

United Nations
**GENERAL
ASSEMBLY**

TWENTY-THIRD SESSION

Official Records



**FIRST COMMITTEE, 1645th
MEETING**

Wednesday, 18 December 1968,
at 10.30 a.m.

NEW YORK

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Chairman: Mr. Piero VINCI (Italy).

AGENDA ITEM 24

**International co-operation in the peaceful uses of outer
space: report of the Committee on the Peaceful Uses of
Outer Space (*continued*) (A/7285, A/C.1/979, A/C.1/
L.463, L.464)**

1. Mr. HAYMERLE (Austria): On behalf of the delegations of Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chad, Czechoslovakia, France, Hungary, India, Iran, Italy, Japan, Lebanon, Mexico, Mongolia, Poland, Romania, Sierra Leone, Sweden, the Union of Soviet Socialist Republics, the United Arab Republic, the United Kingdom of Great Britain and Northern Ireland and the United States of America, I have the honour to introduce to the Committee a draft resolution on the item "International Co-operation in the Peaceful Uses of Outer Space: Report of the Committee on the Peaceful Uses of Outer Space", contained in document A/C.1/L.463.

2. The draft resolution in section A deals with the United Nations Conference on the Exploration and Peaceful Uses of Outer Space, which, took place at Vienna from 14 August to 27 August 1968.

3. The draft resolution notes that the Conference has achieved its purpose of examining the practical benefits of space exploration, and the opportunities available to non-space Powers for international co-operation in space activities.

4. It welcomes the intention of the Committee on the Peaceful Uses of Outer Space to consider all proposals arising from the discussions at the Conference, and in particular those concrete proposals which had already been made in the Committee on possible follow-up action. The resolution then urges all Member States to avail themselves as much as possible of the information presented at the Conference, and requests the Secretary-General to bring this information to the attention of all Member States.

5. The Committee on the Peaceful Uses of Outer Space and the international organizations would be requested to report on the steps taken pursuant to this resolution.

6. In section B the draft resolution would deal with the work of the Committee on the Peaceful Uses of Outer Space during the past year, and at the same time establish guide-lines for the Committee's activities in 1969.

7. In this respect the draft resolution endorses the recommendations and decisions contained in the report of the Committee on the Peaceful Uses of Outer Space [A/7285].

8. In the further elaboration of the law of outer space, the draft resolution requests the Committee to complete urgently the preparation of a draft agreement on liability, and to submit it to the General Assembly at the twenty-fourth session. It further requests the Committee to continue the study of other questions in the legal field.

9. The draft resolution then, taking note of the recent entry into force of the Agreement on rescue and return,¹ would urge all countries to become parties to this Agreement and to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies [General Assembly resolution 2222 (XXI), annex].

10. The draft resolution would further reaffirm the principle expressed in resolution 1721 D (XVI) that communication by means of satellites should be available to all nations on a global and non-discriminatory basis. In this connexion, the draft resolution would approve the establishment by the Committee of a special working group to study and report on the various aspects of communication by direct broadcast from satellites.

11. The draft resolution would also approve continuing sponsorship by the United Nations of the Thumba rocket launching station and provide for preparations for similar sponsorship, at the appropriate time, of the Mar del Plata station in Argentina.

12. The draft resolution would finally request the specialized agencies and IAEA to inform the Committee of their work in the field of the peaceful uses of outer space, and request the Committee to report to the twenty-fourth session of the General Assembly.

13. I trust that this draft resolution will commend itself to all members of the Committee and that it will be adopted unanimously.

14. Mr. ASTRÖM (Sweden): In her recent statement in the disarmament debate which took place in this Com-

¹ Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, General Assembly resolution 2345 (XXII), annex.

mittee [1609th meeting, para. 72], Mrs. Alva Myrdal, Swedish Minister for Disarmament, remarked that technological achievements originally brought about in the search for more effective and more deadly means of destruction, have rapidly also caused "spin-off" effects in the fields of peaceful construction. Some of these implications may still have a rather "futuristic" ring, but in many cases, if I may use this expression, the future is already here. This seems particularly true with regard to the question of outer space now before the First Committee. The achievements in outer space science and technology during the last eleven years have been truly staggering, and we can look forward to even more spectacular events in the very near future. One cannot, indeed, speak on the subject without expressing feelings of admiration and awe. These achievements are both of long-term and immediate practical importance. It is an encouraging and challenging thought that the ever-expanding human knowledge of space has far-reaching and growing implications for man's life and daily activities on earth.

15. The application of space science and technology will profoundly affect—and has already done so—industry, agriculture, communications, meteorology, broadcasting, medicine, geology and many other fields. Such developments have already led to international co-operation both inside and outside the United Nations and the specialized agencies. The Outer Space Conference at Vienna in 1968 provided an exhaustive inventory of today's knowledge in different fields of space science and technology and brought greater understanding of the true potentialities of the practical utilization of space technology. It is our sincere hope that that Conference will also serve to foster enlarged international co-operation in the outer space field so as to allow all countries, regardless of the stage of their economic and scientific development, to benefit according to their requirements from the practical application of space activities.

16. We believe that space demands an international, indeed a planetary approach. We therefore believe that questions relating to space should, whenever possible, be considered by the appropriate organs of the United Nations so that their full significance may be clearly realized by all States and so that all countries may be given a chance to draw on space technology for their economic and social advancement. Their interest in assuming and sharing responsibility for international co-operation in that field should be encouraged and welcomed.

17. Just as the sea-bed item [agenda item 26] presently debated in this Committee, the space item faces us with challenging options. We have reached a stage where plans are rapidly developing for the use of satellites on a domestic, regional and international level. In all these cases there is a need for international co-operation and for international co-ordination. In short, we have reached a stage where important decisions have to be taken concerning our future course in order to make sure that this course will be beneficial to all and detrimental to none.

18. One such case seems to us to be that of global satellite communications. At present there is only one international organization with a large membership which is actually in operation—that is INTELSAT, where more than sixty countries are represented, amongst them Sweden.

19. A proposal for a new organization in this field was made during the Outer Space Conference in Vienna by the Soviet Union and seven other countries. This proposed organization, as we know, is called Intersputnik. Unfortunately, since the presentation of the proposal, little new factual information about this system has been forthcoming. It is, therefore, not possible, at this stage, to form any definite ideas on the intended operations of this system.

20. However, we seem now to be confronted with the possibility of two international systems. We cannot exclude that there will even be more than two. I think that most of us agree that it would be highly unfortunate if, because of lack of co-operation and mutual efforts to come to a general agreement, we would see the emergence of two, or perhaps more, possibly competing international communications satellite systems, all with global aspirations but perhaps with fundamental differences conceptually, technically and structurally.

21. During discussions in European space organs regarding these problems, in particular the forthcoming negotiations concerning permanent arrangements for INTELSAT, as well as during the Vienna Space Conference, Sweden has consistently urged that all efforts should be made to ensure in the words of General Assembly resolution 1721 D (XVI), which was adopted by the General Assembly in 1961, that "...communication by means of satellites should be available to the nations of the world as soon as practicable on a global and non-discriminatory basis".

