annex II

REPORT OF THE CHAIRMAN OF THE WORKING GROUP ON DIRECT TELEVISION
BROADCAST SATELLITES

1. The Sub-Committee, at the first meeting of its present session on 17 March 1981, re-established its Working Group on direct television broadcast satellites.
2. The Working Group noted that the Legal Sub-Committee was required, under paragraph 5 of General Assembly resolution 35/14 of 3 November 1980, to continue as a matter of priority its detailed consideration of the elaboration of draft principles governing the use by States of artificial earth satellites for direct television broadcasting.
3. The Working Group had before it the report of the Legal Sub-Committee on its nineteenth session in 1980 which contained the report of the Chairman of the Working Group, the texts of the draft principles as they appeared at the conclusion of the nineteenth session, and the working papers which were before the Working Group at the nineteenth session (A/AC.105/271, annex 1 and appendix). The working papers were the following: the "clean text" of principles submitted at the eighteenth session of the Sub-Committee by the delegations of Canada and Sweden (A/AC.105/C.2/L.117) and the working papers submitted by other delegations at the eighteenth and nineteenth sessions of the Sub-Committee with respect to particular principles, namely, a working paper submitted by the delegation of Belgium (A/AC.105/C.2/L.120) with respect to the preamble, a working paper submitted by the delegation of Iraq (WG.II(1979)WP.4) with respect to the principle on international co-operation, a working paper submitted by the delegation of the Netherlands (WG.II(1979)/WP.2/Rev.1) with respect to the principle on State responsibility; and, with respect to the principle on consultation and agreements between States, a working paper submitted by the delegation of Colombia (WG/DBS(1980)/WP.2), a working paper submitted by the delegation of the United Kingdom (WG/DBS(1980)/WP.1), and a working paper submitted by the delegation of the United States (A/AC.105/C.2/L.118). It was suggested that the texts which appear in the appendix to the nineteenth session's report of the Chairman of the Working Group (A/AC.105/271, annex 1 and appendix) should be appended to this report. It was so agreed and the texts are accordingly set out in the appendix to the present report. The Working Group also had before it the United Kingdom working paper concerning the World Administrative Radio Conference of 1977 which had been submitted to the Sub-Committee in 1977 (A/AC.105/196, annex IV).
4. As to the organization of its work at its present session, the Working Group decided that it would: (a) conduct its work on the basis of the texts of the draft principles as they appeared at the conclusion of the nineteenth session of the Sub-Committee (A/AC.105/271, annex 1, appendix); (b) begin with a consideration of the following texts which contained square brackets or unresolved foot-notes,

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namely: State responsibility; duty and right to consult; peaceful settlement of disputes; consultation and agreements between States; programme content; and unlawful/inadmissible broadcasts; (c) postpone until later its consideration of the preamble and of texts of draft principles which contained no square brackets.

5. The Working Group held preliminary discussions on the question of State responsibility and consultation and agreements between States. During the discussions views were expressed which in the main were reflected in last year's report. The remainder of the draft principles were not discussed. The Working Group decided without delay to commence informal consultations in the hope of promoting success in its work.

6. Accordingly, the Working Group adjourned its meetings to enable informal consultations open to all members of the Sub-Committee to take place.

7. Informal consultations were held in an effort to remove the remaining differences and to reach agreement on a text to be considered by Governments and the parent body. However, no consensus was reached.

8. The Working Group held its final meeting on 7 April 1981 when it considered and approved the report to be made by its Chairman to the Sub-Committee.

APPENDIX

Section A

TEXTS OF DRAFT PRINCIPLES AS CONTAINED IN THE REPORT OF THE
LEGAL SUB-COMMITTEE ON THE WORK OF ITS NINETEENTH SESSION
(A/AC.105/271, annex I, appendix)

PRINCIPLES GOVERNING THE USE BY STATES OF ARTIFICIAL EARTH
SATELLITES FOR INTERNATIONAL* DIRECT TELEVISION
BROADCASTING

The General Assembly,

(1) In view of the benefits of international direct television broadcasting by means of artificial earth satellites for individuals, peoples, countries and all mankind,

(2) Desiring to safeguard the legitimate rights and interests of all States and to encourage orderly development on an equitable basis of this new and promising means of television broadcasting,

(3) Recognizing the unique characteristics of such satellite broadcasting not encountered in other forms of broadcasting which necessitate besides relevant technical regulations also legal principles solely applicable in this field,

(4) Considering that States, as well as international governmental and non-governmental organizations, including broadcasting associations, should base their activities in this field upon and encourage international co-operation,

(5) Solemnly declares that in international direct television broadcasting by means of artificial earth satellites, States should be guided by the following principles:

1a. Recognizing that international direct broadcasting by means of artificial earth satellites should be based on strict respect for the sovereign rights of States and non-interference in their internal affairs;7

...

