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COMMITTEE ON THE PEACEFUL USES
OF OUTER SPACE

REPORT OF THE LEGAL SUBCOMMITTEE ON THE WORK OF ITS THIRTY-FIRST SESSION (23 MARCH-10 APRIL 1992)

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INTRODUCTION

Opening of the session

1. The Legal Subcommittee held its thirty-first session at the United Nations Office at Geneva from 23 March to 10 April 1992 under the chairmanship of Mr. Václav Mikulka (Czechoslovakia).

2. At the opening, 550th meeting of the Subcommittee, the Chairman made a statement briefly describing the work to be undertaken by the Subcommittee at its current session. A summary of the Chairman's statement is contained in document A/AC.105/C.2/SR.550.

Adoption of the agenda

3. At the opening meeting, the Subcommittee adopted the following agenda (A/AC.105/C.2/L.186):

1. Opening of the session.

2. Statement by the Chairman.

3. The elaboration of draft principles relevant to the use of nuclear power sources in outer space, with the aim of finalizing the draft set of principles at the current session.

4. Matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union.

5. Consideration of the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries.

Attendance

4. Representatives of the following States members of the Subcommittee attended the session: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, Czechoslovakia, Ecuador, Egypt, France, Germany, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Mexico, Mongolia, Netherlands, Nigeria, Pakistan, Poland, Portugal, Romania, Russian Federation, Sweden, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela and Yugoslavia.

5. Representatives of the following specialized agencies and international organizations attended the session: International Atomic Energy Agency (IAEA), International Telecommunication Union (ITU), European Space Agency (ESA), International Astronautical Federation (IAF) and International Law Association (ILA).

6. The Chairman informed the Subcommittee at its 550th and 551st meetings that requests to participate in meetings of the Subcommittee had been received from Greece and Spain. The Subcommittee agreed that, since the granting of observer status was the prerogative of the Committee on the Peaceful Uses of Outer Space, the Subcommittee could take no formal decision on the matter, but that the representatives of Greece and Spain might attend the formal meetings of the Subcommittee and could direct requests for the floor to the Chairman, should they wish to make statements.

7. A list of representatives of States members of the Subcommittee, States not members of the Subcommittee, specialized agencies and other organizations attending the session, and of the secretariat of the Subcommittee, is contained in document A/AC.105/C.2/INF.24 and Corr.1.

Organization of work

8. In accordance with decisions taken at its opening meeting, the Subcommittee organized its work as follows:

(a) Pursuant to the recommendation of the Committee on the Peaceful Uses of Outer Space that the Legal Subcommittee, on a permanent basis, should rotate each year the order of consideration of substantive agenda items, 1/ it considered the three substantive items on its agenda (see para. 3 above) in the following order: item 5, item 3 and item 4;

(b) It re-established its Working Group on agenda item 3, open to all members of the Subcommittee, and agreed that Mr. Franz Cede, the representative of Austria, should serve as its Chairman;

(c) It re-established its Working Group on agenda item 4, open to all members of the Subcommittee, and agreed that Mr. Estanislao Zawels, the representative of Argentina, should serve as its Chairman;

(d) It re-established its Working Group on agenda item 5, open to all members of the Subcommittee, and agreed that Mr. Raimundo González, the representative of Chile, should serve as its Chairman;

(e) It began its work with a plenary meeting to hear delegations wishing to address the Subcommittee, and then adjourned and reconvened, when appropriate, as a working group, or began its work as a working group.

9. The following delegations participated in the general exchange of views: Argentina, Brazil, China, Ecuador, France, India, Indonesia, Mexico, Nigeria,

United States and Venezuela. The views expressed by those delegations are summarized in documents A/AC.105/C.2/SR.550-558.

10. The Working Group on agenda item 3 held six meetings. The Working Group on agenda item 4 held seven meetings. The Working Group on agenda item 5 held six meetings.

11. The Chairman of the working groups reported to the Subcommittee at its 561st meeting, on 10 April (see annexes I, II and III to the present report). The Subcommittee took note with appreciation of the reports and of the work done in the working groups.

12. At the opening meeting, the Chairman made a statement concerning the utilization of conference services by the Subcommittee. He drew attention to the importance which the General Assembly and the Committee on Conferences attached to the effective utilization of conference services by all United Nations deliberative bodies and noted that the percentage of the use of conference services by the Subcommittee had improved lately, particularly at its two last sessions, in 1990 and 1991. In view of this, the Chairman proposed and the Subcommittee agreed that the following measures, similar to those adopted at its two last sessions, should also be adopted at the current session of the Subcommittee:

(a) The Subcommittee and its working groups should begin their meetings punctually at the scheduled time, even if there was no quorum (14 members);

(b) The Office of Conference Services should be notified as early as possible whenever it was anticipated that any of the services usually provided were not going to be required. If possible, there should be 24 hours' prior notice;

(c) Informal consultations (i.e., outside the auspices of the Subcommittee and its working groups) should not interrupt the work of the Subcommittee or its working groups;

(d) The general rule for annexing documents to the report of the Subcommittee should be that normally any document would be annexed, if at all, only once - to the report of the session in which it was first submitted, but not to later reports;

(e) The Subcommittee should not have plenary meetings in the afternoons when the agenda items on nuclear power sources, on the definition of outer space/geostationary orbit and on outer space benefits were being considered. Instead, the working groups on those items should meet;

(f) Delegations wishing to speak at the Subcommittee's next plenary meeting should inform the Chairman of their intention before the adjournment of the previous plenary meeting. If no such information was received by the Chairman, the next plenary meeting of the Subcommittee should be cancelled, and a working group should meet instead;

(g) The Subcommittee and its working groups should seek to schedule in advance informal consultations at which conference services would not be used. For this purpose, the Subcommittee and its working groups should decide as early as possible whether it is feasible to cancel in advance some of their formal meetings in order to have informal consultations among interested delegations. This measure, if adopted, should not preclude resorting to unscheduled informal consultations following a decision of the Subcommittee or a working group, if such consultations are deemed necessary for attaining progress in deliberations.

13. As to specific steps to implement measure (g) indicated in paragraph 12 above, the Chairman proposed and the Subcommittee agreed not to schedule six formal afternoon meetings on 24, 25 and 31 March, and on 1, 6 and 7 April so that informal consultations among interested delegations could be held instead.

14. The Subcommittee agreed that a similar organization of work as agreed upon at the current session would again serve as the basis for organizing the work of the Subcommittee's thirty-second session.

15. Pursuant to paragraph 11 of General Assembly resolution 46/190, which had been brought to the Chairman's attention by the Chairman of the Committee on Conferences, the Chairman undertook informal consultations for the purpose of further improving the utilization of conference servicing resources by the Subcommittee. As a result of those informal consultations, the Chairman proposed and the Subcommittee agreed that at its next session, in 1993, the Subcommittee should adopt the following additional measures:

(a) The Subcommittee should seek to reduce, by one a week, the number of morning plenary meetings and to allocate the time saved for the meetings of relevant working groups. For this purpose, the Chairman should set a deadline for closing lists of speakers for the general exchange of views and for each of the substantive agenda items;

(b) The Subcommittee and its working groups should begin their morning meetings at 10 a.m., with the understanding that this does not relate to and does not affect the question of the length of the session;

The Subcommittee also agreed to continue actively its efforts aimed at ensuring optimum efficiency of its work.

16. In the course of a general exchange of views, some delegations expressed their grave concern over the threat of extending the arms race into outer space. They believed that every effort should be made to avert that danger and that the Committee on the Peaceful Uses of Outer Space, as well as its subcommittees, could make important contributions in that regard, playing a supportive role for other international forums dealing with the problem of preventing an arms race in outer space. Those delegations proposed that machinery should be established for cooperation between the Committee on the Peaceful Uses of Outer Space and the Ad Hoc Committee on Prevention of the Arms Race in Outer Space of the Conference on Disarmament, and that the

Chairman of the Ad Hoc Committee might be invited to the Subcommittee to make a statement on the current status of the discussions in the Conference. In this context, one delegation recalled that its country had proposed, in the Conference on Disarmament, an amendment to article IV 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, of 1967, with a view to increasing its scope to a total prohibition of weapons in outer space, thereby guaranteeing the peaceful use of that region.

17. Other delegations, in the course of a general exchange of views, expressed the view that disarmament questions did not fall within the competence of either the Committee on the Peaceful Uses of Outer Space or its subsidiary bodies. They pointed out that the question of the prevention of an arms race in outer space was properly a matter for the Conference on Disarmament. They were of the view that the Committee and its subcommittees should not be distracted from the task of promoting international cooperation in the peaceful uses of outer space by being drawn into areas belonging to the mandates of other forums.

18. In the view of some delegations, the question of manned space flights could be a subject for the consideration of the Subcommittee in the future.

19. In the course of a general exchange of views, some delegations referred to the threat posed by space debris to man's future activities in outer space. Those delegations stated that an international agreement specifically focusing on space debris might be necessary, and that to this end it was necessary to resolve a series of legal issues, such as the definition of space debris, jurisdiction over and control of space debris and liability for damage caused by space debris. In this context, they considered it advisable for the Committee on the Peaceful Uses of Outer Space and its two subcommittees to begin consideration of all technical, legal and political issues relating to space debris.

20. The Subcommittee held a total of 12 meetings. The views expressed at those meetings are summarized in documents A/AC.105/C.2/SR.550 to 561.

21. At its 561st meeting, on 10 April, the Subcommittee adopted the present report and concluded the work of its thirty-first session.

I. THE ELABORATION OF DRAFT PRINCIPLES RELEVANT TO THE USE OF NUCLEAR POWER SOURCES IN OUTER SPACE, WITH THE AIM OF FINALIZING THE DRAFT SET OF PRINCIPLES AT THE CURRENT SESSION (AGENDA ITEM 3)

22. The Chairman made an introductory statement on agenda item 3 at the 554th meeting, on 27 March. He referred to the work of the Subcommittee at its thirtieth session in 1991.

23. The Chairman drew attention to the fact that the General Assembly, in its resolution 46/45 of 9 December 1991, had decided that the Subcommittee, taking into account the concerns of all countries, particularly those of developing countries, should continue, through its Working Group, the elaboration of draft principles relevant to the use of nuclear power sources in outer space, with the aim of finalizing the draft set of principles at the current session of the Subcommittee.

24. The Subcommittee noted that its work in respect of the use of nuclear power sources in outer space had been reviewed by the Committee on the Peaceful Uses of Outer Space at its thirty-fourth session in 1991, that substantial progress had been made in the substantive consideration by the Committee of that subject and that the relevant parts of the Committee's report 2/ were contained in paragraphs 101 to 115 and 151 (a). The Subcommittee also noted that the subject of the use of nuclear power sources in outer space had been under consideration in the Scientific and Technical Subcommittee at its twenty-ninth session in 1992, and that the relevant parts of the report of that Subcommittee were contained in document A/AC.105/513, chapter IV and annex III.

25. The Subcommittee had before it working papers submitted at its previous session in 1991, which are set out in section A of annex IV to the Subcommittee's 1991 report (A/AC.105/484). The Subcommittee also had before it a working paper submitted at its current session by the delegations of Canada and Germany (A/AC.105/C.2/L.154/Rev.11), which is set out in section A of annex IV to the present report.

26. The views expressed by delegations during the debate on agenda item 3 are contained in summary records A/AC.105/C.2/SR.554 to 557.

27. As mentioned in paragraph 8 (b) above, the Subcommittee, at its 550th meeting, re-established its Working Group on agenda item 3 under the chairmanship of Mr. F. Cede, the representative of Austria.

28. At the 561st meeting, on 10 April 1992, the Chairman of the Working Group reported to the Subcommittee. The Subcommittee took note with appreciation of the report, which is set out in annex I to the present report. The Subcommittee agreed that the "working non-papers" contained in the above-mentioned report might be considered at the next session of the Committee on the Peaceful Uses of Outer Space as a contribution to meeting the aim set out in General Assembly resolution 46/45 for finalizing the Principles on nuclear power sources.

II. MATTERS RELATING TO THE DEFINITION AND DELIMITATION OF OUTER SPACE AND TO THE CHARACTER AND UTILIZATION OF THE GEOSTATIONARY ORBIT, INCLUDING CONSIDERATION OF WAYS AND MEANS TO ENSURE THE RATIONAL AND EQUITABLE USE OF THE GEOSTATIONARY ORBIT WITHOUT PREJUDICE TO THE ROLE OF THE INTERNATIONAL TELECOMMUNICATION UNION (AGENDA ITEM 4)

29. The Chairman made an introductory statement on agenda item 4 at the 558th meeting, on 3 April. He referred to the work of the Subcommittee at its thirtieth session in 1991.

30. The Chairman drew attention to the fact that the General Assembly, in its resolution 46/45, had decided that the Subcommittee, taking into account the concerns of all countries, particularly those of developing countries, should continue, through its Working Group, its consideration of matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit, without prejudice to the role of the International Telecommunication Union.