22. When the question was considered by the European Conference on Satellite Telecommunications (CETS), a Conference that took place last May, a resolution was moved by Sweden and adopted unanimously by the Conference, the fifth preambular paragraph of which reads as follows:

"Believing that in order to facilitate the establishment of a truly global organization consideration should be given to means of associating countries members of the United Nations and the International Telecommunication Union with the negotiations for the definite arrangements and that for this purpose the matter ought to be considered by appropriate United Nations bodies".

This is what we are doing now.

23. The principles contained in General Assembly resolution 1721 D (XVI) will be put to a test soon during the renegotiation of the existing Intelsat agreements. Sweden is a member of Intelsat and wishes the forthcoming negotiations, due to start on 24 February next year, to be successful. At the same time we cannot overlook the fact that, although the present organization has more than sixty members, it cannot be, as yet, characterized as truly global, that being the aim set out in its statutes, which *inter alia* quote resolution 1721 (XVI) to which I just referred. Important countries and regions may not become part of the system, just as many countries may not join an organization like Intersputnik.

24. We feel that no country should take a narrow point of view in this case. A single country may find that its immediate interest in having access to satellite communications is adequately met by membership in a specific system

grouping a certain number of countries. We feel that the possibility of establishing a universal system, however, should always be present in the minds of all of us and, wherever feasible, actively pursued. If this ideal solution is beyond reach, there still remains an obvious need for international arrangements concerning co-operation and co-ordination between systems, existing or planned.

25. Given the far-reaching consequences of decisions in this field, we think that all efforts should be made on the part of Governments, as well as on the part of organizations, to keep the doors open for the widest possible participation in the development and use of satellite communications systems. It is important to avoid any action which might impair the ultimate realization of the objective of universality.

26. These are the reasons why Sweden for its part has thought it appropriate that the principle contained in resolution 1721 D (XVI) should be reaffirmed in the resolution to be adopted by the General Assembly at this session. We note with great satisfaction that the reaffirmation of this principle is contained in the draft resolution now before the Committee, recommending that parties to international negotiations on the subject keep this principle in mind so that the possibility of its ultimate realization shall not be impaired.

27. I had the occasion last year to develop the views of the Swedish Government on the importance and implications of direct broadcasting by satellites, which is bound to have a far-reaching influence on existing broadcasting policies and systems within a relatively short time. The General Assembly, sharing this concern, requested the Committee on the Peaceful Uses of Outer Space in operative paragraph 13 of its resolution of 3 November 1967, 2260 (XXII), to "study the technical feasibility of communications by direct broadcasts from satellites and the current and foreseeable developments in this field, as well as the implications of such developments".

28. The Committee on the Peaceful Uses of Outer Space, during its October 1968 meeting, devoted considerable interest and attention to the questions raised in connexion with the development of direct broadcast satellites. It was widely recognized that developments had taken place and information had been forthcoming which indicated that the technical feasibility of direct broadcasting was no longer in doubt. Material presented during the Vienna Conference had indicated that direct broadcast satellites might be a reality within five years and in any case not much later than this. This being so the importance of studying also the legal, social, cultural, educational and other aspects of this new technology and its use became evident. In order to expedite the matter, the Committee therefore found it advisable to establish a special working group to study the technical questions, "including comparative user costs and other economic considerations, as well as the implications of such developments in the social, cultural, legal and other areas" [*see A/C.1/L.463, sect. B*].

29. As will be seen from paragraph 28 of the report of the Committee on the Peaceful Uses of Outer Space the working group would commence its study early in 1969, devoting the first part of its work to the technical

characteristics of direct broadcasting from satellites, including questions related to user costs and other economic and directly related considerations. It is our understanding that these aspects could be adequately dealt with during a short, or relatively short, first session of the working group which could be held in February 1969 at Headquarters. At a second session later in the year the working group would proceed to consider additional economic, as well as social, cultural, legal and other implications of direct satellite broadcasting. The reports of the working group would be transmitted to the regular autumn session of the Committee on the Peaceful Uses of Outer Space, which in its turn would report on the matter to the General Assembly at its twenty-fourth session next autumn. In other words, in the view of the Swedish delegation, two sessions of the working group will be necessary, of which the latter may well be the more important one.

30. It is the hope of the Swedish delegation that this Committee will share the views expressed by the Committee on the Peaceful Uses of Outer Space and welcome the establishment of this working group. It is equally our hope that, in conformity with paragraph 32 of the report, Member States will submit for consideration of the working group their own comments and papers on the question of direct broadcasting satellites, whether they are members of the Committee on the Peaceful Uses of Outer Space or not.

31. The Canadian Government and the Swedish Government had decided to present a joint paper on the technical characteristics as we know them of the use of satellites for direct broadcasting as well as on the implications of such broadcasting in the social, cultural, legal and other fields. We intend to present this background paper to the first meeting of the working group so that it could, together with material presented by other Governments and international organizations, serve as documentation and guidance for the working group and for all interested parties.

32. Even if present experience in using satellite systems for broadcasting purposes is limited, enough studies have been undertaken both nationally and internationally to make clear the far-reaching implications of direct broadcast satellites. We feel that these implications point to a new type of situation.

33. For the first time we shall not be bound by technical constraints but will have great freedom to decide and organize communications according to desirable uses, to the social needs and requirements in the widest sense. We must, therefore, make sure that this new technology is put to uses which are beneficial to all States, taking into account, on the one hand, the specific requirements of each one of them and, on the other hand, general principles such as freedom of information and the availability of satellite communication on a non-discriminatory basis. Direct broadcast satellites present us with great opportunities, great challenges and also a number of new problems. As has also been stated by ITU, the most difficult problems are not to be found in the technical field but may be of a social, cultural and political nature and should therefore attract the attention of the highest government authorities.

34. I will not go into a detailed discussion of these problems more than I have already done. Let me only say

that there is the obvious need for some type of international regulation with regard to general principles of policy, as well as with regard to such practical matters as frequency allocation and orbital parking space—a new expression. Arrangements in this field should take into account the different purposes—general broadcasting, education, national development, etc.—to which space broadcasting can be put in countries with widely differing social and cultural backgrounds, at different stages of development and with national broadcasting organizations working according to different patterns and with different objectives.

35. Looking further ahead, it is quite obvious that the international community will be faced with a number of practical tasks which will have to be allocated to various international organs. The activities of these organs should be directed towards an orderly and co-ordinated development of the use of this new technology in the interest of mankind.

36. That also indicates the general spirit in which the Swedish Government wishes to work in this important field.

37. Mr. WIGGINS (United States of America): As the General Assembly this year again considers the peaceful use and exploration of outer space, we all know that one of man's most ancient dreams may soon be fulfilled. For we see unfolding before us today the final stages of one of the greatest explorations of all time—an exploration which may lead to man's landing upon the moon. This adventure belongs not to one or two nations, but to all mankind. The voyage to the moon is part of man's historic quest for a more complete understanding of the universe in which he must make his way, and a measure of his faith in his own human capabilities. Whatever the nationality of the men who make this voyage, they will be guided by the courage, imagination and zest for life which we know are the common qualities of all peoples. Perhaps most important, the exploration of the moon, like that of all celestial bodies, will be governed by principles which represent the interests and aspirations of the community of nations. The outer space Treaty stated in Article I, that the exploration and use of outer space shall be "the province of all mankind;" as we look forward to the dramatic extension of man's environment which lies ahead, this statement seems to us to be a very literal expression of fact.