1b. Considering that direct television broadcasting by means of satellites should take place under conditions in which this new form of space technology will serve the lofty goals of peace and friendship among peoples;7

...

* The term "international direct television broadcasting" is to be defined.

/...

/1c. Recognizing the importance for free dissemination of information and ideas and a broader exchange of views between all countries of the world;]

...

/1d. Recognizing the importance of the right of everyone to freedom of expression, including the right to seek, receive and impart information and ideas regardless of frontiers, as enshrined in instruments of the United Nations relating to universal human rights.]

Purposes and objectives

Activities in the field of international direct television broadcasting by means of artificial earth satellites should* be carried out in a manner compatible with the development of mutual understanding and the strengthening of friendly relations and co-operation among all States and peoples in the interest of maintaining international peace and security. Such activities should, inter alia, promote the dissemination and mutual exchange of information and knowledge in cultural and scientific fields, assist in educational, social and economic development, particularly in the developing countries and enhance the quality of life of all peoples.

Applicability of international law

Activities in the field of direct television broadcasting by means of artificial earth satellites should be conducted in accordance with international law, including the Charter of the United Nations, the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies of 27 January 1967, the relevant provisions of the International Telecommunication Convention and its Radio Regulations and of International Instruments relating to friendly relations and co-operation among States and to human rights.

Rights and benefits

Every State has an equal right to conduct activities in the field of direct television broadcasting by means of artificial earth satellites and to authorize such activities by persons and entities under its jurisdiction. All States and peoples are entitled to and should enjoy the benefits from such activities. Access to the technology in this field should be available to all States without discrimination on terms mutually agreed by all concerned.

* Use of the terms "should" and "shall" will be reviewed later when formulation of the principles is complete and it is clear what status the principles are to have and uniformity of terminology is considered.

/...

International co-operation

Activities in the field of direct television broadcasting by means of artificial earth satellites should be based upon and encourage international co-operation. Such co-operation should be the subject of appropriate arrangements.*

State responsibility

/States should bear international responsibility for activities in the field of direct television broadcasting by means of artificial earth satellites carried out by them or under their jurisdiction and for the conformity of any such activities with the principles set forth in this document./

When direct television broadcasting by means of artificial earth satellites is carried out by an international intergovernmental organization, responsibility for compliance with these principles should be borne both by such organization and by States participating in it.

Duty and right to consult

/Any State requested to do so by another State should promptly enter into consultations with the requesting State concerning any matter arising from those activities in the field of international direct television broadcasting by satellites that are likely to affect the requesting State, and such consultations should be conducted with due regard to the other principles of this document./

Peaceful settlement of disputes**

Any dispute that may arise from activities in the field of direct television broadcasting by means of artificial earth satellites should be resolved by prompt consultations among the parties to the dispute. Where a mutually acceptable resolution cannot be achieved by such consultations, it should be sought through other established procedures for the peaceful settlement of disputes.

Copyright and neighbouring rights

Without prejudice to the relevant provisions of international law States should co-operate on a bilateral and multilateral basis for protection of

* Subject to review of the second sentence in the light of the discussion on consent and participation.

** Some delegations indicated that they had a preference for the text in paragraph 15 of the report of the Chairman of the Working Group.

copyright and neighbouring rights by means of appropriate agreements between the interested States or the competent legal entities acting under their jurisdiction. In such co-operation they should give special consideration to the interests of developing countries in the use of direct television broadcasting for the purpose of accelerating their national development.

Notification to the United Nations

In order to promote international co-operation in the peaceful exploration and use of outer space, States conducting or authorizing activities in the field of direct television broadcasting by satellites should inform the Secretary-General of the United Nations to the greatest extent possible of the nature of such activities. On receiving this information, the Secretary-General of the United Nations should disseminate it immediately and effectively to the relevant United Nations specialized agencies, as well as to the public and the international scientific community.