31. The Subcommittee noted that the subject of the geostationary orbit had been under consideration in the Scientific and Technical Subcommittee at its twenty-ninth session, in 1992, and that the relevant part of the report of that Subcommittee (A/AC.105/513) was contained in paragraphs 67 to 72.

32. The Subcommittee had before it working papers submitted at its previous sessions under this agenda item. The Subcommittee also had before it a working paper entitled "Questions concerning the legal regime for aerospace objects" (A/AC.105/C.2/L.189) submitted at its current session by the delegation of the Russian Federation, which is set out in section B of annex IV to the present report.

33. The views expressed by delegations during the debate on agenda item 4 are contained in summary records A/AC.105/C.2/SR.558 to 560.

34. As mentioned in paragraph 8 (c) above, the Subcommittee, at its 550th meeting, re-established its Working Group on agenda item 4 under the chairmanship of Mr. E. Zawels, the representative of Argentina.

35. At the 561st meeting, on 10 April, the Chairman of the Working Group reported to the Subcommittee. The Subcommittee took note with appreciation of the report, which is set out in annex II to the present report.

III. CONSIDERATION OF THE LEGAL ASPECTS RELATED TO THE APPLICATION OF THE PRINCIPLE THAT THE EXPLORATION AND UTILIZATION OF OUTER SPACE SHOULD BE CARRIED OUT FOR THE BENEFIT AND IN THE INTERESTS OF ALL STATES, TAKING INTO PARTICULAR ACCOUNT THE NEEDS OF DEVELOPING COUNTRIES (AGENDA ITEM 5)

36. The Chairman made an introductory statement on agenda item 5 at the 550th meeting, on 23 March 1992. He referred to the work of the Subcommittee at its thirtieth session in 1991.

37. The Chairman drew attention to the fact that the General Assembly, in its resolution 46/45, had decided that the Subcommittee, taking into account the concerns of all countries, particularly those of developing countries, should continue, through its Working Group, its consideration of the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries.

38. The Subcommittee had before it the replies received (A/AC.105/C.2/15 and Add.1-13) to a note verbale dated 26 September 1988, addressed by the Secretary-General to the States Members of the United Nations inviting them to submit their views as to the priority of specific subjects under agenda item 5 and to provide information on their national legal frameworks, if any, relating to the development of the application of the principle contained in article 1 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.

39. The Subcommittee also had before it the replies received (A/AC.105/C.2/16 and Add.1-10) to a note verbale dated 20 December 1989, addressed by the Secretary-General to the States Members of the United Nations inviting them to submit their views on the subject of international agreements that Member States had entered into that were relevant to the principle that the exploration and use of outer space shall be carried out for the benefit and in the interests of all countries, taking into particular account the needs of developing countries.

40. The Subcommittee further had before it a paper submitted by the Chairman of the Working Group on agenda item 5 as a background paper (A/AC.105/C.2/L.187), which summarized in an analytical manner the views and information contained in the replies of Member States referred to in paragraphs 38 and 39 above. The Subcommittee also had before it a working paper submitted at its previous session by the delegations of Argentina, Brazil, Chile, Mexico, Nigeria, Pakistan, the Philippines, Uruguay and Venezuela (A/AC.105/C.2/L.182) and a working paper submitted at its current session by the delegation of Nigeria (A/AC.105/C.2/L.188). Those papers are set out in section C of annex IV to the present report.

41. The views expressed by delegations during the debate on agenda item 5 are contained in summary records A/AC.105/C.2/SR.550, 552 and 553.

42. As mentioned in paragraph 8 (d) above, the Subcommittee, at its 550th meeting re-established its Working Group on agenda item 5 under the chairmanship of Mr. Raimundo González, the representative of Chile.

43. At the 561st meeting, on 10 April 1992, the Chairman of the Working Group reported to the Subcommittee. The Subcommittee took note with appreciation of the report, which is set out in annex III to the present report.

Notes

1/ See Official Records of the General Assembly, Forty-fifth Session, Supplement No. 20 (A/45/20), para. 143.

2/ Official Records of the General Assembly, Forty-sixth Session, Supplement No. 20 (A/46/20).

Annex I

REPORT OF THE CHAIRMAN OF THE WORKING GROUP ON AGENDA ITEM 3 (THE ELABORATION OF DRAFT PRINCIPLES RELEVANT TO THE USE OF NUCLEAR POWER SOURCES IN OUTER SPACE, WITH THE AIM OF FINALIZING THE DRAFT SET OF PRINCIPLES AT THE CURRENT SESSION)

1. On 27 March 1992, the Legal Subcommittee re-established its Working Group on agenda item 3.

2. The Working Group had before it the report of the Legal Subcommittee on the work of its thirtieth session in 1991 (A/AC.105/484), which contained, in annexes I and IV, section A, respectively, the report of the Chairman of the Working Group and the working papers that were before the Working Group at the thirtieth session. It also had before it the report of the Scientific and Technical Subcommittee on the work of its twenty-ninth session, in 1992 (A/AC.105/513), which contained in its chapter IV a section on the use of nuclear power sources in outer space, as well as the report of the Committee on the Peaceful Uses of Outer Space on the work of its thirty-fourth session in 1991, a/ which contained, in paragraphs 101 to 115 and 151 (a), an account of the deliberations of the Committee on the present agenda item.

3. The Working Group also had before it a working paper submitted to the Legal Subcommittee at its current session by the delegations of Canada and Germany (A/AC.105/C.2/L.154/Rev.11). The working paper is set out in section A of annex IV to the report of the Subcommittee.

4. Upon the suggestion of the Chairman, the Working Group agreed to work on the basis of the above-mentioned working paper submitted by the delegations of Canada and Germany, which contained a composite text of draft principles, including both principles agreed upon and those not yet agreed upon, and to consider therefore only the preamble and draft principles 1A, 4 and 12. The Working Group also agreed that after recording consensus on the entire text, necessary linguistic and editorial refinements should be effected.

5. The Working Group further agreed that, while some formal meetings of the Working Group should be held to permit delegations to make statements and to enable the Group to record decisions, much of the time allocated to the Working Group could more profitably be used for informal consultations with the object of resolving the remaining differences of view.

6. The views expressed on working paper A/AC.105/C.2/L.154/Rev.11 at the formal meetings of the Working Group are summarized below.

Preamble

7. The view was expressed that the text of the preamble had been formulated in order to bridge the remaining differences of view on the set of principles as a whole.

8. The view was expressed that a new paragraph 6 should be added to the preamble, as follows:

> "Affirming also that the use of nuclear power sources in outer space shall be carried out strictly in accordance with article IV 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."

Principle 1A. Use of terms

9. The view was expressed that the fifth paragraph of the preamble, reading "Affirming that this set of principles applies to nuclear power sources in outer space devoted to generation of electric power on board space objects", should be moved to draft principle 1A, since it gave a definition of the term "nuclear power source" as used in the draft principles.

10. Some delegations expressed the view that the definition contained in draft principle 1A of "launching State" or "State launching" should also encompass States which had designed or manufactured a space object with a nuclear power source on board. In the view of those delegations, since such States possessed the full technical knowledge relating to the space object, their responsibility should extend to the undertaking of safety assessments, the observance of scientific and technical guidelines, bearing the costs of assistance in clean-up operations and payment of compensation for damage owing to technical and scientific faults.

11. The view was expressed that the second sentence of paragraph 1 of draft principle 1A ("If the object is not registered in accordance with the above-mentioned Convention, the terms 'launching State' or 'State launching' mean the State which exercises jurisdiction and control over such space object.") should become a separate new paragraph 2 with the current paragraph 2 being renumbered as paragraph 3.

Principle 4. Safety assessment

12. The view was expressed that the wording of paragraph 1, which provided that the safety assessment shall, inter alia, "deal with all systems involved, including, for example, the means of launching, the space platform, ... and the means of control and communication between ground and space", was inconsistent with the requirement in paragraph 2 that the assessment shall respect the guidelines and criteria for safe use contained in draft principle 3, since those three systems were not addressed in the guidelines and criteria in draft principle 3, which only addressed nuclear power sources. Moreover, it was felt that the language in paragraph 1 could lead to an incorrect understanding that one State, not necessarily familiar with the different systems involved, would have to conduct a thorough and comprehensive safety assessment on all of them. While it was desirable that one State would coordinate the task of ensuring the completion of the safety assessment, it

was not advisable for a principle to determine beforehand which one of the States involved in the launching of a space object with a nuclear power source would assume this responsibility, since that should be a decision to be taken by the parties involved in the launching. It was also stated that the question of prior notification should have to be adequately addressed in principle 4.

Principle 12. Revision

13. Some delegations expressed the view that the time period within which a review of the set of principles after their adoption is to take place should be shortened to take into account the rapidity of scientific and technological changes in the area of nuclear power. They believed that such a review could commence from two to five years from the adoption of the set of principles. The view also was expressed that a shorter time frame for revision would enable the taking into account of new recommendations of the International Commission on Radiological Protection (ICRP).

14. Some delegations expressed the view that, even after the adoption of the set of principles, the subject of nuclear power sources should remain on the agenda of the Committee on the Peaceful Uses of Outer Space and its subcommittees.

15. The view was expressed that the provision on revision, although entitled a principle, could not be so regarded from a legal standpoint.

16. The view was expressed that the sixth paragraph of the preamble should be deleted and that its substance should be incorporated in draft principle 12, which would then read as follows:

"Principle 12. Review

"These Principles shall be reviewed by the Committee on the Peaceful Uses of Outer Space no later than two years after their adoption, in view, inter alia, of emerging nuclear power applications, of evolving international recommendations on radiological protection or of any other circumstances that affect these Principles."

17. The view was expressed that the title of draft principle 12 should be "Review and revision".

Informal consultations

18. After intensive informal consultations, the Chairman of the Working Group, on 2 April 1992, presented a "working non-paper" which reflected views of the results of discussions conducted during those consultations with regard to the preamble and draft principle 12. The Chairman believed that the "working non-paper" could provide a good basis for reaching consensus on the preamble and draft principle 12 in the very near future. The "working non-paper" read as follows:

"PRINCIPLES RELEVANT TO THE USE OF NUCLEAR POWER SOURCES IN OUTER SPACE

"Preamble

"The General Assembly,

"Recognizing that for some missions in outer space nuclear power sources are particularly suited or even essential due to their compactness, long life and other attributes,

"Recognizing that the use of nuclear power sources in outer space should focus on those applications which take advantage of the particular properties of nuclear power sources,

"Recognizing that the use of nuclear power sources in outer space should be based on a thorough safety assessment, including probabilistic risk analysis, with particular emphasis on reducing the risk of accidental exposure of the public to harmful radiation or radioactive material,

"Recognizing the need, in this respect, for a set of principles containing provisions to ensure safe use of nuclear power sources in outer space,

"Affirming that this set of Principles applies to nuclear power sources in outer space devoted to generation of electric power on board space objects, (which have characteristics generally comparable to those of systems used and missions performed at the time of the adoption of the Principles,)*

"(Affirming also that the use of nuclear power sources in outer space shall be carried out in accordance with article IV 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,)**

"Adopts the Principles Relevant to the Use of Nuclear Power Sources in Outer Space as set forth below.

"* Some delegations reserved their position concerning the removal of these brackets, pending the outcome of the finalization of the whole set of Principles.

"** The delegation of Mexico expressed its readiness to withdraw this proposal, once agreement on the rest of the set of Principles was achieved.

"Principle 12: Review and revision

"These Principles shall be reviewed by the Committee on the Peaceful Uses of Outer Space no later than two years after their adoption in order to consider, for the purpose of their effective implementation, the possible revision of these Principles, bearing in mind emerging nuclear power applications, evolving international recommendations on radiological protection and any other circumstances that may affect one or more of these principles."

19. As a result of intensive informal, including bilateral, consultations between the Chairman and some delegations, the Chairman presented a "working non-paper" which reflected his views of the result of those consultations with regard to draft principles 1A and 4. The Chairman believed that this "working non-paper", while not committing any delegation, could provide a good basis for reaching consensus on draft principles 1A and 4 in the very near future. The "working non-paper" read as follows:

"Principle 1A: Use of terms

"1. For the purpose of these Principles, the terms 'launching State' and 'State launching' mean the State which exercises jurisdiction and control over a space object with NPS on board at a given point in time relevant to the principle concerned.

"2. For the purpose of principle 9, the definition of the term 'launching State' as contained in that principle is applicable.

"3. For the purposes of principle 3, the term 'foreseeable' describes a class of events or circumstances whose overall probability of occurrence is such that it is considered to encompass credible possibilities for purposes of safety analysis. The term 'general concept of defence-in-depth' when applied to NPS in outer space considers the use of design features and mission operations in place of or in addition to active systems, to prevent or mitigate the consequences of system malfunctions. Redundant safety systems are not necessarily required for each individual component to achieve this purpose. Given the special requirements of space use and of varied missions, no particular set of systems or features can be specified as essential to achieve this objective. For the purposes of paragraph 2.4 of principle 3, the term 'made critical' does not include actions such as zero-power testing which are fundamental to ensuring system safety.