38. There have been two events in 1968 of major importance in the United Nations work on outer space. The first was the Vienna Conference on the Peaceful Uses of Outer Space, the first such Conference to emphasize the practical benefits of space technology to all nations, no matter how large or small their own programmes in space research; the second was the coming into force on 3 December 1968 of the Agreement on the rescue and return of astronauts, which has now been signed by sixty-six nations, and which will help to assure that astronauts in distress receive the assistance which they deserve and require.

39. My delegation would like to express its appreciation to Mr. Waldheim of Austria and to Mr. Sarabhai of India for their able leadership in the Conference on the Peaceful Uses

of Outer Space at Vienna. We think that the Conference provided a useful exchange of ideas and experience on opportunities for international co-operation in space research and on the benefits to all men here on earth of the new technology being used in the space above us.

40. In view of the rapid advances which are taking place, the Conference sessions on such subjects as the use of satellites in communications and in meteorology were of particular benefit. The United States delegation to the Conference was impressed by the common-sense approach taken to the questions discussed and the general realization that the successful application of space technology must begin with a real and specific need which the new technology can fill.

41. Let me now turn to a disappointment in the past year in the United Nations work on outer space: the failure to complete an outer space liability convention. Like the Agreement on assistance to and return of astronauts, a liability convention would be an important supplementary agreement to the outer space Treaty approved by the General Assembly in 1966.

42. In approving the astronaut Agreement last December, the General Assembly, in its resolution 2345 (XXII), in its operative paragraph 4, called upon the Committee on the Peaceful Uses of Outer Space:

"to complete urgently the preparation of the draft agreement on liability for damage caused by launching of objects into outer space and, in any event, not later than the beginning of the twenty-third session of the General Assembly, and to submit it to the Assembly at that session."

Speaking for the United States in the General Assembly on 19 December, Mr. Goldberg pledged "the full and unstinting efforts of the United States to that end" [*1640th plenary meeting, para. 128*]. Similar pledges were made by other members of the Committee on the Peaceful Uses of Outer Space.

43. In the light of these pledges, the 1968 session of the Legal Sub-Committee of the Committee on the Peaceful Uses of Outer Space, held last June at Geneva, was a failure. Not all members showed a willingness to negotiate meaningfully towards a satisfactory text. Some, in fact, showed no readiness whatsoever to advance beyond rigid and outdated positions. The result was a great deal of discussion and very little progress.

44. Recently, there has been evidence of a greater readiness to deal forthrightly with the issues involved in a draft liability convention. For example, the members of the Committee on the Peaceful Uses of Outer Space now seem to agree unanimously that such a convention should cover nuclear as well as non-nuclear damage. This is a big step forward. And while not all members yet agree that such a convention should contain a limitation on liability, a large and growing number are now prepared to consider seriously a limitation, provided that the figure chosen is appropriately high.

45. A remaining issue of fundamental importance relates to the settlement of unresolved claims. The United States

shares the view of most members of the Committee on the Peaceful Uses of Outer Space that a liability convention must provide some way of resolving a dispute over a claim upon which a claimant and the launching State have not been able to agree. If negotiations have not led to a mutually acceptable result within a reasonable time, a dissatisfied claimant State should be able to invoke the jurisdiction of an impartial tribunal with the power to decide upon the existence of liability and the amount, if any, for which the launching State should be held liable. Such a provision is essential if a liability convention is to be meaningful.

46. If an agreed solution can be reached on the question of arbitration, or other procedures for resolving unsettled claims, agreement should come quickly on such remaining issues as the treatment of international organizations under the Convention, the system or systems of law used to determine the amount of damage, and the question of sharing the liability from damage caused by space activities conducted jointly by two or more States.

47. We have waited too long for a convention to protect all States against damages which could result from space accidents. We hope all members of the Committee on the Peaceful Uses of Outer Space will find it possible to finish such a convention at the next session of the Legal Sub-Committee. There is no reason why this goal should not be reached.

48. Two other subjects rank high on the agenda of the Committee on the Peaceful Uses of Outer Space for next year—the proposals of India and Sierra Leone [*see A/7285, paras. 22 and 23*] that the United Nations establish a continuing mechanism to provide objective information on the applications of space technology, and the proposed study by a working group of the technical feasibility and various implications of communications by direct broadcast satellites [*ibid.*, *para. 27*].

49. At the Conference on the Exploration and Peaceful Uses of Outer Space in Vienna, considerable attention was given to broad questions of the future role of the United Nations in outer space. Discussions of the way in which the United Nations might assist developing countries in using space technology led to two concrete proposals, one by India and the second by Sierra Leone [*see A/AC.105/PV.53 and 58*] that a mechanism be established to provide nations with analytical advice on advances in space technology which might have practical benefits. This mechanism might take various forms, but a successful United Nations service clearly must employ the best technical expertise available.

50. My delegation believes that these proposals point the way toward a useful new activity for the United Nations in the field of outer space. As I emphasized at the fifty-fourth meeting of the Committee on the Peaceful Uses of Outer Space last October [*see A/AC.105/PV.54*], all nations—no matter what their stage of development or ultimate objectives—face insistent and competing demands on limited resources. Space techniques will be adopted only if there is sound evidence that they are more efficient or less costly than conventional methods. There are times when the old-fashioned way of doing a job is more efficient than an esoteric application of space technology—when a sextant

may be a more efficient instrument of navigation than a geosynchronous satellite, a land line more sensible for communication than a space relay, or a propeller-driven airplane a better choice for surveying resources than a satellite still on the drawing board. But there will also be times when a new space technology can be more economic and more effective than a conventional method. We believe that the United Nations can and should play an increasingly active part in providing the analytical information that countries need in deciding where and when space technology can best assist their development.

51. My delegation also supports the proposal that a working group of the Committee on the Peaceful Uses of Outer Space undertake a study of direct broadcast from communications satellites to local ground receivers [*see A/7285, para. 27*]. We believe that questions relating to technical feasibility should constitute the first phase of this study. Then the working group, on the basis of this report, should next proceed to consider economic as well as social, cultural, legal and other implications of direct broadcasting.

52. The promise of economically feasible direct satellite broadcast to home receivers may yet be some distance in the future. However, we think the value of such broadcasts for education and other purposes could be great, and we believe that the possibilities should be examined in depth.

53. The most immediately feasible applications of satellite broadcasting may be those which do not require that every home be equipped with a highly sophisticated receiving set and antenna. For example, the United States and India are currently considering a co-operative project which would make available to India a satellite capable of broadcasting television programmes directly into small, inexpensive village receivers. India would be able to use this satellite for instructional programmes, which would be prepared entirely by India, on the basis of its own analysis of national priorities. We hope this pilot project will demonstrate how a developing country may bring sophisticated space technology to bear on its own national needs.

54. Seven years ago, the General Assembly on 20 December 1961 adopted resolutions 1721 A-E (XVI) landmark resolutions which set forth basic principles and guide-lines concerning international co-operation in outer space. The General Assembly expressed its belief in resolution 1721 D (XVI) that “communication by means of satellites should be available to the nations of the world as soon as practicable on a global and non-discriminatory basis”. Few people in 1961 could have foreseen the vast satellite telecommunications network which now spans the earth. The sixty-three members of that system are drawn from every continent. They represent widely different political and social systems, but share a common interest in practical, effective satellite communications. My Government is proud of the part which it has played in making these communications available, through the medium of INTELSAT, to all nations.