Consultation and agreements between States

1. A direct television broadcasting service by means of artificial earth satellites specifically directed at a foreign State, which shall be established only when it is not inconsistent with the provisions of the relevant instruments of the International Telecommunication Union, shall be based on appropriate agreements and/or arrangements between the broadcasting and receiving States or the broadcasting entities duly authorized by the respective States, in order to facilitate the freer and wider dissemination of information of all kinds and to encourage co-operation in the field of information and the exchange of information with other countries.

2. For that purpose a State which proposes to establish or authorize the establishment of a direct television broadcasting service by means of artificial earth satellites specifically directed at a foreign State shall without delay notify that State of such intention and shall promptly enter into consultations with that State if the latter so requests.*

3. No such agreements and/or arrangements shall be required with respect to the overspill of the radiation of the satellite signal within the limits established under the relevant instruments of the International Telecommunication Union.

* Some delegations considered that, owing to the wording of the principle on "consultation and agreements between States", the principle on "duty and right to consult" should be reconsidered in order to avoid inconsistencies and redundancies.

/(b) No such agreements and/or arrangements or consultations shall be required with respect to the overspill of the radiation of the satellite signal within the limits established under the relevant instruments of the International Telecommunication Union./

/(c) Delete paragraph 3./

/(d) This principle shall not apply with respect to the overspill of the radiation of the satellite signal within the limits established under the relevant instruments of the International Telecommunication Union./

Programme content

/States or their broadcasting entities which participate in direct television broadcasting by satellite with other States should co-operate with one another in respect of programming, programme content, production and interchange of programmes./

/The broadcasting of advertising, direct or indirect to countries other than the country of origin should be on the basis of appropriate agreements between the countries concerned./

/Notwithstanding the foregoing, States undertaking activities in direct television broadcasting by satellites should in all cases exclude from the television programmes any material which is detrimental to the maintenance of international peace and security, which publicizes ideas of war, militarism, national and racial hatred and enmity between peoples, which is aimed at interfering in the domestic affairs of other States or which undermines the foundations of the local civilization, culture, way of life, traditions or language./

Unlawful/inadmissible broadcasts

/States shall regard as unlawful and as giving rise to the international liability of States direct television broadcasts specifically aimed at a foreign State but carried out without the express consent of the latter, containing material which according to these principles should be excluded from programmes, or received as a result of unintentional radiation if the broadcasting State has refused to hold appropriate consultations with the State in which the broadcasts are received./

/In case of the transmission to any State of television broadcasts which are unlawful, that State may take in respect of such broadcasts measures which are recognized as legal under international law./

/States agree to give every assistance in stopping unlawful direct television broadcasting by satellite./

/...

Any broadcasts that a State does not wish to be made in its territory or among its population and in respect of which it has made known such decision to the broadcasting State are inadmissible.

Every transmitter, State, international organization or authorized agency shall refrain from making such broadcasts or shall immediately discontinue such broadcasts if it has begun to transmit them.

Section B

BELGIUM: WORKING PAPER
(A/AC.105/C.2/L.119 of 22 March 1979)

Amendment calling for the replacement of the draft principle entitled "Consultation and agreements between States" in document A/AC.105/218, appendix to annex II, and document A/AC.105/C.2/L.117, by the following text:

"Agreements between States on the exchange of programmes

"In order to facilitate the freer and wider dissemination of information of all kinds and to encourage co-operation in the field of information and the exchange of information with other countries, (broadcasting and receiving) States may agree, bilaterally or multilaterally, directly or through their duly authorized broadcasting entities, to lend each other or pool the direct television broadcasting facilities available to them under the relevant instruments of the International Telecommunication Union, for the purpose of exchanging programmes for broadcasting to the public in their respective countries."

BELGIUM: WORKING PAPER
(A/AC.105/C.2/L.120 of 22 March 1979)

Amendment to document A/AC.105/218, appendix to annex II, and to document A/AC.105/C.2/L.117.

Add the following wording at the end of the preambular part:

"Recognizing that in no instance does the scope of these principles cover national direct television broadcasting services or overspill within the limits established under the relevant instruments of ITU."

COLOMBIA: WORKING PAPER
(WG/DBS(1980)/WP.2)

Agreements between States

Any State intending to make direct television broadcasts by means of artificial earth satellites which may be received in all or part of the territory of a foreign State shall conclude the appropriate arrangements and/or agreements with the receiving State.