"Principle 4: Safety assessment

"1. A launching State, as defined in principle 1A, paragraph 1, at the time of launch shall, prior to the launch, through cooperative arrangements, where relevant, with those which have designed,

constructed, or manufactured the NPS, or will operate the space object, or from whose territory or facility such an object will be launched, ensure that a thorough and comprehensive safety assessment is conducted. This assessment shall cover as well all relevant phases of the mission and shall deal with all systems involved, including the means of launching, the space platform, the NPS and its equipment and the means of control and communication between ground and space.

"2. This assessment shall respect the guidelines and criteria for safe use contained in principle 3.

"3. Pursuant to 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, the results of this safety assessment, together with, to the extent feasible, an indication of the approximate intended time frame of the launch, shall be made publicly available prior to each launch, and the Secretary-General of the United Nations shall be informed on how States may obtain such results of the safety assessment as soon as possible prior to each launch."

20. The Working Group held its final meeting on 7 April 1992, when it considered and approved the present report.

Notes

a/ Official Records of the General Assembly, Forty-sixth Session, Supplement No. 20 (A/46/20).

Annex II

REPORT OF THE CHAIRMAN OF THE WORKING GROUP ON AGENDA ITEM 4 (MATTERS RELATING TO THE DEFINITION AND DELIMITATION OF OUTER SPACE AND TO THE CHARACTER AND UTILIZATION OF THE GEOSTATIONARY ORBIT, INCLUDING CONSIDERATION OF WAYS AND MEANS TO ENSURE THE RATIONAL AND EQUITABLE USE OF THE GEOSTATIONARY ORBIT WITHOUT PREJUDICE TO THE ROLE OF THE INTERNATIONAL TELECOMMUNICATION UNION)

1. On 23 March 1992, the Legal Subcommittee re-established its Working Group on agenda item 4.

2. The Working Group had before it the report of the Legal Subcommittee on the work of its thirtieth session in 1991 (A/AC.105/484), which contained in annex II the report of the Chairman of the Working Group at the thirtieth session. It also had before it the report of the Scientific and Technical Subcommittee on the work of its twenty-ninth session in 1992 (A/AC.105/513), which considered, in chapter VI, inter alia, the subject of the "physical nature and technical attributes of the geostationary orbit".

3. The Working Group also had before it a working paper entitled "Questions concerning the legal regime for aerospace objects" (A/AC.105/C.2/L.189), submitted to the Legal Subcommittee at its current session by the delegation of the Russian Federation, which is set out in section B of annex IV to the report of the Subcommittee.

4. The following documents submitted at previous sessions of the Legal Subcommittee and of the Committee on the Peaceful Uses of Outer Space were referred to in the course of the discussions: "Approach to the delimitation of airspace and outer space", submitted to the Subcommittee at its twenty-second session by the delegation of the Union of Soviet Socialist Republics (A/AC.105/C.2/L.139); "Draft general principles governing the geostationary orbit", submitted to the Subcommittee at its twenty-third session by the delegations of Colombia, Ecuador, Indonesia and Kenya (A/AC.105/C.2/L.147); "Draft basic provisions of the General Assembly resolution on the delimitation of airspace and outer space and on the legal status of the geostationary satellites' orbital space", submitted to the Committee at its twenty-second session by the delegation of the Union of Soviet Socialist Republics (A/AC.105/L.112); "Compromise proposal on the question related to the definition and delimitation of outer space", submitted to the Committee at its thirtieth session by the delegation of the Union of Soviet Socialist Republics (A/AC.105/L.168); and a "working non-paper" circulated at the Subcommittee's thirtieth session in 1991 (A/AC.105/484, annex II, para. 12).

5. On the question of the organization of its work, pursuant to a recommendation by the Chairman, the Working Group agreed that each aspect of the agenda item (namely, the definition and delimitation of outer space, on

the one hand, and the geostationary orbit, on the other) should be discussed by the Working Group separately.

6. The views expressed in the discussion within the Working Group are summarized below.

Question of the definition and delimitation of outer space

7. In accordance with a request expressed by a number of delegations during the thirtieth session of the Legal Subcommittee (A/AC.105/484, annex II, para. 10), the delegation of the Russian Federation introduced a working paper (A/AC.105/C.2/L.189) on the questions concerning the legal regime for aerospace objects. The Russian delegation explained that there was currently an impasse in the Working Group between States which believed that the delimitation of airspace and outer space was necessary, and States which believed that it was not; the above-noted working paper was submitted as a starting-point for a discussion which might break this impasse.

8. The Working Group expressed its appreciation at the submission of working paper A/AC.105/C.2/L.189. Some delegations, while noting that they would need time to study the paper thoroughly, expressed the view that a debate on the basis of that document would be useful and might result in a new approach which would resolve the impasse.

9. Some delegations expressed the view that certain questions raised in the working paper were directly relevant to aeronautical activities, and therefore the views of the International Civil Aviation Organization (ICAO) on the subject-matter of the paper would be pertinent and helpful.

10. Some delegations expressed the view that replies to the questions raised in the working paper would eventually lead to the necessity to answer the question which had been before the Subcommittee for a very long time, namely, whether the delimitation of outer space and airspace was necessary or not, and, if it was, the criteria upon which such delimitation might be based. Some delegations also expressed the view that it would be preferable if, in the first instance, the sponsor of the working paper attempted to answer the questions posed therein.

11. The view was expressed that while the title of working paper A/AC.105/C.2/L.189 referred to the legal regime of aerospace objects, it dealt by inference with the more general problem of the delimitation of airspace and outer space, and that two different approaches in this connection could be taken: to consider the problems arising from aerospace objects and activities as one of the aspects of the problem of delimitation, or to try to discuss delimitation independently.

12. Replying to some delegations, the sponsor of the paper explained that there existed an evident link between the subject of the paper and the problem of delimitation. The objective of the paper was to stimulate a debate which

would clarify at least one practical matter: is a clearly defined boundary between airspace and outer space needed for international legal regulation of the flights of aerospace objects? The question of the need to delimit outer space and airspace had been discussed in a theoretical context for many years without fruitful results. The working paper attempted to focus the discussion on circumstances which actually occurred. The sponsor of the paper also stated that the list of questions contained in the paper was not exhaustive, and that the finding of answers to those questions was the task for all delegations and not for the sponsor alone.

13. In connection with the debate on working paper A/AC.105/C.2/L.189, some delegations, reiterating views expressed at previous sessions of the Subcommittee, stated that the delimitation of airspace and outer space was a practical and logical necessity in order to establish a distinct boundary between the legal regime of airspace, with its inherent features of State sovereignty, territorial integrity and security, and the legal regime of outer space, which provided for the free exploration and use of outer space for the benefit of all countries. Those delegations believed that the delimitation of outer space should be accomplished by a legally binding international instrument. Some delegations expressed the view that there were convincing legal reasons, based on the international instruments in force, which made it essential to delimit and define outer space.

14. In connection with the debate on working paper A/AC.105/C.2/L.189, other delegations, reiterating views expressed at previous sessions of the Subcommittee, stated that there was currently no need to establish a boundary between airspace and outer space. They believed that the lack of such a boundary had not led to any practical problems and that no convincing juridical or practical reasons had been introduced in favour of establishing an arbitrary line delimiting airspace and outer space. They also considered that, without clear scientific criteria, not only would the delimitation not be appropriate, but it could also lead to a curtailing of future space activities.

15. The view was expressed that, although the delimitation of outer space and airspace had not seemed necessary at the time the 1967 Outer Space Treaty was concluded, the issue should now be reconsidered in the light of events since 1967, such as the extensive utilization of outer space since that date. The view was further expressed that the element needed to effect the delimitation was the political will to do so.

16. The view was expressed that the definition of an aerospace object contained in the first paragraph of working paper A/AC.105/C.2/L.189 was a departure from the traditional concept of a space object under the doctrines of outer space law, since that definition encompassed a hybrid vehicle capable of flying both in airspace and in outer space. The view was further expressed that it would be useful to elaborate and agree on the nature of this hybrid concept, also taking into account definitions of air law.

17. The view was expressed that the merit of the working paper lay in its abandoning the sterile attempt to prove the need for the delimitation of outer space and airspace by deductive reasoning; rather, the working paper adopted the more useful inductive approach of focusing on actual occurrences and the needs that might be created by those occurrences. The view was further expressed that, as far as the general question of delimitation between airspace and outer space was concerned, it was for the proponents of delimitation to provide convincing arguments, if any, in favour of establishing a boundary between airspace and outer space, and not for the opponents of delimitation to provide arguments against it.

18. The view was also expressed that it was not possible to legitimize the status quo since that would clearly contradict the relevant rules of space law. In that context, the view was also expressed that there was no room for other interpretations of any of those rules.

19. The view was expressed that working paper A/AC.105/C.2/L.189 should stimulate inquiry into two basic issues: whether the nature and character of the object launched should be identical with, or different from, the medium of its transit or stay, and whether it was advisable to continue defining various components of outer space activities, or rather to define outer space itself. In this view, the working paper concerning the legal regime for aerospace objects further reinforced the need for a clear delimitation between airspace and outer space, and thus for defining outer space.

20. The view was expressed that there were two types of vehicles which could fall within the category of aerospace objects. The first category would include objects which passed through foreign airspace during launch or landing and which entered airspace from the outer space orbit and after the flight in airspace returned back to the orbit. The second category would include aerospace planes the main function of which would be to provide transportation between two points on Earth while passing briefly through outer space. In the view of that delegation, the definition of an aerospace object contained in working paper A/AC.105/C.2/L.189 was applicable to the first of the two above categories, and all objects belonging to that category were in fact space objects. In such a case, the arguments for and against delimitation would remain intact and would not be influenced by using the term "aerospace object" for what was actually a space object. As for the airspace planes, it was necessary, in the view of that delegation, to determine which law - air, space or a new aerospace law - should apply to such planes' flights. In reply, the view was expressed by the sponsor of the working paper that the definition of aerospace objects contained in the paper was intended to cover both of the above-mentioned categories.

21. The view was expressed that, while working paper A/AC.105/C.2/L.189 presented a number of interesting issues, it was not evident that a separate legal regime was required for so-called aerospace systems. In the view of that delegation, the general discussion of the ideas expressed in the paper could continue especially with a view to determining what practical effect a possible special legal regime for aerospace objects would have on the existing

international legal regime of outer space envisaged, for example, by the 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space and by the 1972 Convention on International Liability for Damage Caused by Space Objects.

22. The view was expressed that one possible task, in the light of the working paper presented by the Russian Federation, could be to identify or to clarify the practices currently observed with regard to the launching and landing of space objects with some of the characteristics of "aerospace objects", so as to enable delegations, once that work was completed, to consider the subsequent steps to be taken.

23. In summing up the discussion on the question of the definition and delimitation of outer space, the Chairman expressed the view that the debate on working paper A/AC.105/C.2/L.189 was of a preliminary character and did not prejudge the positions of various delegations with regard to the appropriateness of delimiting airspace and outer space. The Chairman further believed that the approach suggested in the working paper was positive and could form a suitable basis, among other bases, for future discussions in the Working Group. The Working Group agreed with those views.

Question of the geostationary orbit

24. At the commencement of the debate, the Chairman of the Working Group recalled that a "working non-paper" had been circulated by a group of delegations at the last session of the Working Group in 1991. The text of the "working non-paper" was as follows:

"GEOSTATIONARY SATELLITE ORBIT

"1. The geostationary satellite orbit is a limited natural resource and, therefore, must be used in a rational and equitable manner and for the benefit of all mankind, taking into account the special needs of the developing countries.

"2. The development of space science and technology applied in the utilization of the geostationary satellite orbit is of fundamental importance for the economic, social and cultural development of the peoples of all States.

"3. The geostationary satellite orbit must be used exclusively for peaceful purposes for the benefit of all mankind through promoting international cooperation and understanding.

"4. The geostationary satellite orbit is a geometric locus in outer space where an object in orbit behaves differently with respect to the Earth from the way in which it would behave in any other locus in outer space.

"5. In view of all the foregoing, a special legal regime, complementary to that governing such other loci in outer space, is needed so as to ensure that the resource in question is used, in accordance with the relevant international agreements, in a rational, effective, economical and equitable manner.

"6. All States should be guaranteed in practice equitable access to the geostationary satellite orbit, in accordance with articles 10 and 33 of the Nairobi ITU Convention.

"7. In practice, equity would be achieved through the establishment of a concrete, specific preference, which would consist in the following:

"7.1. Where a developed country and a developing country have equal claims to access to the same orbital position, or where a country which has already had access and another country which has not yet had access have equal claims, preference shall be given to the developing country or to the country which has not yet had access."