55. By the terms of the 1964 Agreement Establishing Interim Arrangements for a Global Commercial Communications Satellite System, my Government is obligated to convene a plenipotentiary conference during early 1969 for the purpose of establishing definitive arrangements for

INTELSAT. As host Government, we have invited all sixty-three INTELSAT members to this conference, which will convene at Washington, D.C., on 24 February 1969. The Secretary-General of the United Nations and the Secretary-General of the International Telecommunication Union have been invited to send observers. In addition, notice of this conference has been sent to every country which is not a member of INTELSAT, but is a Member of the United Nations or one or more of its specialized agencies. If any such country, in response to this notice, indicates that it would like to attend the conference, the Government of the United States would be pleased to extend an invitation to that Government to participate in the conference in an observer status. [See A/C.1/979.]

56. The year ahead may be one of achievement and high adventure in the exploration of outer space. But above all, I should like to emphasize that the United States will continue to work towards co-operation in the exploration and in the use of this new environment, and especially in the uses of space technology which have a direct, practical relevance to our daily lives on earth.

57. In closing, I should like to voice my appreciation for the kind wishes for success of the forthcoming Apollo 8 manned space flight, which have been expressed by so many of the speakers here who have preceded me.

58. Mr. TSURUOKA (Japan): I should like to express our warm congratulations to the Soviet Union and the United States for their respective series of marvellous successes in space exploration during this past year. Our congratulations go also to the member States of the European Space Research Organisation for the successful launching of their satellite HEOS on 5 December.

59. Permit me now to make a brief statement on the space activities of my country. Space activities in Japan could be classified into two categories—the scientific exploration of outer space and the practical application of artificial satellites to such fields as communications, meteorology, navigation, geodetic surveys, and so on.

60. In the field of scientific exploration, we are planning to launch our first scientific research satellite in the near future. This scientific research satellite and others which will follow it will make observations of radio waves, cosmic radiation and corpuscular beams. In the field of practical application of artificial satellites, Japan plans to launch by 1973, satellites, respectively, for communications, meteorology, navigation and geodesy. At present we are focusing our efforts on a launching project of experimental applications satellites designed for measurements and observations.

61. Recently, in September, our country successfully launched ten rockets. Some were designed to make meteorological observations, and others were to make operational tests providing necessary data for the development of rockets for the propulsion of artificial satellites.

62. In the field of international co-operation, our country co-operated with India in April 1968 in sounding celestial X-ray sources by a rocket furnished by the National Aeronautics and Space Administration (NASA) in the United States of America. From June through October

1968, Japan carried out transmitting tests with the United States, using an applications technology satellite launched by NASA and also using a pulse code modulation multiple access system developed by Japan.

63. The United Nations Conference on the Exploration and Peaceful Uses of Outer Space, as we all know, was held at Vienna, Austria, from 14 to 27 August. We should like to express our profound thanks to the Government of Austria for acting as host to the Conference. This Conference was designed to examine the practical benefits to space programmes on the basis of scientific and technical achievements, and the opportunities available to non-space Powers for international co-operation in space activities, with special reference to the needs of the developing countries.

64. The Conference, which we believe was a real success, was the first of the great steps needed to bridge the gap between the space Powers and the non-space Powers, particularly the developing countries. It was an international forum where some 500 participants from seventy-eight countries and thirteen international organizations exchanged their views and deepened their mutual understanding. They shared valuable information based on their own experience, regarding: (1) how space science and the application of space technology are being developed; (2) what kind of space programmes the participating countries and international organizations have; (3) what problems they envisage; and (4) what sort of expectation for international co-operation there is in the minds of countries, and what problems are anticipated in that connexion.

65. We believe that the Conference produced results satisfactory to all the participants. Japan certainly deepened its understanding of the direction in which other countries are going in developing their space exploration and application programmes, and also of the various problems anticipated in the process. We expect that detailed study of the papers, statements and discussions at the Conference will make a substantial contribution to the elaboration of our own space programme.

66. This historical Conference at Vienna having been such a success, what remains to be done now is to follow up the results of the Conference. We are pleased that concrete follow-up measures will be discussed extensively in the Scientific and Technical Sub-Committee of the Committee on the Peaceful Uses of Outer Space during its next session, as mentioned in the report of the latter Committee.

67. All the delegations may well remember that just one year ago the General Assembly, when it adopted resolution 2345 (XXII) commending the draft Agreement on the Rescue and Return of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, called upon the Committee on the Peaceful Uses of Outer Space to complete urgently the preparation of a draft agreement on liability for damage caused by the launching of objects into outer space, in any event not later than the beginning of the present session of the General Assembly, and to submit it to this session. Unfortunately, the Committee could not fulfil this task. The reality in the present world is that the overwhelming majority of States are non-space Powers. The draft Treaty on rescue and

return having been completed, the balance should be restored in favour of the non-space Powers by prompt completion of a draft agreement on liability. We should like to urge the big space Powers to endeavour to make a substantial contribution to the early completion of a draft agreement on liability.

68. Lastly, we are glad to be one of the co-sponsors of draft resolution A/C.1/L.463, and we hope that it will be adopted unanimously.

69. Mr. BETTINI (Italy): I wish, in the first place, to congratulate Mr. Haymerle of Austria on his election to the Chairmanship of the Committee on the Peaceful Uses of Outer Space, following in the footsteps of his illustrious predecessor, Mr. Kurt Waldheim, since promoted to the post of Minister for Foreign Affairs of his country. It is perhaps significant that, just as in the last century the Austrian diplomats were instrumental in maintaining a reasonable balance of power on our troubled old European continent, Austrian diplomats have now been for almost a decade at the helm of the very special Committee which is trying to ensure an orderly development of space exploration within the framework of the widest possible international co-operation and with the clearly stated goal of benefiting all States irrespective of their political creed or stage of development. I am perfectly sure that with his wide experience, keen sensibility and natural diplomatic skill, Mr. Haymerle will guide the Committee on the Peaceful Uses of Outer Space on a path of continuous achievement.

70. I wish now to present some remarks on the report of the Committee on the Peaceful Uses of Outer Space which has been submitted for the approval of this Committee. Of course, my delegation recommends its approval since we have participated in its preparation and in its unanimous acceptance by the Committee on the Peaceful Uses of Outer Space. My remarks will be aimed rather at clarifying and expanding the position of my Government in some of the pertinent matters which it deals with.

71. The first chapter is dedicated to the Vienna Space Conference and I wish to repeat here the deep appreciation of my delegation for the foresight of the Austrian Government in proposing, supporting and organizing it on behalf of the United Nations, with perfect efficiency and traditional hospitality.

72. As far as exploiting the results of the Conference is concerned, my delegation is of the opinion that, even if an annotated list of the papers presented at Vienna and a volume of the proceedings and other means of popularizing the basic questions raised and discussed at the Conference is produced by the United Nations Secretariat, only a detailed study of the proceedings by the Scientific and Technical Sub-Committee and the use of the most significant topics as a background for recommendations of future steps to be taken by the United Nations will give full meaning to the undisputed success of the Conference.