IRAQ: WORKING PAPER
(WG.II(1979)/WP.4)

International co-operation

Activities in the field of direct television broadcasting by means of artificial earth satellites should be based upon and encourage international co-operation. Such co-operation should be the subject of appropriate arrangements and take account of the interests of developing countries in the use of direct television broadcasting for the purpose of accelerating their national development.

NETHERLANDS: WORKING PAPER
(WG.II(1979)/WP.2/Rev.1)

Principle of State responsibility

States should bear international responsibility, in accordance with the applicable rules of international law, for the activities in the field of international direct television broadcasting by means of artificial earth satellites carried out by them or under their jurisdiction and for the conformity of any such activities with the principles set forth in this document.

[(Second paragraph unchanged.)]

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND: WORKING PAPER
(WG/DBS(1980)/WP.1)

Consultation and arrangements between States

1. A direct television broadcasting service by means of artificial earth satellites specifically directed at a foreign State shall be established only in accordance with the relevant instruments of the International Telecommunication Union, in order to facilitate the freer and wider dissemination of information of all kinds and to encourage co-operation in the field of information and the exchange of information with other countries.

/...

2. For that purpose a State which proposes to establish or authorize the establishment of a direct television broadcasting service by means of artificial earth satellites specifically directed at a foreign State shall without delay notify that State of such intention and shall promptly enter into consultations with that State if the latter so requests.

3. With respect to the overspill of the radiation of the satellite signal the relevant instruments of the International Telecommunication Union shall be exclusively applicable.

UNITED STATES OF AMERICA: WORKING PAPER
(A/AC.105/C.2/L.118 of 22 March 1979)

Replace the present paragraphs 1 and 2 of the principle now entitled "Consultation and agreements between States" with the following:

"A State which proposes to establish or authorize the establishment of an international direct television broadcasting service by means of artificial earth satellites specifically aimed at a foreign State should, without delay, notify that State of such intention and should promptly enter into consultations with that State if the latter so requests. The State which proposes to establish or authorize such a service should take into account and give due regard to the interests and concerns of the foreign State in regard to the proposed service, as set forth in such consultations. Any such consultations should also be premised upon facilitating a free flow and a wider dissemination of information of all kinds and encouraging co-operation in the field of information and the exchange of information with other countries."

Annex III

REPORT OF THE CHAIRMAN OF THE WORKING GROUP ON AGENDA ITEM 5
(CONSIDERATION OF THE POSSIBILITY OF SUPPLEMENTING THE NORMS
OF INTERNATIONAL LAW RELEVANT TO THE USE OF NUCLEAR POWER
SOURCES IN OUTER SPACE)

1. The Sub-Committee, at the first meeting of its present session on 16 March 1981, established a Working Group on item 5 of its agenda (Consideration of the possibility of supplementing the norms of international law relevant to the use of nuclear power sources in outer space).
2. The Working Group had before it the report of the Legal Sub-Committee on its nineteenth session in 1980 (A/AC.105/271) and the report of the Scientific and Technical Sub-Committee on its eighteenth session in 1981 which contained, in annex II, the report of its Working Group on the use of nuclear power sources in outer space (A/AC.105/287).
3. The Working Group also had before it a working paper entitled "Use of nuclear power sources in outer space" submitted to the Legal Sub-Committee at its present session by the delegation of Canada (A/AC.105/C.2/L.129) and reproduced in annex IV to the Sub-Committee's report. The delegation of Canada explained that the working paper was based on its 1980 working paper (A/AC.105/C.2/L.126) and took account of the 1981 report of the Scientific and Technical Sub-Committee's Working Group on nuclear power sources in outer space (A/AC.105/287, annex II).
4. The following working papers were submitted in the course of the discussions of the Working Group: a working paper submitted by the delegation of Venezuela (WG/NPS(1981)/WP.1) and a working paper submitted by the delegation of Italy (WG/NPS(1981)/WP.2). The working papers are set out in the appendix to this report.
5. The views expressed in and the results of the discussions of the Working Group are summarized below.
6. The Working Group noted that the Scientific and Technical Sub-Committee's Working Group on the use of nuclear power sources in outer space had, in paragraph 38 of its 1981 report (A/AC.105/287, annex II), reaffirmed its previous conclusion that nuclear power sources can be used safely in outer space, provided that all necessary safety requirements are met.
7. Some delegations, while recognizing that nuclear power sources were necessary for the exploration of outer space, emphasized that considerations of safety for people and the environment should also be given the necessary weight, and they were of the view that nuclear power sources should not be used in outer space if an alternative energy source could be utilized. Other delegations noted that this should be a technical decision taking account of design and operational features appropriate to the specific mission.