25. It was decided that general remarks should be made on the subject under review, after which the Working Group could conduct a paragraph-by-paragraph reading of the above "working non-paper".

26. The view was expressed that both the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee had a mandate to consider questions relating to the use of the geostationary orbit with a view to elaborating general principles on this question. This work should be complementary to the activities of the International Telecommunication Union (ITU), closely linked to them and without prejudice to the role of ITU. In the view of that delegation, cooperation with ITU was needed in the Subcommittee's work on this subject, and active participation of the ITU representative in the debate would be very helpful. That delegation suggested that the following text could be added as subparagraph 7.2 in the above "working non-paper":

"Notwithstanding the above provision, if a claim was raised for a certain GSO position by a State which has no adequate capability to launch the satellite in the immediate future, while at the same time a claim was raised by another State which has the capability to do so immediately, then the substantiated claim in the latter case should prevail, in accordance with the principle of effectiveness as enunciated in the ITU Convention."

That delegation explained that the above text was suggested for the consideration of the sponsors of the "working non-paper" who might wish to use it in the future. The delegation further expressed the view that the role of ITU should also be mentioned in the relevant document.

27. The view was expressed that the "working non-paper" had been favourably received at the last session of the Working Group in 1991, and no criticism had been offered against its provisions. In the view of that delegation, the

approach suggested in the paper was not controversial since it reflected the provisions of articles 10 and 33 of the ITU Convention (Nairobi), which had also been reproduced in the more recent ITU Convention (Nice). That delegation believed that a special legal regime should be elaborated for the geostationary orbit; such a regime would provide preferential rights for countries which did not have access to it or which were developing countries. The delegation further expressed the view that, to cover certain cases not currently covered by subparagraph 7.1, the following text could be added as subparagraph 7.2 in the above-noted "working non-paper" (with the previously proposed subparagraph 7.2 (see para. 26 above) renumbered as subparagraph 7.3):

> "When there are equal claims by two or more developing countries, or by two or more developed countries, the principle of 'first-come, first-served' shall be applied."

28. Some delegations expressed the view that, when discussing the question of the geostationary orbit, the Working Group should consider the problem of removing non-functioning objects from the geostationary orbit.

29. The view was expressed that existing ITU regulations, as well as provisions of the 1967 Outer Space Treaty, in particular its articles I and IX, provided a good basis for elaborating a code of conduct or certain minimum standards which would regulate the activities of States in the utilization of the geostationary orbit. Such a document should, in particular, deal with the problem of non-functioning space objects, space debris and various fragments and particles which already created certain risks in the utilization of the orbit, since such risks affected the equitable utilization of the orbit by all States. In the view of that delegation, the preparation of the document would require taking into account other principles of international law, such as the duty to conduct talks in good faith and achieve a result, the duty to prevent damage, and responsibility in connection with activities which bear high risk.

30. The view was expressed that some of the paragraphs in the "working non-paper" consisted of statements of fact rather than legal principles, and, while some of those statements were acceptable, others gave rise to certain doubts. For example, it was not clear whether the formulation of paragraph 4 was scientifically accurate. Furthermore, in the view of that delegation, the contents of the "working non-paper" might partly overlap with procedures already adopted by ITU, and therefore it would be advisable to obtain the comments of ITU on the "working non-paper".

31. The view was expressed that the term "rational and equitable manner" in paragraph 1 of the "working non-paper" was ambiguous and required clarification. In reply, it was stated that the term was compatible with the relevant provision of article 33 of the ITU Convention and should have a similar meaning.

32. The view was expressed that the geostationary orbit could be used for purposes other than telecommunication and therefore it was necessary to

elaborate a special legal regime for its use for the benefit of all countries, and that the General Assembly had provided the Working Group with an adequate mandate to realize this objective. The question under review should be analysed in a much broader context than telecommunication, and the review should include physical, scientific, political and legal aspects, with its main thrust to the political-legal issues. In the view of that delegation, the work of the Subcommittee should be results-oriented and should lead eventually to the elaboration and adoption of an appropriate legal instrument.

33. Some delegations expressed the view that the sponsors of the "working non-paper" should submit their proposal in a more formal way by introducing an official working paper based on the existing "working non-paper", and that such action would help to have a more constructive and focused debate on the subject under review. Some delegations expressed the view that paragraphs 4 and 5 of the non-paper should be reformulated in order to avoid the use of terms like "locus" and "loci" which might be difficult to interpret. The view was expressed that some elements of the "working non-paper" (such as the opening language of paragraph 7.1) needed clarification.

34. In reply to a number of statements made during the debate, one of the sponsors of the "working non-paper" stated that the status of the document under review was not particularly important for the purpose of having a substantive debate, that specific additions to the non-paper made by a number of delegations were valuable contributions which could be incorporated in the text of a future legal document, that the idea contained in paragraph 4 of the non-paper was a confirmation of recognized scientific fact which, in a future legal document, could be incorporated in a preamble, and that since that provision was not a definition, it did not require further scientific analysis by the Scientific and Technical Subcommittee or by any other body. That delegation also believed that the above concern could be resolved by adding the words "inter alia" after the words "in outer space where" in the text of paragraph 4. That delegation added that when the contents of the "working non-paper" had been further refined, it might be presented as a formal working paper. In reply, the view was expressed that sufficient comments and suggestions had been made on the "working non-paper" at both the current and the previous sessions of the Subcommittee to justify the preparation of a formal working paper.

35. Some delegations expressed the view that, while the geostationary orbit was a part of outer space, it had specific characteristics and features, being a limited natural resource which may be saturated. Therefore, a special legal regime, supplementing the existing one, should be elaborated in order to ensure equitable access to the orbit. One of those delegations further expressed the view that the formulation of subparagraph 7.2 proposed in paragraph 26 above should be amended as follows: the first reference to "a State" should be replaced by "a developing country", and the following text should be added at the end of the subparagraph:

> "... and with due regard to the interests of the said developing country, when it is eventually in the position to use the orbit."

36. With regard to paragraph 2 of the "working non-paper", the view was expressed that the paragraph was related to the important idea of the paper that the geostationary orbit, while being an integral part of outer space, should be used for the benefit of all States, for which purpose a special legal regime should be elaborated. In the view of that delegation, the task of the Working Group was to find the way to operationalize the relevance of the common benefit principle to the geostationary orbit.

37. With regard to paragraph 4, some delegations expressed the view that the Scientific and Technical Subcommittee should be requested to provide technical advice with regard to the provisions contained in the paragraph. They believed that the work of that Subcommittee, which had an item devoted to the geostationary orbit on its agenda, should provide a scientific and technical basis for the work of the Legal Subcommittee on the question of the geostationary orbit. In this connection, the Scientific and Technical Subcommittee could use relevant documents of ITU and the "working non-paper" as a basis for its work.

38. In reply to a request, the observer of ITU provided the following definitions from the latest version of the ITU Radio Regulations:

> "Geosynchronous satellite: An Earth satellite whose period of revolution is equal to the period of rotation of the Earth about its axis.
>
> "Geostationary satellite: A geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth; by extension, a satellite which remains approximately fixed relative to the Earth.
>
> "Geostationary-satellite orbit: The orbit of a geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator."

In this connection, the view was expressed that, while the current formulation of paragraph 4 was not intended to provide a definition of the geostationary orbit, the relevant ITU definition could in the future be included in the document under review.

39. The view was expressed that the text in paragraph 4 described physical characteristics of the orbit, but was incomplete. In the view of that delegation, the description of the physical characteristics of the orbit should include recognition of the fact that the orbit was a limited natural resource which should be used in an efficient and equitable manner.

40. The view was expressed that potential consensus existed in the Working Group to the effect that the geostationary orbit was an integral part of outer space and that, in view of its specific characteristics, a special legal regime was needed which would take into account the special needs of the developing countries.

41. Some delegations expressed the view that a separate principle should be included to clearly state that the geostationary orbit was an integral part of outer space possessing the same legal status and characteristics as outer space.

42. Other delegations expressed the view that, while it was true that the geostationary orbit was in outer space and was subject to its legal regime, the fact that this orbit had special physical characteristics meant that it should also have a supplementary legal regime.

43. The view was expressed that it would be preferable to describe the substance of paragraph 4 without using the construction "behaves differently", which might be misleading. The view was also expressed that the paragraph attempted a definition of the geostationary orbit by an exclusionary method, which did not appear to be advisable.

44. The view was also expressed that it was not an error to speak of "behaves differently" because in fact in this part of outer space, in the geostationary satellite orbit, these satellites remained relatively fixed with regard to Earth, and this did not happen in other parts of outer space.

45. With regard to paragraphs 5 and 6, the view was expressed that there existed a linkage between the ideas contained in those paragraphs. While paragraph 5 spoke of the need for a special legal regime for the geostationary orbit, paragraph 6 indicated that a certain special regulation of the orbit already existed, at least as far as equitable access to the orbit was concerned. That delegation believed that the sponsors of the "working non-paper" could, in the future, find an appropriate formulation to reflect the view that, while there were certain legal regulations governing the geostationary orbit, further regulations were needed.

46. With regard to paragraph 7, the view was expressed that the concept of equity reflected in the paragraph should be clarified.

47. With regard to paragraph 7.1, the observer of ITU expressed the view that certain questions of terminology should be further elaborated, in particular, the term "equal claims", and that the possibility of sharing positions on the geostationary orbit, as well as the possibility of a project by a group of countries, should be taken into account in this elaboration. The view was also expressed that thought might be given to replacing the terms "developed country" and "developing country" with the terms "countries with greater space capabilities" and "countries with lesser space capabilities".

48. With regard to subparagraph 7.2, contained in paragraph 26 above, as amended in paragraph 35 above, the view was expressed that the question of overlapping claims should be considered in the future. In reply to a request, the observer of ITU described existing ITU procedures for extending the time for actual launch of an object into the geostationary orbit. The view was also expressed that certain terms, contained in the amendment proposed in paragraph 35 above, should be further studied.

49. With regard to subparagraph 7.3, proposed in paragraph 27 above, the view was expressed that the word "by" should be replaced by "between" or, where relevant, "among". The view was also expressed that, to make this provision consistent with other provisions of the paper, the word "by" should be replaced by "of".

50. The view was expressed that the following text could be added as an additional subparagraph in paragraph 7 of the "working non-paper":

> "There is a need for reserving suitable orbital positions/frequencies to meet the requirements of the developing countries. Such reservations should be kept valid for as long as ITU is convinced that the developing country in question is making legitimate efforts to utilize the position(s) reserved for it."

The view was also expressed that the above formulation could be considered together with the formulation proposed in paragraph 26 above as amended in paragraph 35 above.

51. The question was raised as to whether the provisions contained in paragraph 7 of the "working non-paper" were in harmony with the relevant instruments of ITU. In reply, the observer of ITU stated that, generally speaking, all the subjects touched upon in paragraph 7 were, to a certain extent, dealt with in the relevant ITU documents.

52. In summing up the discussion on the question of the geostationary orbit, the Chairman expressed the view that the Working Group had held a very substantial exchange of views, which was characterized by a constructive and positive atmosphere. The debate had been based on the "working non-paper" and various other oral proposals. The Chairman shared the view expressed by some delegations that a new document - official or unofficial - reflecting the results of the discussion, which interested delegations might wish to submit, would facilitate the future work of the Group on the question of the geostationary orbit.

53. The Working Group held its final meeting on 9 April, when it considered and approved the present report.

Annex III

REPORT OF THE CHAIRMAN OF THE WORKING GROUP ON AGENDA ITEM 5 (CONSIDERATION OF THE LEGAL ASPECTS RELATED TO THE APPLICATION OF THE PRINCIPLE THAT THE EXPLORATION AND UTILIZATION OF OUTER SPACE SHOULD BE CARRIED OUT FOR THE BENEFIT AND THE INTERESTS OF ALL STATES, TAKING INTO PARTICULAR ACCOUNT THE NEEDS OF DEVELOPING COUNTRIES)

1. On 23 March 1992, the Legal Subcommittee re-established its Working Group on agenda item 5.

2. The Working Group had before it the report of the Legal Subcommittee on the work of its thirtieth session in 1991 (A/AC.105/484), which contained, in annexes III and IV.B respectively, the report of the Chairman of the Working Group and a working paper (A/AC.105/C.2/L.182) submitted by Argentina, Brazil, Chile, Mexico, Nigeria, Pakistan, Philippines, Uruguay and Venezuela at that session. The Working Group also had before it a working paper (A/AC.105/C.2/L.188) submitted by the delegation of Nigeria during the session of the Working Group. The Working Group further had before it a background paper (A/AC.105/C.2/L.187) submitted by its Chairman. That paper summarized in an analytical manner the views and information contained in the responses of Member States (A/AC.105/C.2/15 and Add.1-13, and A/AC.105/C.2/16 and Add.1-10) to the Secretary-General's notes verbales of 26 September 1988 and 20 December 1989 in which he had invited Member States: (a) to submit their views as to the priority of specific subjects under agenda item 5; (b) to provide information on their national frameworks, if any, relating to the principle contained in article I 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 (1967 Outer Space Treaty) (1988 note verbale); and (c) to submit their views on the subject of international agreements that Member States had entered into that were relevant to the principle that the exploration and use of outer space shall be carried out for the benefit and in the interests of all countries, taking into account the needs of developing countries (1989 note verbale). The working and background papers A/AC.105/C.2/L.182, A/AC.105/C.2/L.187 and A/AC.105/C.2/L.188 are set out in section C of annex IV to the report of the Subcommittee.