73. That brings me to the second item of the report, namely, the future work of the Scientific and Technical Sub-Committee. It is true, as the report says, that:

“although the Scientific and Technical Sub-Committee did not hold its annual meeting in 1968, the Conference

provided the opportunity to take up the questions usually dealt with in the Sub-Committees . . .” [*see A/7285, para. 19*].

74. But it is one thing to take up a question and it is another thing to study it and to formulate recommendations for whatever is to be done about it. One of the most important points in this respect is that related to education and training in the field of outer space, which is so closely connected with the capability of enjoying the practical benefits deriving from it.

75. The delegation of India has presented a proposal [*ibid.*, *para. 22*] for the constitution of small advisory groups and for arranging panel meetings, fellowships, surveys and technical assistance. The delegation of Sierra Leone has proposed [*ibid.*, *para. 23*], that the United Nations create a specialized mechanism to inform and advise nations in a highly focused way of space advances which might have practical applications for their benefit. Both proposals should be carefully studied by the Scientific and Technical Sub-Committee, and an acceptable plan should be recommended for the approval of the General Assembly, taking into account the suggestions made by many members to utilize as much as possible already existing United Nations channels and expertise.

76. Other important items for the consideration of the Scientific and Technical Sub-Committee are identified by the evidence presented at the Vienna Conference of the promising prospects in the fields of communications technology, meteorology, navigation, biology, medicine, as well as in agriculture and, in general, in the assessment of our earth's resources with the purpose of their more efficient utilization.

77. It is within the mandate of the Scientific and Technical Sub-Committee to adopt recommendations that will be aimed at developing and strengthening the positive elements which have emerged from the Vienna Conference, providing impartial and analytical advice concerning the role of space applications compared with conventional methods, within the framework of the over-all development of any one country.

78. I wish to single out for a more detailed analysis one of the most important areas of space application with which the Scientific and Technical Sub-Committee has not, as yet, concerned itself, namely, that of space communications. We are facing here not dreams, but realities, and my delegation believes that a clear outline of the situation is required in order to proceed to a complete understanding of the problems involved, which can no longer be ignored or skirted, as has been done in the past.

79. As the representative of the United States, which has an unmatched experience in the public communications field, rightly stated in his remarks at the last session of the Committee on the Peaceful Uses of Outer Space, “Through effective and practical international arrangements, communications satellites have become one of the most effective tools man has for coming to understand and to live with the different ideas and beliefs of his fellows.” [*See A/AC.105/PV.54*].

80. And that is true even if people differ on what kind of an organizational arrangement ought to be chosen for an

international space communications system. Irrespective of that difference of opinion, we have, however, to bear in mind that at the present time there is—and there has been for the last four years—only one international operational system in existence, that of INTELSAT.

81. A substantial number of States, including my own, have joined the INTELSAT communications satellite consortium in an experimental agreement, which will be subject to renegotiation and adjustment in a conference of plenipotentiaries to be held early next year.

82. As was to be expected in the initial period of any operational system, some problems have emerged during the four years of operation of INTELSAT which will be discussed and renegotiated on the basis of such experience in the forthcoming Conference. But it is the belief of the Italian delegation that all the problems can be satisfactorily solved, given the goodwill and spirit of co-operation that has always prevailed among the sixty-three members of INTELSAT.

83. I shall now comment on the possibilities of the future communications satellites, represented by the possible use of satellites for direct radio and telecommunications broadcasts. We are fully convinced of the importance of this new form of space telecommunications and share the opinion forcefully expressed by the representatives of Sweden and Canada of the need to establish some rules governing its utilization, which otherwise can be for evil as well as for good, and in some cases for purposes contrary to the promotion of peaceful relations between States.

84. In that spirit, the Italian delegation has agreed to the recommendation contained in the report of the Committee on the Peaceful Uses of Outer Space "to study the technical feasibility of communications by direct broadcasts from satellites and the current and foreseeable developments in this field, as well as the implications of such developments." [See A/7285, para. 26.] However, having said that, and while for the sake of unanimity I support the proposal of establishing such a working group, I wish to add that my delegation is still not completely convinced that the same work could not be performed by the Scientific and Technical Sub-Committee and by the Legal Sub-Committee respectively. As a matter of fact, in the mandate of the working group as envisaged in the aforementioned recommendation, mention is made of two reports, one on technical feasibility and other technical matters, and the second on social, cultural, legal and political implications—that is in two areas which fall precisely within the respective mandates of each Sub-Committee.

85. I wish to mention now the topic of the international rocket facilities only to the effect that the Italian delegation fully shares the general appreciation of the effective operation of the Thumba Equatorial Launching Rocket Station so brilliantly conducted by the Government of India, and to express our keen interest in the new international facility of Mar Chiquita, generously offered by the Government of Argentina. My country will be happy to offer a scientist to be included in the United Nations group that is to visit that space station when the Government of Argentina will notify the Committee on the Peaceful Uses of Outer Space of the proper time.

86. On the subject of the work of the United Nations agencies on space-related subjects, my delegation was very impressed, as it has been in preceding years, by the effective and far-reaching action taken by the World Meteorological Organization in developing the World Weather Watch, and now in the commencement of a new global atmospheric research programme, Global Atmospheric Research Programme (GARP), in which satellites will play an important role.

87. By the same token, the work of the International Telecommunication Union has to be commended, and the Italian delegation believes that the studies discussed at its April 1968 meeting on the very numerous and difficult problems raised by satellite broadcasting should be examined very carefully by the Scientific and Technical Sub-Committee. The International Telecommunication Union has also approached in its International Radio Consultative Committee (ICCR) the important questions of the sharing of frequencies between earth and space services and of the use of the geostationary orbit: both the frequencies and the orbital positions must be considered a special kind of natural resource, and whatever decision is reached on their exploitation and use falls within the responsibility and the mandate of the Committee on the Peaceful Uses of Outer Space, in as much as they are to be considered space resources to be utilized for the benefit of all States, irrespective of their development or political affiliation.

88. The Italian delegation has endorsed whole-heartedly the recommendation by the Committee on the Peaceful Uses of Outer Space requesting the specialized agencies of the United Nations to consider the work of the Vienna Conference and to take the necessary follow-up steps to ensure the future progress of work in their respective areas of competence [*ibid.*, para. 36].

89. In this respect, my delegation will be very much interested to hear from ICAO and IMCO about their positions and activities in the field of navigation satellites; to hear from FAO an evaluation of the practical benefits which could accrue to its work by the operation of a satellite for agricultural use, in regard to the mandate and responsibilities of that agency; to hear from WHO the outline of its projected studies on space biology and medicine; to hear from UNESCO up-dated results of its studies of satellite applications to educational programmes and to the assessment and study of earth resources, such as the hydrological potential and the geodetic characteristics of the earth.

90. Finally, my delegation fully endorses the recommendation that all the specialized agencies examine, and report to the Committee on the Peaceful Uses of Outer Space on, the particular problems that have arisen or that may arise from the use of outer space in the fields within their competence [*ibid.*, para. 37].

91. I have dwelt at length on scientific and technical matters because I believe that if we do not take the steps which are requested of us in this area, technological progress will bypass our work and our aim of an orderly development of international co-operation in space for peaceful purposes will be seriously compromised.

92. I even suggest, following a provocative idea expressed by the representative of Austria, that it might add vigour and drive to the activities of the Committee on the Peaceful Uses of Outer Space and its two Sub-Committees, to meet occasionally outside of the United Nations territory and in countries developing space activities or interested in space.