8. Some delegations expressed the view that the purpose of the work to be conducted in the Legal Sub-Committee and the Working Group was clear, namely, to ensure, through preparation of appropriate principles or guidelines, the safe use of nuclear power sources in outer space. They were of the opinion that the Legal Sub-Committee, at its nineteenth session last year, had prepared the necessary ground for such work by reviewing existing international law relevant to outer space activities. They considered that while present rules of international law were relevant to the use of nuclear power sources in outer space (including the general principle of international law that a State should not engage in activities harmful to other States and the provisions in the Outer Space Treaties) they needed to be supplemented. They referred in this connexion to: article XI of the Outer Space Treaty, article IV of the Registration Convention, and article VII of the Treaty on the moon and other celestial bodies with reference to the question of information concerning the use of nuclear power sources; article IV of the Registration Convention and paragraph 9 of General Assembly resolution 33/16 of 10 November 1978 with reference to the question of notification prior to re-entry; article V of the assistance and return Agreement; article XXI of the Liability Convention and article VI of the Registration Convention with reference to the question of assistance to States; and articles I, VI and IX of the Outer Space Treaty and publication 26 of the International Commission on Radiological Protection with reference to the question of radiation exposure levels. It was necessary in their view for the Working Group to identify areas for the elaboration of specific provisions.

9. Other delegations considered that the Sub-Committee's review last year of international law relevant to the use of nuclear power sources in outer space was incomplete. They were of the view that a comprehensive study of relevant international law was necessary and that it was only then that consideration of the possibility of supplementing the norms of international law relevant to the use of nuclear power sources in outer space, which was the item before the Sub-Committee and the Working Group, could begin, and this should not be regarded as a simple matter. They stated that the use of nuclear power sources in outer space was legitimate under the Outer Space Treaty, and they drew attention to the Scientific and Technical Sub-Committee's conclusion that nuclear power sources in outer space can be used provided all necessary safety requirements are met. They were of the opinion that a space object with a nuclear power source was, when functioning normally, no different from any other man-made space object, and that to provide in advance for the variety of emergency situations that could possibly arise was not feasible. They considered that there was an adequate framework of international rules for the use of nuclear power sources in outer space and they referred to: article IX of the Outer Space Treaty which required States using nuclear power sources in outer space to do so having regard to the interests of other States; article XI of the Outer Space Treaty and article IV of the Registration Convention which contained provisions on information and notification, with respect to space objects and space activities, that would also apply to space objects with nuclear power sources; article V of the assistance and return Agreement which concerned notifications in the case of accidents and article VI of the Registration Convention which provided for elimination of harmful consequences of accidents; General Assembly resolution 33/16 of 10 November 1978 which requested launching States to

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inform States concerned in the event a space object with a nuclear power source on board was malfunctioning with a risk of re-entry of radioactive materials to the earth; article VII of the Outer Space Treaty which provided for the international liability of States for damage caused by space objects and the Liability Convention which prescribed absolute liability and provided for compensation for damage caused by space objects. They also drew attention to the standards on technical safety established by the International Commission on Radiological Protection.

10. Some delegations, supporting the conclusions reached by the Scientific and Technical Sub-Committee's Working Group on the use of nuclear power sources in its 1981 report to the effect that nuclear power sources can be used safely in outer space provided all necessary safety requirements are met, pointed out that it is not possible to vouch for an absolute absence of risk and that, therefore, use of the expressions "acceptable low risk" and "minimizing of risk", rather than "absence of risk", would be more in accord with realities. They considered that a régime covering the use of nuclear power sources in outer space should be based on an approach which took account of probabilities. They pointed out that the guidelines formulated by the International Commission on Radiological Protection in its publication No. 26 were not designed for accident situations and should not be referred to, therefore, in accident contexts.