3. In his introductory statement the Chairman suggested certain points of reference for discussion, in particular, that article I of the 1967 Outer Space Treaty provided that outer space shall be free for exploration and use by all States for the benefit of humanity and that the General Assembly of the United Nations, in its resolution 46/45 of 9 December 1991, had recommended that particular account in this regard should be taken of the needs of developing countries. The Chairman also noted that it was important to achieve the goals set forth in the above-mentioned and similar previous General Assembly resolutions which in their preambular paragraphs referred, inter alia, to the common interest of mankind in continuing efforts to extend to all States outer space benefits, the importance of international

cooperation in developing the rule of law, and to preventing an arms race in outer space as an essential condition for the promotion of international cooperation in the outer space field. The Chairman also highlighted the importance of General Assembly resolution 2625 (XXV), of 24 October 1970, which was directly relevant to outer space.

4. The Chairman also explained that in his paper (A/AC.105/C.2/L.187) he had tried to highlight similarities and discrepancies in the approaches of various States to the subject under review, and drew particular attention to paragraph 10 of the paper in which he had noted that all respondents had agreed that the main, and perhaps the most practical and promising way of realizing the principle contained in the first sentence of article I of the 1967 Outer Space Treaty was by further developing international cooperation in the exploration and peaceful uses of outer space.

5. Upon a suggestion by the Chairman, the Working Group agreed to conduct a preliminary exchange of ideas on the provisions of working paper A/AC.105/C.2/L.182, entitled "Principles regarding international cooperation in the exploration and utilization of outer space for peaceful purposes", which took the form of a draft General Assembly resolution, with an annex.

Preambular paragraphs

6. As a general comment, some delegations expressed the view that a considerable degree of international cooperation in space activities already existed, and was continuing. This cooperation should be acknowledged in the preamble. Some delegations also expressed the view that the purpose of the current formulation of the preamble was to outline an accepted common ground for future international cooperation in space activities, and was not intended to ignore the existing fruitful cooperation.

7. With regard to the second preambular paragraph of the working paper, some delegations expressed the view that consideration might be given to amending it by adding a reference to Article 1 of the Charter of the United Nations. In this connection the view was expressed that the order of the first and second preambular paragraphs might be reversed so that the provisions of the Charter, which was the more significant text, were referred to first, and the 1967 Outer Space Treaty second. Other delegations expressed the view that the current order of the first two preambular paragraphs was appropriate because article III of the 1967 Outer Space Treaty referred to the Charter and because it was preferable to refer to the particular and thereafter proceed to refer to the general.

8. With regard to the third preambular paragraph, it was questioned why those particular General Assembly resolutions had been singled out for special mention. The view was also expressed that other relevant resolutions might exist. Some delegations expressed the view that mentioning resolutions which dealt with such matters as development of international economic cooperation, economic rights and duties of States and principles concerning cooperation among States reflected the main objective of the work under agenda item 5. As

a solution to these difficulties, the view was expressed that the paragraph might refer to all relevant resolutions and thereafter identify those which were of special importance. The view was also expressed that the difficulties referred to might be avoided by a general reference to all resolutions dealing with relevant subject areas, which would be specified. The view was further expressed that since international law was referred to in article III of the 1967 Outer Space Treaty, consideration should be given to setting forth in the third preambular paragraph a reference to the general principles of international law.

9. With regard to the fourth preambular paragraph, the view was expressed that the last phrase (i.e., "and shall be the province of mankind") did not clearly relate to the rest of the paragraph. In reply, some delegations stated that the phrase was intended to refer to "the exploration and use of outer space", as in article I of the 1967 Outer Space Treaty. Some delegations also expressed the view that it was desirable to retain the existing text without change, except for the addition of the word "all" before the word "mankind", as that text was identical with the language employed in article I of the 1967 Outer Space Treaty. As to the phrase "further developing the principle" contained in the first line of the paragraph, it was suggested that any difference between the various language versions in regard to that phrase could be dealt with by the Working Group in the course of its subsequent deliberations.

10. Some delegations observed that, although the title of the agenda item referred to particular account having to be taken of the needs of developing countries, this point was not addressed in the fourth or any other preambular paragraph, and that the point should therefore be mentioned. In reply, some delegations expressed the view that the fourth preambular paragraph reflected the language of article I of the 1967 Outer Space Treaty, and not the language of the title, and that therefore the current language should not be altered. Following further discussion, some delegations expressed the view that the needs of the developing countries should be referred to in one of the preambular paragraphs, though not necessarily in the fourth one.

11. With regard to the sixth preambular paragraph, some delegations observed that the existing text was not entirely satisfactory in that the objective of international cooperation in outer space was not stated. The view was also expressed that it would be appropriate to redraft the paragraph to refer first to outer space research and secondly to outer space activities, since research would precede the activities. In this connection, a further view was expressed that the words "exploration and utilization" should be inserted after the word "space" in the second line, and that the balance of that line should be deleted.

12. With regard to the seventh preambular paragraph, some delegations expressed the view that the current text, in using the word "exclusively", went beyond the language of the 1967 Outer Space Treaty. In reply, it was stated that, while this might be the case, the current wording of the text was consistent with that contained in certain General Assembly resolutions.

13. With regard to the eighth preambular paragraph, the view was expressed that the phrase "Determined to maintain" was too peremptory, that more moderate language should be used and that any attempt to obligate cooperation between States by mandatory language was inappropriate and bound to fail. The view was expressed that States should be free to determine with which other States they should cooperate. In reply, some delegations reaffirmed that the current formulation of the eighth preambular paragraph was not intended to imply any obligation or compulsory action towards international cooperation in space activities. The view was also expressed that the provisions of the paragraph merely repeated what had been clearly expressed in the preceding sixth and seventh preambular paragraphs; and that it should therefore be deleted. Another view was that consideration might be given to amalgamating into one preambular paragraph the sixth, seventh, and eighth preambular paragraphs. The view was also expressed that the existing structure of the three paragraphs reflected an attempt in the sixth preambular paragraph to focus on international cooperation, in the seventh to focus on peaceful purposes being the objective of cooperation and in the eighth to amalgamate the two ideas. The view was also expressed that the concept of international cooperation might contain certain obligatory elements.

14. With regard to the ninth preambular paragraph, the view was expressed that it should be deleted, since it was obvious that outer space had to be used in a rational manner, and the need for the equitable use of outer space had already been mentioned in the fifth preambular paragraph. The view was further expressed that the preservation of outer space for future generations appeared to be an environmental concern, and if the intention was to refer to that concern, that element alone might be retained. Some delegations observed that the terms "rational" and "equitable" were open to different interpretations and needed clarification. The view was expressed that it was important to state the need to preserve outer space for future generations and that this idea should be retained.

Text set forth in the annex

15. As a general comment on the provisions contained in the annex, some delegates expressed the view that States with existing space capabilities had obtained those capabilities by the utilization of their financial and personnel resources, that such States already closely cooperated with other States with whom they had specific ties and that it would not be reasonable to obligate them to cooperate with all States indiscriminately because they had to be given the freedom to cooperate with other States of their own choice. Some delegations also expressed the view that international cooperation on a voluntary basis already existed to a considerable degree in regard to space activities. The question therefore arose as to whether there was a need to add a regime of obligatory cooperation. Some delegations, while expressing the view that the provisions of the annex constituted a basis for the work of the Working Group, stated that it was open to receiving other suggestions. They reaffirmed that no compulsory or obligatory idea towards cooperation was intended in the formulations of the proposed set of principles.

Principle I

16. With regard to principle I, paragraph 1, the Chairman suggested that, with regard to the Spanish text, its last clause would have to be amended to replace the word "particularmente" by the word "especialmente", to correspond to the intended meaning.

17. With regard to principle I, paragraph 2, some delegations expressed the view that the term "special responsibility" might be interpreted as imposing an obligation, or as a reference to the concept of State responsibility in international law, and it should therefore be deleted. In reply, other delegations expressed the view that there was no intention of imposing an obligation through the use of that term; rather, the idea was to emphasize that it was the States with space capability that had the ability to promote and foster cooperation in outer space science and technology. The view was also expressed that the words "bear a special responsibility" could be replaced by "should make their corresponding contributions".

Principle II

18. With regard to principle II, some delegations expressed the view that the text as currently formulated was not acceptable to the extent that it introduced a constraint on the freedom of States to decide with which other States they should cooperate. In reply, some delegations expressed the view that the current formulation of principle II was not intended to limit in any way the freedom of States to enter into bilateral or regional cooperation arrangements and that the intention of principle II was to supplement such arrangements at an international level. The view was also expressed that consideration should be given by the Working Group to the relationship of the provisions of principle II to the laws protecting industrial property rights.

19. With regard to principle II, paragraph 1, some delegations expressed the view that the current formulation, which referred to the concepts of equity, non-discrimination and timely access of all States to the knowledge and applications derived from outer space exploration and use, was unclear as to the nature of the duties being imposed through those concepts. In reply, other delegations observed that the reference to "timely basis" was not intended to obligate States to automatically grant to all other States access to knowledge and applications derived from the exploration and use of outer space. In the view of those delegations, the expression "timely basis" should be understood as meaning an adequate access compatible with the level of development of recipient countries' capabilities for absorbing relevant space technologies and applications. The view was also expressed that utilization of legal language and concepts from the law of international trade, such as language concerned with most-favoured-nation status or a system of trade preferences, might not be appropriate for space law, or the space activities of States. However, the view was expressed that the use of the terms "equitable, non-discriminatory and timely" appeared to be derived from the use of those same terms in the 1986 Principles Relating to Remote Sensing of the Earth from Outer Space. In that regard, all data and information derived from

remote sensing from outer space should be accessible to all States on an equitable, non-discriminatory and timely basis. Though the term "non-discriminatory" was often used in a commercial context, nevertheless if the terms were to have the same meaning as in the Remote Sensing Principles, their use in the principles under consideration might be justified.

20. With regard to principle II, paragraph 2, the view was expressed that there was a discrepancy in the Spanish language text between the title of the item and the use of the word "especialmente" in paragraph 2. It was suggested that it would be necessary to review the texts in all the languages so that they might be harmonized.

21. The view was expressed that the phrase "States pursuing programmes of utilization and exploration of outer space" needed clarification, in particular, as to whether it was intended to apply to those States which, while not pursuing such programmes, had space launches from their territories. In reply, the view was expressed that the phrase under consideration should not necessarily apply to such States and should not be restrictively interpreted. Such cooperation could only be extended if it referred to areas where those States had their own programmes. The view was expressed that if the definition of "launching State" in the 1972 Convention on International Liability for Damage Caused by Space Objects was applied, the phrase "States pursuing programmes of utilization and exploration of outer space" might conceivably cover States from whose territories space objects were launched. The view was expressed that the opinion that the phrase was not applicable to States from whose territories space objects were launched, was too narrow an interpretation.

22. With regard to the reference in the first sentence of the paragraph to States pursuing programmes of utilization and exploration of outer space allowing access to the knowledge and applications derived therefrom to other States, the view was expressed that the reference to, in particular, developing countries being afforded access was suggestive of those countries being given preferential treatment in regard to such access over States with a more developed capacity in outer space activities. In this regard, the view was expressed that while the General Assembly had endorsed the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, and that particular account should be taken of the needs of developing countries, the use of that terminology did not mean that developing countries should be placed in a special category with regard to access to the knowledge and applications derived by States pursuing programmes of utilization and exploration of outer space. In this connection the view was also expressed that the principle applicable to international cooperation, as found in the Charter of the United Nations, was that such cooperation was based on the notion of solidarity among States. Consequently, the legal framework within which programmes of international cooperation were carried out as currently formulated in the text, might require some adjustment, and the notion of solidarity among States should be the basis for international cooperation.

23. In reply, some delegations expressed the view that due regard would have to be taken of the concept of international cooperation in promulgating a set of principles regarding such cooperation in the exploration and use of outer space for peaceful purposes. In this connection the view was expressed that the Committee on the Peaceful Uses of Outer Space had yet to analyse the new viewpoint expressed with regard to the basis of international cooperation. In this respect the view was expressed that in terms of international cooperation the question was not what could be done but rather what should be done. The view was expressed that there was a mutuality of interests among States to cooperate and that the benefits derived from the exploration and utilization of outer space should be distributed. Some delegations stated that outer space should be considered as a common heritage of mankind.