93. I now wish to present some brief remarks on the work performed by the Legal Sub-Committee and on the thinking and hopes of my delegation on this subject.

94. There is no doubt that the great majority of the members of this Committee have been deeply disappointed by the lack of progress in the discussions of the Legal Sub-Committee on the convention for liability and damages, which, in our opinion, is legally and politically an instrument inseparable from the agreement on rescue and return of astronauts, as far as implementation of the space treaty is concerned.

95. I am aware of the main differences still to be settled: namely, whether the convention should exclude nuclear damage; whether there should be any limitation on the amount of liability; whether the convention should provide for compulsory third-party settlement of disputes; the relationship between international organizations and the convention; the law applicable for measuring damage; and finally, the other unresolved aspects of joint liability. The Italian delegation, at the last meeting of the Legal Sub-Committee, itself presented a draft of a convention [*see A/7285, annex III, appendix I (A/AC.105/C.2/L.40)*] as a contribution towards the elaboration of a unanimously agreed text which could reflect the interests of all member States in a spirit of goodwill and co-operation. Unfortunately, it did not produce an agreement, just as there was no agreement on the drafts produced by other delegations; and all this led the Legal Sub-Committee to the negative statement that there was no use in proceeding with the discussions, nor even in reconvening the Legal Sub-Committee itself, until several members could reconsider their firm positions and supply proof of their intentions to adopt a more flexible approach to the various controversial points, thus opening the way to a unanimously acceptable text of the convention on liability and damages.

96. On behalf of my delegation, I wish to state first of all that our position in respect of the draft we have presented has been and still is flexible, and that we are ready to accept reasonable compromises in accordance with the wishes of the majority of members of the Legal Sub-Committee.

97. Secondly, the Italian delegation believes that during the recent session of the Committee on the Peaceful Uses of Outer Space there were substantial indications of a new flexibility in the positions of certain members, which could meet the conditions imposed upon itself by the Legal Sub-Committee to reconvene only when it considers that substantial progress can be made. For this reason, my delegation strongly recommends that a meeting of the Legal Sub-Committee take place in the first half of the coming year and that, in a spirit of goodwill and co-operation, it reach agreement on the convention on liability and damages as well as on the other matters on its agenda.

98. One of those matters is that of defining where the atmosphere ends and space begins, which also appears on

the agenda of the Scientific and Technical Sub-Committee. From the latter's 1967 report on the subject,² it appears clear that, for the time being, there is no acceptable scientific definition of a single border-line between atmosphere and space. The task of defining such a border-line on the basis of other than scientific criteria rests, therefore, on the Legal Sub-Committee. The Italian delegation feels that this is a problem of the utmost importance.

99. In concluding my remarks, I wish to assure the Chair and all my colleagues that the Italian delegation, as in the past, is ready to give its full support and its most enthusiastic co-operation to the efforts of the First Committee of the General Assembly aimed at an orderly and peaceful development of outer space for the benefit of all mankind.

100. Mr. PARTHASARATHI (India): As you, Mr. Chairman, stated yesterday in the Committee [*1644th meeting, para. 2*], the second decade of space exploration has already begun. Man's endeavours in further exploring outer space are reaching new dimensions. Some weeks ago, the Soviet Union achieved a magnificent success in sending Zond 5 and Zond 6 around the moon. Encouraged by the success of the Apollo 7, which was sent on an eleven-day mission around the earth, the United States is in the final stages of preparation for rocketing a three-man crew in Apollo 8 on a historic voyage around the moon. This circumlunar voyage by astronauts is blazing the trail for projected missions around and to the moon. The world owes a debt of gratitude to the scientists and technicians of the United States and the Soviet Union for the untiring zeal with which they are pursuing their efforts to conquer outer space. The results achieved in the process of discovering it are opening up new fields of applications for the benefit of all of mankind. It is for us to put this knowledge to use in as effective a manner as possible for the amelioration of the economic and social well-being of man on this planet. It was in realization of this goal that the Conference on the Peaceful Uses of Outer Space was convened at Vienna.

101. I am glad to state that it was able to achieve its purpose of examining the practical benefits of space exploration on the basis of scientific and technical achievements and the opportunities available to non-space Powers for international co-operation in space activities with special relevance to the needs of the developing countries. In this regard, we are thankful to the Government of Austria for providing facilities for holding the Conference at Vienna and for the warm hospitality offered to those who attended the Conference. Furthermore we would like to express our warmest appreciation to the President of the Conference, the Foreign Minister, Mr. Waldheim, who at that time was also the Chairman of the Committee on the Peaceful Uses of Outer Space. During his Chairmanship, the Committee was able to make significant head-way in furthering international co-operation in the peaceful uses of outer space. Finally, we would like to congratulate Mr. Haymerle, the present Chairman of the Committee, and assure him of our whole-hearted co-operation.

102. At the 53rd meeting of the Committee on the Peaceful Uses of Outer Space in October 1968 my

² *Official Records of the General Assembly, Twenty-second Session, Annexes, agenda item 32, document A/6804.*

delegation had an opportunity of recalling the proposals made by Mr. Sarabhai in his capacity as Vice-President and Scientific Chairman of the Conference held at Vienna. Mr. Sarabhai had suggested that a small Advisory Group should be constituted and that action should be taken to arrange panel meetings, fellowships, surveys, and technical assistance. In his closing statement at the Conference Mr. Sarabhai stated that at the United Nations level there was need to look at the current as well as the forward-looking problems of applications of the uses of outer space in a variety of fields. Drawing upon the experience of the International Council of Scientific Unions, he was of the view that a small Advisory Group of specialists should be constituted to generate new ideas that might lead to the combining of the efforts of various agencies. He stated, and I quote:

"Moreover, there is a good scope for some projects to be supported jointly by two or more specialized agencies, as is being done by the International Atomic Energy Agency and the Food and Agriculture Organization of the United Nations. The Outer Space Affairs Division could generate a great deal of interest and understanding by arranging specialist panel meetings on specific topics on lines IAEA has followed so effectively. These panel meetings, perhaps no more than four per year, of fifteen or twenty people, could produce documentation and new ideas on specific applications, which could then be distributed widely. These meetings could be held in different parts of the world in order to generate local interest. And then there is the need for a number of scholarships for nationals of developing countries. I feel that one would need perhaps a hundred per year for training related to specific applications which a nation wants to undertake. There should be funds available for Governments committed to certain projects to be able to send their people to institutions run by nations advanced in the subjects concerned. The funds should support travel expenses and maintenance during a period of six months to a year."

Mr. Sarabhai went on to state:

"Another programme of some importance which the United Nations could consider would be to undertake survey missions, on request, from countries or groups of countries to explore the potential of certain specific techniques within the context of local situations. There is need for a modest programme of technical assistance for developing countries to set up facilities like APT [*Automatic Picture Transmission*]. If a country wants to construct an APT unit itself, there should be some funds available for taking a scientist or engineer to a place where he could make the first unit. For example, we will be very happy to provide at our Space Science and Technology Centre in India facilities and assistance to those wishing to build such units themselves and then taking the units back with them. This type of technical assistance should be geared to specific programmes of immediate benefit where the country itself is interested in making a commitment. United Nations sponsorship, like at Thumba, to multinational co-operative projects for space applications might be very helpful in providing an umbrella for bilateral co-operation." [See A/7285, annex II, chap. XI.]