11. Some delegations which considered that the present rules of international law were inadequate addressed the question of how such rules might be supplemented. They were of the view that the working papers submitted by the delegations of Canada (A/AC.105/C.2/L.129), Venezuela (WG/NPS(1981)/WP.1) and Italy (WG/NPS(1981)/WP.2) provided a very useful basis for discussion. The working paper submitted by the delegation of Canada proposed that the Working Group should begin to consider preparation of a set of specific guidelines or principles that would help ensure the safe use of nuclear power sources in outer space and should, for that purpose, consider the following specific areas: information concerning the use of nuclear power sources; notification prior to re-entry; assistance to States; and radiation exposure levels. The proposals made in the working paper submitted by the delegation of Venezuela were in general similar to those contained in the Canadian working paper. The working paper submitted by the delegation of Italy contained comments on certain paragraphs in the Canadian working paper. Some delegations expressed the view that a basis for supplementing existing rules of international law should be an examination of the guarantees against nuclear contamination which a launching State provides its own population; and an examination of how such guarantees could be adopted on the international level. Some were of the view that the assistance of the International Atomic Energy Agency ought to be sought for necessary advice and studies. Other delegations were of the view that the elaboration of specific provisions and guidelines required a sound technical basis and considered the 1981 Scientific and Technical Sub-Committee report to be an essential basis for the work.

12. Some delegations, while welcoming the initiative of Canada in presenting the working paper, expressed the view that amendments were necessary to further elaborate it. The following are the views expressed and the amendments suggested:

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regarding sections A and B of the paper, incorporation of the recommendation of the Scientific and Technical Sub-Committee on the proposed format for notification (A/AC.105/287, para. 19) and inclusion of a guarantee of notification, not only to the Secretary-General but also to those States likely to be affected, with respect to all space objects containing nuclear power sources which have already been launched; regarding section C of the paper, clarification of the need for all States, including those with land-based space monitoring and tracking facilities, to co-operate to the greatest extent feasible; inclusion of reference to training assistance to developing countries affected or likely to be affected by disintegration of a space object above their territory or the landing of debris on their territory; inclusion of a requirement that in case of an accident involving developing countries the launching State must assume responsibility and provide immediate assistance in order to prevent any danger of radiation or other harmful consequences which may derive from any such accident; regarding section D of the paper, deletion of the requirement that no radiation exposure should occur in situations where a space object or debris from a space object lands outside the territory of the launching State on the grounds that an absolute obligation of this nature was unrealistic; deletion of the reference to "prevention" of the release of nuclear radiation and replacing it with a requirement of "minimizing" release; insertion of wording to make obligations of States regarding radiation exposure levels mandatory; and insertion of a requirement that satellites with a reactor type nuclear power source should be so equipped as to be able to reboost them to an orbit sufficiently high to allow radioactive materials to decay to a level that would meet the requirements of paragraph 1. Some delegations supporting the Canadian working paper (A/AC.105/C.2/L.129) put particular emphasis on the need for information prior to launching an object with a nuclear power source and the elaboration of radiation protection measures so that appropriate safety measures could be taken in case of an accident involving a nuclear power source. Some delegations expressed the view that radiation exposure levels recommended by the International Commission on Radiological Protection should be included, while the view was also expressed that they did not refer to accident situations. The view was expressed that a separate paragraph covering accident situations should be inserted. Some delegations expressed the view that a reference to State liability for damage should be incorporated. The view was also expressed that the question of liability for damage and the extent of such liability should also be looked at having regard to articles I and XII of the Liability Convention. The view was expressed that the question of re-entry into the earth's atmosphere of other high-risk space objects (other than those with a nuclear power source) might be worthy of consideration by the Legal Sub-Committee or this Working Group at some later session, if appropriate.

13. The Working Group held its final meeting on 9 April 1981, when it considered and approved the present report. The Working Group felt that the consideration of agenda item 5 at its present session should provide a useful and constructive basis for continuation of work on that item at the twenty-first session of the Legal Sub-Committee taking due account of the results of the eighteenth session of the Scientific and Technical Sub-Committee and the views expressed by all delegations during the present session of the Legal Sub-Committee.

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Annex IV

DOCUMENTS SUBMITTED TO THE LEGAL SUB-COMMITTEE
AT ITS TWENTIETH SESSION

A

ELABORATION OF DRAFT PRINCIPLES GOVERNING THE USE BY
STATES OF ARTIFICIAL EARTH SATELLITES FOR DIRECT
TELEVISION BROADCASTING

Argentina, Brazil, Canada, Chile, Colombia, India,
Indonesia, Iraq, Kenya, Mexico, Niger and
Venezuela: working paper

(A/AC.105/C.2/L.131)

The following negotiating text has been prepared taking into account discussions on direct television broadcast satellites which took place at the twentieth session of the Legal Sub-Committee. The above delegations submit this text as a basis for discussion at the twenty-fourth session of the Committee on the Peaceful Uses of Outer Space.