24. With regard to principle II, paragraph 4, the view was expressed that, in order to bring conformity within various principles, paragraph 4 might be shifted as paragraph 3 under principle IV. The existing paragraph 3 of principle IV could then be renumbered as paragraph 4 under the same principle.

25. Also with regard to principle II, paragraph 4, the view was expressed that the idea of no reciprocity being asked from developing countries benefiting from special treatment and preference in connection with programmes oriented to the dissemination of scientific and technological knowledge, was inconsistent with the concept of cooperation being based on a mutuality of interests among all States. In reply, some delegations expressed the view that special treatment was needed because of the different space capabilities of States, with those having extensive space capabilities providing technological knowledge and information to countries with lesser space capabilities, while the latter were in no condition to reciprocate. Those delegations believed that there was no unfairness in a lack of reciprocity when a developing country lacked relevant space capabilities and was not in a position to be forthcoming at the same level. The view was expressed, however, that even where scientists from a developing country had, in fact, through a programme of international cooperation, acquired special knowledge not known to its partner, the second sentence of paragraph 4 might operate to prevent reciprocity; the provision should be amended to avoid such a result.

26. The view was also expressed that the idea that countries benefiting from special treatment would not be required, even if in a position to do so, to reciprocate, ran counter to the spirit and perhaps even the letter of article IX of the 1967 Outer Space Treaty. The view was expressed that the principle under consideration should, in respect of reciprocity, be in conformity with the provisions contained in that Treaty, which is currently in force.

27. The view was expressed that there might be a contradiction between the concept of "special treatment" required under principle II, paragraph 4, and the concept of non-discrimination as it appeared in principle II, paragraph 1. In reply, the view was expressed that there was no such contradiction; the two concepts were used to strike a balance between non-discrimination on the one hand, which would provide equal access of all States to the knowledge and

applications derived from the exploration and use of outer space, and equity on the other, to be attained by special treatment being afforded to developing countries in pursuing international cooperation in the utilization and exploration of outer space.

28. The view was expressed that since the preferential treatment to be afforded to developing countries, and the absence of reciprocity, were of a limited scope (i.e., in respect of programmes oriented to the dissemination of scientific and technical knowledge) and were consistent with the provisions of other legal instruments, the existing text of principle II, paragraph 4, should remain unchanged. In that connection the view was expressed that all States would have access to the knowledge and applications derived from the programmes applicable to the utilization and exploration of outer space under the provisions of principle II, paragraph 1. The view was further expressed that it might be useful in elaborating the idea of international cooperation as it related to outer space matters to consider the provisions on international cooperation set forth in the existing international documents concerning seabed and ocean floor matters, which referred to the common heritage of mankind concept

29. The view was expressed that while the dissemination of scientific and technological knowledge should be on a non-discriminatory basis, the participation of developing countries in programmes oriented to the dissemination of such knowledge should be based on special treatment and should take into account considerations of equity. The view was also expressed that in all matters pertaining to outer space, international cooperation should be on the basis of mutual interest and benefit, irrespective of the level of development of countries in space technology. The view was expressed that the basic philosophy of principle II was that there was a need for developing countries to receive special treatment in pursuing international cooperation in the utilization and exploration of outer space.

30. In reply, the view was expressed that, from a strict legal viewpoint, the special treatment afforded to developing countries under the provisions of principle II, paragraph 4, was, indeed, a form of discrimination, i.e. reverse discrimination. The view was further expressed that since it was the words "special treatment" which had given rise to difficulties, consideration should be given to using different words to express the idea intended; similarly, consideration should be given to replacing the words "no reciprocity" in principle II, paragraph 4, with other language, since those words suggested a deviance from accepted norms of international law, although that was not intended.

Principle III

31. With regard to principle III, paragraph 1, the view was expressed that there were many objectives to be pursued through international cooperation in outer space, not only the objective noted in the paragraph that such cooperation should aim at the development by all States of an indigenous capability in space science and technology and their applications. Other

objectives worthy of pursuit included the non-duplication of efforts, efficient use of resources and the need for coordination of efforts among States. The view was expressed that the paragraph should be amended to include a reference to those other objectives.

32. With regard to principle III, paragraph 2, the view was expressed that the reference to "States with relevant space capabilities" was not sufficiently clear in identifying which States were covered by the phrase. In reply, the view was expressed that terminology with a wide scope of application had deliberately been used, so as to cover the diversity of States (both developed and developing) with capabilities in regard to outer space matters.

33. With regard to principle III, paragraph 3, the view was expressed that the term "just and equitable parameters of price and payment" lacked clarity. For instance, whether the price and payment for material and equipment for, and the transfer of technology on, the utilization and exploration of outer space were within "just and equitable parameters" might depend on the standpoint from which the issue was regarded, e.g., whether the State concerned was "the payer" or "the payee" in respect of such items. In reply, the view was expressed that the terminology utilized was intended to reflect the need for the exchange of material and equipment, and the transfer of technology, to take into account the marketplace, and to occur within the parameters thereof, through transactions freely agreed to by the parties.

34. The view was expressed that consideration should be given to introducing a new subparagraph in principle III expressing support for regional and subregional cooperation in respect of space capabilities; it was suggested that such cooperation was expected to increase in the future.

Principle IV

35. The view was expressed that the term "utilization and exploration" used in principle IV, paragraph 1, and throughout the text of the working paper under consideration, should be amended to read "exploration and utilization", so as to accord with the title of the working paper.

36. With regard to principle IV, paragraph 3, first sentence, the view was expressed that, as an editorial matter, the words "exchange of" should precede the word "knowledge".

37. The view was expressed that principle II, paragraph 4, should become principle IV, paragraph 3, and that the existing paragraph 3 of principle IV should become paragraph 4 of principle IV.

Principle V

38. The view was expressed that the phrase "to preserve outer space" in principle V, paragraph 1, should be changed to "to preserve the outer space environment", thus aligning paragraph 1 with paragraph 2.

39. With regard to principle V, paragraph 2, the view was expressed that it was not sufficient to state that States should pay attention only to protecting and preserving the outer space environment; States must also coordinate their efforts to monitor and protect the Earth environment, and paragraph 2 of principle V should be reworded as follows:

> "States should pay attention and coordinate their efforts in dealing with all aspects related to the use of space technology for the protection and preservation of the outer space and Earth environments, including rational development of the Earth's resources".

40. With regard to principle V, paragraph 3, the view was expressed that the word "should" in the second line should be replaced with the words "are urged to".

Principle VI

41. As a general comment on principle VI, some delegations expressed the view that it summed up the philosophy and the practical implications of the working paper; those delegations expressed the view that with respect to international cooperation, particularly as between developed and developing countries, they had a fundamental difficulty with accepting the notion that any such cooperation should be obligatory. Some delegations expressed the view that international cooperation was a matter of choice, based on friendship and commonality of interests among States. The view was also expressed that the consideration of the working paper had provided the opportunity for a frank and fruitful exchange of views, but that one might be led, in the light of the discussions, to ponder the possibility of maintaining it, as is, as the basis for future discussions. The question was also raised as to whether the Legal Subcommittee was the appropriate forum to discuss the basic issues raised by the working paper. In reply, the view was expressed that Outer Space Committee and, in particular, its Legal Subcommittee was the appropriate forum, pursuant to the mandate given by the General Assembly.

42. Also in reply, some delegations expressed the view, which they had reiterated throughout the deliberations, that the working paper was intended to serve as a basis for discussion and to stimulate an exchange of views, by focusing on practical aspects of international cooperation in the exploration and utilization of outer space for peaceful purposes. Its objective was to search for provisions acceptable to all parties, as deliberations developed in the future, and should not therefore be considered as prejudging the extent or manner of the cooperation that might take place among States. In this respect, some delegations expressed the view that the principle of international cooperation, as elaborated in the working paper, was neither intended nor to be regarded as imposing obligations, nor was such cooperation intended to be mandatory in nature. The view was also expressed that, while it could be agreed that a certain degree of international cooperation already existed, it might not be entirely correct to take the view that the working paper's provisions with respect to international cooperation should not imply some obligations.

43. As a general comment, the view was expressed that it might be useful if model contracts for aspects of international cooperation or draft guidelines for such cooperation in respect of outer space matters were elaborated by the Legal Subcommittee under this agenda item in the future, and that this issue could be taken up at the next session of the Legal Subcommittee or in the Committee on the Peaceful Uses of Outer Space. This view was supported by some delegations, who said that that idea could be considered in the context of a future revision of working paper A/AC.105/C.2/L.182.

44. With regard to principle VI, paragraph 2, some delegations expressed the view that the word "fund" was inadequate to describe the kinds of contributions that might be given to the Programme on Space Applications, and that it should therefore be deleted. The view was also expressed that it was unclear how it was to be decided whether a contribution was "in accordance with ... space capabilities".

45. The view was expressed that paragraph 3 of principle VI should be renumbered as paragraph 1 of a new principle VII.

46. With regard to principle VI, paragraph 3 (f), the view was expressed that its wording was vague and incomplete in terms of describing how redistribution of benefits was to be effected; it was therefore suggested that the following text be inserted after the word "technology" and before the period: ", by taking particular account of the interests of the developing countries".

47. Some delegations expressed the view that the overall discussion of working paper A/AC.105/C.2/L.182 had been constructive and positive, and that the suggestions made during the session would be taken into account in the future discussions of the paper.

48. With regard to the paper of the Chairman of the Working Group (A/AC.105/C.2/L.187), some delegations expressed the view that that document should be discussed under the present agenda item at the Legal Subcommittee's next session, in order to draw conclusions from the information contained in it.

49. In summing up the discussion, the Chairman of the Working Group expressed the view that the debate on the basis of working paper A/AC.105/C.2/L.182 had been very interesting, useful and constructive.

50. The Working Group held its final meeting on 1 April, when it considered and approved the present report.

Annex IV

DOCUMENTS ANNEXED TO THE REPORT

A. The elaboration of draft principles relevant to the use of nuclear power sources in outer space, with the aim of finalizing the draft set of principles at the current session

Canada and Germany: working paper (A/AC.105/C.2/L.154/Rev.11 of 16 March 1992)

The following is the eleventh revision of the draft principles contained in working paper A/AC.105/C.2/L.154 of 25 March 1986 and reflects discussions held at the twenty-ninth session of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space.

This revision is the result of close consultations with interested delegations and reflects what those and many other delegations consider to be a solid basis for finalizing the draft set of principles at the thirty-first session of the Legal Subcommittee, as recommended by the General Assembly in its resolution 46/45 of 9 December 1991.

The present working paper contains a composite text of both agreed and not yet agreed provisions. All abbreviations (except "mSv") have been written out fully throughout the text.

Principles 1, 3, 5, 6, 7, 8, 9 and 10 have been agreed. It has also been agreed to delete former draft principle 11, "Relations with international treaties". Only the preamble and principles 1A, 4 and 12 remain to be agreed.

PRINCIPLES RELEVANT TO THE USE OF NUCLEAR POWER SOURCES IN OUTER SPACE

Preamble

The General Assembly,

Recognizing that for some missions in outer space nuclear power sources are particularly suited due to their compactness and long life,

Recognizing that the use of nuclear power sources in outer space should focus on those missions which take advantage of the particular properties of nuclear power sources,

Recognizing that the use of nuclear power sources in outer space should be based on a thorough safety assessment, with particular emphasis on reducing the risk of accidental exposure of the public to harmful radiation or radioactive material,

Recognizing the need, in this respect, for specific procedures and criteria, in the form of a set of principles, to ensure safe use of nuclear power sources in outer space,

Affirming that this set of principles applies to nuclear power sources in outer space devoted to generation of electric power on board space objects,

Recognizing that this set of principles may undergo future revisions in view of emerging nuclear-power applications and of evolving international recommendations on radiological protection,

Adopts the Principles Relevant to the Use of Nuclear Power Sources in Outer Space as set forth below.

Principle 1. Applicability of international law

Activities involving the use of nuclear power sources in outer space shall be carried out in accordance with international law, including in particular 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.

Principle 1A. Use of terms

1. For the purpose of principles 3, 4, 5 and 7 of these Principles, the terms "launching State" or "State launching" mean the State on whose registry a space object is carried in accordance with the Convention on Registration of Objects Launched into Outer Space, and which shall retain jurisdiction and control over such an object according to article VIII 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. If the object is not registered in accordance with the above-mentioned Convention, the terms "launching State" or "State launching" mean the State which exercises jurisdiction and control over such space object.

2. For the purpose of principle 9, the definition of the term "launching State" as contained in that principle is applicable.

Principle 3. Guidelines and criteria for safe use

In order to minimize the quantity of radioactive material in space and the risks involved, the use of nuclear power sources in outer space shall be

restricted to those space missions which cannot be operated by non-nuclear energy sources in a reasonable way.