103. We trust that the Scientific and Technical Sub-Committee, as has been recommended in the report of the

Committee on the Peaceful Uses of Outer Space [see A/7285, para. 22], will consider in detail all aspects of the proposals made by my delegation regarding the establishment of a small Advisory Group as well as the suggestion that action be taken to arrange panel meetings, fellowships, surveys and technical assistance. We consider that these proposals originating from the discussion at the Conference should be studied in detail and definite recommendations made, as the future follow-up of the achievements of the Conference entirely depends on it.

104. We are gratified to note that a number of delegations, including that of the United States, as noted by Mr. Wiggins this morning [see paras. 48-50 above], have made encouraging comments on our proposals.

105. Also arising from the discussion at the Conference on Exploration and Peaceful Uses of Outer Space in Vienna is the proposal of Sierra Leone that arrangements should be made for the use of expert services through a United Nations centre for information consultation in the field of practical applications of space technology [see A/7285, para. 23]. We have supported this proposal earlier and we consider that its implementation will fill a lacuna in this field by bringing the information regarding the scientific and technological developments in the field of outer space to scientists and engineers, particularly those in the developing countries.

106. Today the distinguished representative of Sweden has taken a wise initiative in reiterating General Assembly resolution 1721 D (VI) which, *inter alia*, indicated that communications by means of satellites should be available to the nations of the world as soon as practicable on a global and non-discriminatory basis and that parties to negotiations regarding international arrangements in the field of satellite communications should constantly bear this principle in mind so that its ultimate realization is not impaired [see paras. 21-26 above]. My delegation is in sympathy with the views expressed and fully appreciates the significance and the relevance of the suggestion made by the distinguished representative of Sweden. We consider that this suggestion, coming as it does at this juncture when negotiations are expected to start in this respect, is a very constructive one and should be borne in mind by all concerned.

107. My delegation also welcomes the proposal made by Sweden and Canada at the last meeting of the Committee on the Peaceful Uses of Outer Space held in October regarding a study to be prepared on the technical feasibility of communication by direct broadcast from satellites as well as its various implications [see A/AC.105/PV.55 and 58]. My delegation considers that this is a timely proposal and that it should be given an early consideration by the proposed working group, as recommended in the report of the Committee on the Peaceful Uses of Outer Space [see A/7285, paras. 27-29]. My Government will be ready and willing to make its contribution to such a study to be prepared by the proposed working group.

108. We are glad to note that the report of the Committee on the Peaceful Uses of Outer Space has also recommended that the Scientific and Technical Sub-Committee give serious consideration to suggestions and views regarding

education and training in the field of exploration and peaceful uses of outer space expressed in the General Assembly and in the Committee [*ibid.*, para. 21]. In this connexion, we should like to recall the report of the Scientific and Technical Sub-Committee on the work of its fifth session in which it was stated that:

“Arising out of this discussion [*concerning various matters, including education and training*], the Sub-Committee requested the Outer Space Affairs Group to report to the Sub-Committee at its next session on the status of implementation of the recommendations and suggestions made by the Committee on the Peaceful Uses of Outer Space and its Scientific and Technical Sub-Committee and by the General Assembly and the problems faced by the Secretariat in this regard.”³

109. We should like to urge the Secretariat to start immediately preparing the report asked for by the General Assembly and to present it to the Scientific and Technical Sub-Committee at its next session.

110. The Government of India has attached special importance to the continued sponsorship by the United Nations of the Thumba Equatorial Rocket Launching Station, and my Government has been keen to offer facilities at Thumba to other countries and to encourage international co-operation in this field. As the Prime Minister of India, Mrs. Indira Gandhi, stated in her message to the United Nations Conference on the Exploration and Peaceful Uses of Outer Space:

“India looks forward to expanding areas of international collaboration and would take initiatives as she has at the United Nations-sponsored International Rocket Launching Station at Trivandrum and at the Experimental Satellite Communications Earth Station.” [*See A/7285, annex II, chap. IV sec. C.*]

111. The Prime Minister of India dedicated the international rocket launching station at Thumba as a United Nations facility on 2 February 1968. The Secretary-General in his message sent on that occasion stated that:

“The United Nations, for its part, has been proud and gratified that, under its sponsorship, TERLS [*Thumba Equatorial Rocket Launching Station*] has turned out to be a great example of international co-operation in the space age and performed a number of desirable and important tasks. What is being accomplished here will not only result in practical benefits to the Government and people of India, and those other nations who decide to take advantage of this international sounding rocket range: it can also point the way to nations in other parts of the world as an example of what can be accomplished towards strengthening international collaboration in this field and providing a means for developing countries to participate and benefit from this new technological and scientific activity.”

112. We trust that the General Assembly will accept the recommendation of the Committee to continue the United Nations sponsorship of the international rocket launching station at Thumba [*see A/7285, para. 33*].

113. This morning the representative of Austria, the Chairman of the Committee on the Peaceful Uses of Outer

Space, Mr. Haymerle, presented draft resolution A/C.1/L.463 which has been co-sponsored, among others, by my delegation. We are confident that the draft resolution will be endorsed overwhelmingly by the Committee.

114. My delegation cannot conceal its disappointment at the slowness of the progress in the Legal Sub-Committee of the Committee on the Peaceful Uses of Outer Space on the question of a draft convention on liability for damage caused by the launching of objects into outer space—a matter so vitally important, especially to the non-space Powers. Last year, when the Agreement on rescue and assistance to astronauts was approved and opened for signature by the General Assembly [*see General Assembly resolution 2345 (XXII)*], we had hoped—and many other delegations had also hoped—that the Legal Sub-Committee and the Committee on the Peaceful Uses of Outer Space would be able, with the co-operation of all members, to present a draft agreement on liability, before the twenty-third session of the General Assembly. That is why General Assembly resolution 2345 (XXII) even called upon the Committee on the Peaceful Uses of Outer Space specifically to complete the proposed draft agreement on liability urgently—and not later than the beginning of the twenty-third session of the General Assembly.

115. At the last session of the Legal Sub-Committee in June, the Indian delegation made its best efforts to carry out the General Assembly's mandate by introducing, at an early stage of the Sub-Committee's work, a draft convention based on the various points of agreement reached—at least provisionally—in the Legal Sub-Committee earlier [*see A/7285, annex III, appendix I*]. Later in that session, we also submitted a revised proposal incorporating those points, and incorporating also compromise formulae on other points of disagreement [*ibid.*], which seemed nevertheless to gain the support of a great number of delegations. The Indian revised proposal on the draft agreement on liability was well received by many delegations in the Legal Sub-Committee.

116. No doubt there appear to be some points of general agreement in the Legal Sub-Committee, on texts and principles, which may be embodied in the proposed convention, like the definition of damage, joinder of claims, presentation of claims, and the principle of absolute liability, and certain specified exceptions thereto or exonerations on certain specified grounds. But there still remain important questions on which there is no general agreement. There are questions, like whether there should be a financial limit on the quantum of compensation under the convention, what should be the principles of assessment, what should be the applicable law governing claims under the convention, what should be the procedures for settlement of disputes, whether nuclear damage should be included in the convention, and what should be the position with regard to the responsibility of international organizations launching objects into outer space. These are all vital issues on which agreement must be found. It is our earnest hope that the space Powers in particular would accept reasonable solutions in the legitimate interests of the victims of the damage, so that a meaningful convention on liability can be concluded.