Negotiating text

3 April 1981

Principles governing the use by States of artificial earth
satellites for international direct television broadcasting

The General Assembly,

(1) In view of the benefits of international direct television broadcasting by means of artificial earth satellites for individuals, peoples, countries and all mankind,

(2) Desiring to safeguard the legitimate rights and interests of all States and to encourage orderly development on an equitable basis of this new and promising means of television broadcasting,

(3) Recognizing the unique characteristics of such satellite broadcasting not encountered in other forms of broadcasting which necessitate besides relevant technical regulations also principles solely applicable in this field,

(4) Considering that States, as well as international governmental and non-governmental organizations, including broadcasting associations, should base their activities in this field upon and encourage international co-operation,

/...

Declares that in their activities in the field of direct television broadcasting by means of artificial earth satellites specifically directed at a foreign State, hereinafter referred to as "international direct television broadcasting by satellite", States should be guided by the following principles:

Purposes and objectives

1. Activities in the field of international direct television broadcasting by satellite should be carried out in a manner compatible with the sovereign rights of States, including the principle of non-intervention as well as with the right of everyone to seek, receive and impart information and ideas as enshrined in the relevant United Nations instruments.
2. Such activities should promote the free dissemination and mutual exchange of information and knowledge in cultural and scientific fields, assist in educational, social and economic development particularly in the developing countries, enhance the qualities of life of all peoples and provide recreation with due respect to the political and cultural integrity of States.
3. These activities should accordingly be carried out in a manner compatible with the development of mutual understanding and the strengthening of friendly relations and co-operation among all States and peoples in the interest of maintaining international peace and security.

Applicability of international law

Activities in the field of international direct television broadcasting by satellite should be conducted in accordance with international law, including the Charter of the United Nations, the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies of 27 January 1967, the relevant provisions of the International Telecommunication Convention and its Radio Regulations and of international instruments relating to friendly relations and co-operation among States and to human rights.

Rights and benefits

Every State has an equal right to conduct activities in the field of international direct television broadcasting by satellite and to authorize such activities by persons and entities under its jurisdiction. All States and peoples are entitled to and should enjoy the benefits from such activities. Access to the technology in this field should be available to all States without discrimination on terms mutually agreed by all concerned.

International co-operation

Activities in the field of international direct television broadcasting by satellite should be based upon and encourage international co-operation. Such co-operation should be the subject of appropriate arrangements. Special

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consideration should be given the needs of the developing countries in the use of international direct television broadcasting by satellite for the purpose of accelerating their national development.

Peaceful settlement of disputes

Any international dispute that may arise from activities covered by these principles should be settled through established procedures for the peaceful settlement of disputes agreed upon by the parties to the dispute in accordance with the provisions of the Charter of the United Nations.

State responsibility

States should bear international responsibility for activities in the field of international direct television broadcasting by satellite carried out by them or under their jurisdiction and for the conformity of any such activities with the principles set forth in this document.

When international direct television broadcasting by satellite is carried out by an international intergovernmental organization, the responsibility referred to in the above paragraph should be borne both by that organization and by the States participating in it.

Duty and right to consult

Any broadcasting or receiving State within an international direct television broadcasting satellite service established between them requested to do so by any other broadcasting or receiving State within the same service should promptly enter into consultations with the requesting State regarding its activities in the field of international direct television broadcasting by satellite, without prejudice to other consultations which these States may undertake with any other State on that subject.

Copyright and neighbouring rights

Without prejudice to the relevant provisions of international law States should co-operate on a bilateral and multilateral basis for protection of copyright and neighbouring rights by means of appropriate agreements between the interested States or the competent legal entities acting under their jurisdiction. In such co-operation they should give special consideration to the interests of developing countries in the use of direct television broadcasting for the purpose of accelerating their national development.

Notification to the United Nations

In order to promote international co-operation in the peaceful exploration and use of outer space, States conducting or authorizing activities in the field of international direct television broadcasting by satellite should inform the Secretary-General of the United Nations to the greatest extent possible of the

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nature of such activities. On receiving this information, the Secretary-General of the United Nations should disseminate it immediately and effectively to the relevant United Nations specialized agencies, as well as to the public and the international scientific community.