1. General goals for radiation protection and nuclear safety

1.1 States launching space objects with nuclear power sources on board shall endeavour to protect individuals, populations and the biosphere against radiological hazards. The design and use of space objects with nuclear power sources on board shall ensure, with a high degree of confidence, that the hazards, in foreseeable operational or accidental circumstances, are kept below acceptable levels as defined in paragraphs 1.2 and 1.3.

Such design and use shall also ensure with high reliability that radioactive material does not cause a significant contamination of outer space.

1.2 During the normal operation of space objects with nuclear power sources on board, including re-entry from the sufficiently high orbit as defined in paragraph 2.2, the appropriate radiation protection objective for the public recommended by the International Commission on Radiological Protection shall be observed. During such normal operation there shall be no significant radiation exposure.

1.3 To limit exposure in accidents, the design and construction of the nuclear power source systems shall take into account relevant and generally accepted international radiological protection guidelines.

Except in cases of low-probability accidents with potentially serious radiological consequences, the design for the nuclear power source systems shall, with a high degree of confidence, restrict radiation exposure to a limited geographical region and to individuals to the principal limit of 1 mSv in a year. It is permissible to use a subsidiary dose limit of 5 mSv in a year for some years, provided that the average annual effective dose equivalent over a lifetime does not exceed the principal limit of 1 mSv in a year.

The probability of accidents with potentially serious radiological consequences referred to above shall be kept extremely small by virtue of the design of the system.

Future modifications of the guidelines referred to in this paragraph shall be applied as soon as practicable.

1.4 Systems important for safety shall be designed, constructed and operated in accordance with the general concept of defence-in-depth. Pursuant to this concept, foreseeable safety-related failures or malfunctions must be capable of being corrected or counteracted by an action or a procedure, possibly automatic.

The reliability of systems important for safety shall be ensured, inter alia, by redundancy, physical separation, functional isolation and adequate independence of their components.

Other measures shall also be taken to raise the level of safety.

2. Nuclear reactors

2.1 Nuclear reactors may be operated:

(i) On interplanetary missions;

(ii) In sufficiently high orbits as defined in paragraph 2.2;

(iii) In low-Earth orbits if they are stored in sufficiently high orbits after the operational part of their mission.

2.2 The sufficiently high orbit is one in which the orbital lifetime is long enough to allow for a sufficient decay of the fission products to approximately the activity of the actinides. The sufficiently high orbit must be such that the risks to existing and future outer space missions and of collision with other space objects are kept to a minimum. The necessity for the parts of a destroyed reactor also to attain the required decay time before re-entering the Earth's atmosphere shall be considered in determining the sufficiently high orbit altitude.

2.3 Nuclear reactors shall use only highly enriched uranium 235 as fuel. The design shall take into account the radioactive decay of the fission and activation products.

2.4 Nuclear reactors shall not be made critical before they have reached their operating orbit or interplanetary trajectory.

2.5 The design and construction of the nuclear reactor shall ensure that it cannot become critical before reaching the operating orbit during all possible events, including rocket explosion, re-entry, impact on ground or water, submersion in water or water intruding into the core.

2.6 In order to reduce significantly the possibility of failures in satellites with nuclear reactors on board during operations in an orbit with a lifetime less than in the sufficiently high orbit (including operations for transfer into the sufficiently high orbit), there shall be a highly reliable operational system to ensure an effective and controlled disposal of the reactor.

3. Radioisotope generators

3.1 Radioisotope generators may be used for interplanetary missions and other missions leaving the gravity field of the Earth. They may also be used

in Earth orbit if, after conclusion of the operational part of their mission, they are stored in a high orbit. In any case ultimate disposal is necessary.

3.2 Radioisotope generators shall be protected by a containment system that is designed and constructed to withstand the heat and aerodynamic forces of re-entry in the upper atmosphere under foreseeable orbital conditions, including highly elliptical or hyperbolic orbits where relevant. Upon impact, the containment system and the physical form of the isotope shall ensure that no radioactive material is scattered into the environment so that the impact area can be completely cleared of radioactivity by a recovery operation.

Principle 4. Safety assessment

1. A State launching a space object with a nuclear power source on board shall conduct in cooperation, where relevant, with those which have designed or constructed the nuclear power source or will operate the space object with the nuclear power source on board a thorough and comprehensive safety assessment prior to each launch. This assessment shall cover as well all relevant phases of the mission and shall deal with all systems involved, including, for example, the means of launching, the space platform, the nuclear power source and its equipment, and the means of control and communication between ground and space.

2. This assessment shall respect the guidelines and criteria for safe use contained in principle 3.

3. Pursuant to 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, the results of this safety assessment shall be made publicly available prior to each launch, and the Secretary-General of the United Nations shall be informed on how States may obtain such results of the safety assessment as soon as possible prior to each launch.

Principle 5. Notification of re-entry

1. Any State launching a space object with nuclear power sources on board shall timely inform States concerned in the event this space object is malfunctioning with a risk of re-entry of radioactive materials to the Earth. The information shall be in accordance with the following format:

A. System parameters

A.1 Name of launching State or States including the address of the authority which may be contacted for additional information or assistance in case of accident

A.2 International designation

A.3 Date and territory or location of launch

A.4 Information required for best prediction of orbit lifetime, trajectory and impact region

A.5 General function of spacecraft

B. Information on the radiological risk of nuclear power source(s)

B.1 Type of nuclear power source: radioisotopic/reactor

B.2 The probable physical form, amount and general radiological characteristics of the fuel and contaminated and/or activated components likely to reach the ground. The term "fuel" refers to the nuclear material used as the source of heat or power.

This information shall also be transmitted to the Secretary-General of the United Nations.

2. The information, in accordance with the format above, shall be provided by the launching State as soon as the malfunction has become known. It shall be updated as frequently as practicable and the frequency of dissemination of the updated information shall increase as the anticipated time of re-entry into the dense layers of the Earth's atmosphere approaches so that the international community will be informed of the situation and will have sufficient time to plan for any national response activities deemed necessary.

3. The updated information shall also be transmitted to the Secretary-General of the United Nations with the same frequency.

Principle 6. Consultations

States providing information in accordance with principle 5 shall, as far as reasonably practicable, respond promptly to requests for further information or consultations sought by other States.

Principle 7. Assistance to States

1. Upon the notification of an expected re-entry into the Earth's atmosphere of a space object containing a nuclear power source on board and its components, all States possessing space monitoring and tracking facilities, in the spirit of international cooperation, shall communicate the relevant information that they may have available on the malfunctioning space object with a nuclear power source on board to the Secretary-General of the United Nations and the State concerned as promptly as possible to allow States that might be affected to assess the situation and take any precautionary measures deemed necessary.

2. After re-entry into the Earth's atmosphere of a space object containing a nuclear power source on board and its components:

(a) The launching State shall promptly offer, and if requested by the affected State, provide promptly the necessary assistance to eliminate actual and possible harmful effects, including assistance to identify the location of the area of impact of the nuclear power source on the Earth's surface, to detect the re-entered material and to carry out retrieval or clean-up operations;

(b) All States, other than the launching State, with relevant technical capabilities and international organizations with such technical capabilities shall, to the extent possible, provide necessary assistance upon request by an affected State.

In providing the assistance in accordance with subparagraphs (a) and (b) above, the special needs of developing countries shall be taken into account.

Principle 8. Responsibility

In accordance with article VI 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, States shall bear international responsibility for national activities involving the use of nuclear power sources in outer space, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that such national activities are carried out in conformity with that Treaty and the recommendations contained in these Principles. When activities in outer space involving the use of nuclear power sources are carried on by an international organization, responsibility for compliance with the aforesaid Treaty and the recommendations contained in these Principles shall be borne both by the international organization and by the States participating in it.

Principle 9. Liability and compensation

1. In accordance with article VII of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, and the provisions of the Convention on International Liability for Damage Caused by Space Objects, each State which launches or procures the launching of a space object and each State from whose territory or facility a space object is launched shall be internationally liable for damage caused by such space objects or their component parts. This fully applies to the case of such a space object carrying a nuclear power source on board. Whenever two or more States jointly launch such a space object, they shall be jointly and severally liable for any damage caused, in accordance with article V of the above-mentioned Convention.

2. The compensation that such States shall be liable to pay under the aforesaid Convention for damage shall be determined in accordance with international law and the principles of justice and equity, in order to provide such reparation in respect of the damage as will restore the person, natural or juridical, State or international organization on whose behalf a claim is presented to the condition which would have existed if the damage had not occurred.

3. For the purposes of this principle, compensation shall include reimbursement of the duly substantiated expenses for search, recovery and clean-up operations, including expenses for assistance received from third parties.

Principle 10. Settlement of disputes

Any dispute resulting from the application of these Principles shall be resolved through negotiations or other established procedures for the peaceful settlement of disputes, in accordance with the Charter of the United Nations.

Principle 12. Revision

These Principles shall be reviewed by the Committee on the Peaceful Uses of Outer Space no later than ten years after their adoption.

B. Matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunications Union

Russian Federation: working paper (A/AC.105/C.2/L.189 of 30 March 1992)

Questions concerning the legal regime for aerospace objects

For the purposes of this working paper, an aerospace object means an object which is launched into outer space and which is capable at some stage in its flight of using its aerodynamic properties to remain in airspace for a relatively long period. This may occur on launch or return from orbit, or during flight, when the aerospace object temporarily enters airspace and then returns to outer space orbit.

Existing international agreements governing activities in the exploration and use of outer space do not, as we know, contain special provisions concerning the regime applicable to the flight of a space object depending on

its location. The practice has been established whereby a space object launched by a State may, when being placed in orbit, pass without hindrance over the territory of other States at virtually any altitude. To be sure, prior notification has been given in a number of cases when the altitude of the flight over the territory of a foreign State was approximately 100 kilometres or less. However, such notifications were voluntary and prompted by considerations of international courtesy.

When addressing the problems of the legal regime for aerospace objects, a basic question arises: should the regime applicable to the flight of such an object differ according to whether it is located in airspace or outer space? In our view, the answer to that question should be in the affirmative. Another fundamental question also arises: can a single or unified regime be developed for all aerospace objects, notwithstanding the diversity of their functional characteristics, the aerodynamic properties and space technologies used, and their design features? In that connection, a series of additional questions needs to be answered:

Can aerospace objects while in airspace be considered as aircraft with all the legal consequences that follow therefrom?

Should the take-off and landing phases be specially distinguished in the regime for an aerospace object as involving a different degree of regulation from entry into airspace from outer space orbit and subsequent return to that orbit?

Should the norms of national and international air law be applicable to an aerospace object of one State while it is in the airspace of another State or is it necessary to develop special legal norms, to be confirmed in a separate international agreement, for such cases?

Will the use of aerospace objects require the introduction in practice of a special procedure for prior notification of launch and return to Earth?

Should the passage of an aerospace object through the airspace of a foreign State be conditional upon receiving prior authorization?

Do the rules concerning the registration of objects launched into outer space need to be changed with respect to aerospace objects?

Does the concept "launching State" need to be changed or defined more precisely with respect to aerospace objects?

If discussions are held in the Legal Subcommittee on the legal aspects of the regime for aerospace objects, the above questions would appear to deserve attention as possible starting points for the formulation of draft normative provisions.

C. Consideration of the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries

1. Argentina, Brazil, Chile, Mexico, Nigeria, Pakistan, the Philippines, Uruguay and Venezuela: working paper (A/AC.105/C.2/L.182 of 9 April 1991)

Principles regarding international cooperation in the exploration and utilization of outer space for peaceful purposes

The General Assembly,

Bearing in mind the provisions of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies,

Bearing also in mind the provisions of the Charter of the United Nations, in particular Articles 55 and 56 thereof,

Recalling General Assembly resolutions 1803 (XVII) of 14 December 1962, 2625 (XXV) of 24 October 1970, 3281 (XXIX) of 12 December 1974 and 3362 (S-VII) of 16 September 1975,

Desirous of strengthening and further developing the principle that the exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of mankind,

Further recalling that outer space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law,

Stressing the need to facilitate and encourage international cooperation in outer space activities and in outer space investigation,

Stressing also that the utilization and exploration of outer space shall be maintained exclusively for peaceful purposes,

Determined to maintain outer space for peaceful purposes through the promotion of international cooperation in its exploration and utilization,

Conscious of the need to utilize outer space in a rational and equitable manner as well as to preserve it for future generations,

Adopts the following Principles regarding International Cooperation in the Exploration and Utilization of Outer Space for Peaceful Purposes.

Annex

Principles regarding international cooperation in the exploration and utilization of outer space for peaceful purposes

I

1. The exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries.

2. States with relevant space capabilities and with programmes for the utilization and exploration of outer space bear a special responsibility in promoting and fostering international cooperation in outer space science and technology and in their applications.

II

1. All States should have access to the knowledge and applications derived from the exploration and use of outer space on an equitable, non-discriminatory and timely basis.

2. States pursuing programmes of utilization and exploration of outer space should allow access to the knowledge and applications derived therefrom to other States, particularly developing countries, through programmes of international cooperation specifically designed for that purpose.

3. Conditions offered to one State in a specific programme of cooperation in outer space should be extended to other countries with which a similar programme of international cooperation is established.

4. In pursuing international cooperation in the utilization and exploration of outer space, developing countries should benefit from special treatment. Preference should be given to developing countries in programmes oriented to the dissemination of scientific and technological knowledge, and no reciprocity should be asked from countries benefiting from such special treatment.

III

1. The main objective to be pursued by international cooperation in outer space should be the development by all States of indigenous capability in space science and technology and their applications.

2. States with relevant space capabilities and with programmes of utilization and exploration of outer space should promote and facilitate the exchange of expertise and technology to all States, particularly the developing countries.

3. States should promote the exchange of material and equipment for, and the transfer of technology on, the utilization and exploration of outer space within just and equitable parameters of price and payment.

IV

1. International cooperation in the utilization and exploration of outer space should be exclusively for peaceful purposes.

2. States providing or benefiting from international cooperation in outer space science and technology and its applications should ensure that they are used exclusively for peaceful purposes.

3. No arbitrary or discriminatory conditions should be applied to any knowledge and applications destined for the peaceful uses and exploration of outer space. To this end, negotiated international guidelines should be established to facilitate the objective settling of prerequisites for equipment and technological transfers.

V

1. All States should pursue their activities in outer space with due regard to the need to preserve outer space, in such a way as not to hinder its continued utilization and exploration.

2. States should pay attention to all aspects related to the protection and preservation of the outer space environment, especially those potentially affecting the Earth's environment.

3. States with relevant space capabilities and with programmes for the utilization and exploration of outer space should share with developing countries on an equitable basis the scientific and technological knowledge necessary for the proper development of programmes oriented to the more rational utilization and exploration of outer space.

VI

1. The role of the United Nations and the scope of its activities in international cooperation in the utilization and exploration of outer space should be strengthened and enlarged, particularly through the Programme on Space Applications.

2. All States should contribute to fund the Programme on Space Applications in accordance with their space capabilities and their participation in the exploration and utilization of outer space.

3. In order to give concrete meaning to these Principles regarding International Cooperation in the Exploration and Utilization of Outer Space for Peaceful Purposes, States should concentrate their efforts in the following areas:

(a) Promotion of the development of indigenous capability in space science and technology, particularly in the developing countries;

(b) Continued exchange of information, data, materials and equipment on space science and technology;

(c) Promotion of joint partnerships or ventures in the spheres of space science and technology;

(d) Promotion of easy and low-cost accessibility and availability of remote-sensing data, the ground receiving stations and the digital image processing system;

(e) Technical cooperation to promote and facilitate the transfer of technology and expertise in space science and technology, particularly with the developing countries;

(f) Redistribution of the spin-off benefits of space science and technology.

2. Paper of the Chairman of the Working Group on agenda item 5 (A/AC.105/C.2/L.187 of 22 January 1992)

INTRODUCTION

1. Since its twenty-seventh session in 1988, the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space has been discussing the item entitled "Consideration of the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries".

2. On 26 September 1988 and on 20 December 1989, respectively, the Secretary-General addressed a note verbale to the permanent representatives of Member States to the United Nations, inviting their Governments: (a) to submit their views as to the priority of specific subjects under the above item; (b) to provide information on their national legal frameworks, if any, relating to the development of the application of the principle contained in article 1 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 (1988 note verbale); and (c) to submit their views on the subject of international agreements that member States have entered into that are relevant to the principle that the exploration and use of outer space shall be carried out for the benefit and in the interests of all countries, taking into account the needs of developing countries (1989 note verbale). The requests contained in these notes were reissued on 6 and 10 July 1990 respectively.

3. Thirty States have sent their responses to the Secretary-General. Those responses are published in documents A/AC.105/C.2/15 and Add.1-13; and A/AC.105/C.2/16 and Add.1-10. While several States responded to both of the above-mentioned notes, others responded only to the first or second. It should be mentioned, however, that some responses to the 1988 note verbale also contained views and information pertaining to the subject-matter of the 1989 note verbale, and vice versa.

4. At the thirtieth session of the Legal Subcommittee, in 1991, the Working Group on agenda item 5 requested its Chairman to prepare, for the next session of the Subcommittee, in 1992, a paper summarizing in an analytical manner the views and information contained in the responses of Member States to the two above-mentioned notes verbales of the Secretary-General (see A/AC.105/484, annex III, para. 22). The following is the Chairman's response to that request.

I. PRIORITY OF SPECIFIC SUBJECTS

5. A wide variety of views on this issue were expressed in the responses received by the Secretary-General. According to some of them, the Legal Subcommittee should start its work on the new item with an analysis of the principle contained 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 (Outer Space Treaty), and should, in particular, consider the question of defining or interpreting certain basic terms, such as "for the benefit and in the interests", "the province of all mankind", "resources to be shared", "space-oriented" versus "Earth-oriented" activities, "use of outer space", "use of objects in outer space" and others.

6. According to other views, the Subcommittee should first review and analyse information received from States on national legal frameworks, still very rare, relating to the peaceful exploration and use of outer space, and also at an early stage consider similar information concerning international agreements that are relevant to the principle contained in article I of the Outer Space Treaty, and, finally, analyse in detail the results of the Subcommittee's review of those subjects, draw conclusions about the application of article I at the national and international levels, perhaps in a factual report on the subject, including a determination as to whether this item should continue to be considered or be dropped from the Subcommittee's agenda.

7. Some responses suggested that the Subcommittee should concentrate its efforts on establishing appropriate institutional machinery for exercising mankind's rights in the outer space sphere, that more specific regulation of the right of all States, especially developing countries, to just and equitable access to the benefits derived from outer space activities were required and that, therefore, the Subcommittee should commence the elaboration of supplementary legal norms for this purpose. Some States indicated that the purpose of such elaboration should be to further develop and strengthen the

principle of international cooperation in the outer space field. Such norms, as mentioned in some responses, could include, along with those indicated above, specific rules for ensuring that the use and exploration of outer space should be carried out exclusively for peaceful purposes and for the benefit and in the interests of all peoples; means of ensuring free exploration and use of outer space without any kind of discrimination, based on equality and in conformity with the norms and principles of international law; ways of guaranteeing freedom of scientific investigation while promoting international cooperation with countries less advanced in that area; protection of the rights of countries which have little or no space capability to participate fully, and on an equitable basis, in the exploration and utilization of outer space; ways to allow access to final products of a space activity to developing countries on a preferential and non-strictly commercial basis; rules encouraging transfer, on an adequate basis, of the relevant space-related capabilities (e.g., through the training of staff) to developing countries.

8. Some replies contained the view that the formulation of the new item of the Subcommittee's agenda was broad enough to allow the consideration of the legal aspects of the space environment's protection, including, in particular, the legal aspects of dealing with the space debris problem.

9. Some responses stressed the need to prevent the militarizing of outer space and to achieve progress in the Subcommittee's consideration of the questions relating to delimitation of outer space and airspace, as well as to the character and utilization of the geostationary orbit.

10. It would seem safe to say that all respondents agree that the main, and perhaps the most practical and promising way of realizing the principle contained in the first sentence of article I of the Outer Space Treaty, is by further developing international cooperation in the exploration and peaceful uses of outer space.

11. Some responses suggest that, in order to reach that objective, an additional international legal framework is needed which would provide specific rules and methods for equitably sharing benefits derived from outer space activities among all States, in particular developing countries.

12. The opposing view implies that, while the existing international legal framework deserves examination, it is generally adequate for further developing international cooperation in the outer space field and should not be supplemented.

13. At the thirtieth session of the Legal Subcommittee, in 1991, Argentina, Brazil, Chile, Mexico, Nigeria, Pakistan, the Philippines, Uruguay and Venezuela submitted a working paper containing "Principles regarding international cooperation in the exploration and utilization of outer space for peaceful purposes" (A/AC.105/C.2/L.182 of 9 April 1991, reproduced in A/AC.105/484, annex IV, sect. B), and the views expressed in that document need to be considered.

II. NATIONAL LEGAL FRAMEWORKS

14. Of the 30 States which have sent responses to the above notes, very few have indicated in those responses domestic laws which are specifically relevant to the principle contained in article I of the Outer Space Treaty, or, even more generally, regulate national activities in outer space or in connection with outer space. Some States indicated that relevant domestic legislation did not exist.

15. At present only one State seems to have numerous domestic laws, regulations and policies relevant in this regard. Of the laws, as indicated in the relevant response, the most important are: the National Aeronautics and Space Act of 1958, as amended; the Communications Satellite Act of 1962, as amended; the International Maritime Satellite Telecommunications (INMARSAT) Act of 1978; the Commercial Space Launch Act of 1984, as amended; and the Land Remote Sensing (LANDSAT) Commercialization Act of 1984.

16. Two other responses contained references to existing national legal frameworks specifically regulating activities involving the exploration and use of outer space. One of them briefly described a law establishing a national space agency, and also described a National School Establishment Law, under which an inter-university research institute had been established to carry out research and engineering in space science and its applications. The other referred to the Outer Space Act, which regulates that State's national activities in outer space for the purpose of complying with article VI of the Outer Space Treaty and the Convention on Registration of Objects Launched into Outer Space.

17. Some States referred to their Basic Laws (Constitutions) which contain principles, such as cooperation among States, sovereign equality and fulfilment in good faith of international obligations, which those States consider to be directly linked to the principle that the exploration and use of outer space should be carried out for the benefit and in the interests of all countries.

18. Among relevant national laws, the laws regulating sovereignty over airspace were mentioned, which laws, inter alia, exclude the extension of national sovereignty into outer space.

19. Some responses contained references to certain outer space treaties to which responding States were parties, implying that, in the absence of specific domestic legislation, the provisions of those treaties, or the principles contained therein, play the role of national legal frameworks for outer space activities conducted by those States. Some States stated that they had "incorporated" relevant outer space agreements into their national legislations.

20. In summary, it may be said that at present very few States have specific national legal frameworks relating to the development of the application of the principle contained in article I of the Outer Space Treaty, or relating to

outer space activities in general. The main explanation for this may be that the exploration and utilization of outer space is still an area of human activity in which as yet still a limited number of States participate directly, in spite of the fact that all mankind is directly concerned in the results.

21. On the other hand, it seems justified to say that national legislation relating to outer space is more developed in those States where the private sector is conducting or planning to conduct outer space activities.

22. Existing national legal frameworks for outer space activities emphasize international cooperation as the main instrument for involving foreign States in those activities and thus sharing outer space benefits with them.

III. INTERNATIONAL AGREEMENTS

23. Most of the responses to the Secretary-General's note on that subject contained lists of agreements, both bilateral and multilateral, to which a relevant responding State was a party. Some States indicated that several of those bilateral treaties reflected cooperation between developed and developing countries.

24. Some responses briefly described the main and more important provisions of such agreements, as well as specific areas, forms and methods of international cooperation on the basis of those agreements.

25. In this connection, reference was also made to some General Assembly resolutions adopted by consensus, e.g., the 1986 Principles Relating to Remote Sensing of the Earth from Outer Space (resolution 41/65, annex), which, while not creating binding legal obligations, emphasize international cooperation and establish goals and objectives for the peaceful exploration and use of outer space. The said resolutions may develop into a customary practice.

26. Some States examined the basic concepts which, in their view, were the bases for certain provisions of some outer space agreements and offered their interpretations of such notions as "for the benefit of mankind", "province of all mankind", "common heritage of mankind" and others. In this connection it was stated, in particular, that the provisions of article I of the Outer Space Treaty had acquired the legal status of peremptory norms of international law or jus cogens, and created the obligation to share resources and the results of technological research, so that interests, values and needs of a civilized community can be properly satisfied.

27. Some responses suggested that the principle of "international cooperation", reflected in article IX of the Outer Space Treaty and in the report of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE 82) (A/CONF.101/10 and Corr.1 and 2), should be developed with due regard to legal aspects that may serve as guidelines on how all countries could have access to outer space benefits. In this connection

it was proposed, in particular, to examine such concepts as "resources to be shared", "benefits" and "interests", as well as to analyse mechanisms and means for the equitable distribution of the benefits derived from the exploration and use of outer space.

28. In general, it may be said that many agreements on a wide variety of subjects were being viewed by different responding States as relevant to the principle that the exploration and use of outer space should be carried out for the benefit and in the interests of all countries, taking into particular account the needs of developing countries.

29. While some responses were limited to listing and/or briefly describing relevant agreements, other responses contained suggestions aimed at developing new legal provisions and instruments with a view to evolving international institutional methods, machinery or procedures to ensure adequate compliance with the principle contained in article I of the Outer Space Treaty.

3. Nigeria: working paper (A/AC.105/C.2/L.188 of 24 March 1992)

In Working Paper A/AC.105/C.2/L.182 of 9 April 1991, after the fourth preambular paragraph, add:

> "Recognizing that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries."