Consultation and agreements between States

1. A State which intends to establish or authorize the establishment of an international direct television broadcasting satellite service shall without delay notify the proposed receiving State or States of such intention and shall promptly enter into consultation with any of those States which so requests.
2. An international direct television broadcasting satellite service shall only be established after the conditions set forth in paragraph 1 above have been met and on the basis of agreements and/or arrangements in conformity with the relevant instruments of the International Telecommunication Union and in accordance with these principles.
3. With respect to the unavoidable overspill of the radiation of the satellite signal the relevant instruments of the International Telecommunication Union shall be exclusively applicable.

B

CONSIDERATION OF THE POSSIBILITY OF SUPPLEMENTING THE NORMS
OF INTERNATIONAL LAW RELEVANT TO THE USE OF NUCLEAR POWER
SOURCES IN OUTER SPACE

Canada: working paper
(A/AC.105/C.2/L.129)

Use of Nuclear Power Sources in Outer Space

A. Information concerning the use of nuclear power sources

1. Each launching State should furnish to the Secretary-General of the United Nations, at least one month prior to launching, the planned date and time of launching of a space object containing a nuclear power source. All changes in the planned date of launching should be communicated to the Secretary-General as soon as practicable.
2. Each launching State should provide the Secretary-General of the United Nations at least one month prior to launching, with information relating to generic design, safety tests conducted, basic orbital parameters, and primary and backup devices, systems and procedures. Each launching State should also provide a safety evaluation statement, including an analysis of accident probability, sufficiently comprehensive to assure the international community that the nuclear power source can be utilized safely.

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3. The Secretary-General should transmit this information to all members of the United Nations as early as possible prior to launching.

4. Each launching State should also provide this information for those space objects containing nuclear power sources which have already been launched into and remain in earth orbit.

B. Notification prior to re-entry

1. Whenever it becomes possible to predict with reasonable certainty that a space object containing a nuclear power source will imminently re-enter the earth's atmosphere, the launching State should notify the Secretary-General of the anticipated re-entry and provide him with information adequate to enable member States to assess the likelihood and consequences of a particular re-entry and to carry out preparations for search and recovery of the nuclear power source and protection of their population. That information should include the items listed in annex ... (this annex could follow the format outlined in paragraph 19 of the report of the Working Group on the use of nuclear power sources in outer space on the work of its third session (A/AC.105/C.1/L.126 of 6 February 1981)).

2. The Secretary-General should transmit this information to all Members of the United Nations as early as possible.

3. In situations where the timely transmission of this information via the Secretary-General is not possible, the launching State should communicate the information direct to those States likely to be affected. States at most risk should be informed first.

C. Assistance to States

1. When a State has informed the Secretary-General that a space object containing a nuclear power source will re-enter the earth's atmosphere, all States, including in particular the launching State as well as States possessing space monitoring and tracking facilities, should co-operate to the greatest extent feasible with States along the orbital path of the object in monitoring the object.

2. In doing so, those States should bear in mind the need for prompt notification with sufficient information so as to allow those States likely to be affected by the re-entry of the space object to take necessary precautionary measures.

3. When a re-entry has occurred, the launching State, and other States to the extent feasible, should be prepared to extend necessary assistance if requested to States over whose territory the space object disintegrated or on whose territory debris has landed. All States should bear in mind the special needs of developing countries affected by such an occurrence.

D. Radiation exposure levels

1. During all phases of a space mission involving a space object containing a nuclear power source, including accident situations, radiation exposure for

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individuals and populations should not exceed that recommended by the International Commission on Radiological Protection (ICRP). In any event, where the space object, or debris from the space object, lands outside the territory of the launching State, there should be no radiation exposure to individuals or to the environment.

2. The launching State should ensure that space objects containing a nuclear power source are designed and constructed so as to prevent the release of nuclear radiation into the environment under re-entry conditions as set out in paragraph 1.

3. Where the type of nuclear power source utilized makes it unfeasible to prevent the release of nuclear radiation under re-entry conditions, earth orbits should be used which are sufficiently high to allow radio-active materials to decay before re-entry to a level that would meet the conditions set out in paragraph 1. Reactors should not be activated until the space vehicle has reached a safe operating attitude.