117. Our position on all these points, which still divide the outer space Legal Sub-Committee, is well known. It is

³ *Ibid.*, Annex II, para. 25.

amply stated in the records of the Committee on the Peaceful Uses of Outer Space. I, myself, have stated our views on these questions recently at the 53rd meeting of the Committee on the Peaceful Uses of Outer Space on 15 October. They are more succinctly stated in the Indian revised draft proposal on a liability convention, which is reproduced in full in the report of the Legal Sub-Committee. I will, therefore, not reiterate our position on these questions today.

118. I will only say that we are glad that, on at least some of the outstanding questions, like the position with regard to international organizations, there appears to be a good prospect now for finding general agreement. We hope that every effort will be made by all members of the Committee on the Peaceful Uses of Outer Space, on a most urgent basis, to resolve their differences on the remaining outstanding issues, so that a convention on liability can still be completed expeditiously by the Committee on the Peaceful Uses of Outer Space. In our view, the Legal Sub-Committee must meet soon and finalize its work on the completion of a draft convention on liability.

119. Mr. RUDA (Argentina) (*translated from Spanish*): For the examination of the question of international co-operation in the peaceful uses of outer space [A/7285], the Committee has before it the report of the relevant Committee, which gives a concise account of activities in the field during 1968.

120. I would like to make a few comments on the report; but first I would like expressly to put on record the Argentine Government's appreciation of the effectiveness and dedication of His Excellency the Foreign Minister of Austria, Mr. Kurt Waldheim, at the head of the Committee on the Peaceful Uses of Outer Space. To his intelligent way of working is due not only the progress achieved, but, above all, the promising prospects for a more satisfactory execution of the Committee's terms of reference.

121. Mr. Waldheim's contribution deserves the highest praise, and we would like the Austrian delegation to transmit our thanks to its Government.

122. We shall greatly miss Mr. Waldheim; at the same time we are fortunate in having elected Mr. Haymerle to succeed him. His virtues ensure that the Committee will make further progress in keeping with the spectacular feats that man is on the eve of carrying out in space.

123. One of the points dealt with in the report to the General Assembly is the outcome of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space, held at Vienna in August 1968. Argentina took part in that Conference in a spirit of faith and enthusiasm, since we attach great importance to its objectives. For countries which are newcomers to this type of activity, the examination made at Vienna of the practical benefits derived from space research and exploration are of very special importance.

124. To give full account of all that the Conference accomplished would require a very long statement. Moreover, in view of the largely scientific character of the meeting, I would have to embark on an extremely

specialized theme. Hence I shall merely deal with one or two aspects of it.

125. The Conference furnished the opportunity of dealing in a relatively simple way, but at the same time at an appropriate scientific and technical level, with all the topics connected with the many possibilities that space activities offer for human betterment. It was possible for the first time in a major international gathering to discuss specific issues such as international collaboration in space programmes, educational programmes, etc. A large number of countries gave an account not only of what they had achieved but also of their hopes, their fears and their problems, the picture that emerged highlighting the vast prospects opened up by space research for the good of mankind.

126. It was demonstrated practically that the use of satellites can bring incalculable advantages, for example, to agriculture, making it possible to determine in advance what areas should be sown, what types of crops are most suitable, how rain and weather conditions can effect crops, and even what harvests are affected by particular pests and in what zones, so that appropriate measures can be taken to protect them.

127. In meteorology, again, the use of satellites has brought extraordinary accuracy of forecasting, with all this implies for its many applications to both sea and air navigation.

128. Another of the basic aims of the Conference was to demonstrate the splendid possibilities offered by space research for developing countries. It is an unquestionable fact that possible applications are infinite and that these countries will be able to reap the benefit more than any others.

129. In this connexion, my delegation considers that the interest of the developing countries in participating in space research programmes is conditioned by the level of their awareness of the benefits to be gained and the extent to which they are equipped to carry out such activities. We feel that greater emphasis should be placed on all types of practical applications, on integrating the various countries into the satellite systems—meteorological, communications, geodetic, etc.—already in operation, and on making an immediate start with a view to doing the same thing in other fields where the chances of success are better, such as natural resources, education, navigation, etc. Nevertheless, it is fundamentally important for every country to see to the training of research workers and to promote studies in the basic sciences. This is the only way to make steady, sustained progress, and with the full participation of scientists from the developing countries, to achieve effective international co-operation.

130. An important point, in our opinion, is the use of space for educational purposes by means of television broadcasting via satellite. By this means, programmes of all kinds, in charge of the leading specialists in different subjects, can be organized and made available both to the large student populations in cities and to the most remote regions, bringing instruction to isolated groups which otherwise would not have access to education.

131. The development of educational television has made great strides in some countries over the last decade. To judge by the results obtained thus far, there seems little doubt that it offers favourable prospects of solving many of the problems of both mass and specialized education.

132. The greater or lesser degree of success of these new educational systems depends not only on technical and of course political factors, but on sound programming adapted to meet the real needs and conditions in each individual region.

133. For this reason my delegation enthusiastically supports the proposal to set up a working group to study the technical feasibility of communications by direct broadcast from satellites and the current and foreseeable developments in this field, including comparative user costs and other economic considerations, and the social, cultural, legal and other implications of such developments. Argentina is particularly interested in making observations and submitting working documents on this subject.

134. I have mentioned these few examples to bring out the importance of space technology today. Every possibility it opens up can and should be pursued immediately. Argentina considers that no country today can remain indifferent to this phenomenon, which is calculated to revolutionize world progress. Along with atomic energy—the other major scientific breakthrough of the twentieth century—top priority should be given to outer space technology, and every encouragement should be given to research and to the training of specialists. At the same time full advantage should be taken of the programmes placed at the disposal of the international community by the space Powers and the international organizations.

135. Another aspect of the report has to do with the work of the Legal Sub-Committee. An account is given of the most important and controversial questions examined in the course of the deliberations at Geneva. Like other representatives who have spoken before me, I regret that it was not possible to finalize the draft convention on liability for damage caused by the launching of objects into outer space.

136. My delegation realizes the problems of bringing the convention to fruition: the question of indirect and delayed damage; the need to include nuclear damage in the proposed agreement; the establishment of quantitative limitations on liability; the relationship that must be established between international organizations and the convention; and the test of determining what legislation should be applied in assessing damage.

137. But we do not think that these difficulties should continue any longer to hold up the preparation of the convention, and we feel that provided the parties show goodwill, understanding and agreement can be reached, and the recommendations contained in General Assembly resolution 2345 (XXII) will be duly complied with.

138. The Argentine Government reiterates its enthusiastic support for the Committee on the Peaceful Uses of Outer Space. Not only has Argentina always followed the prin-

ciples of broad international co-operation and promotion of the peaceful uses of outer space, but it has actively taken part in numerous research operations within the framework of international co-operation. The many experiments undertaken from our launching base at Chacabuco since 1962 have almost invariably been carried out in connexion with international programmes and with the participation of many other countries. My country has also drawn up elaborate plans for the base at Mar Chiquita, near Mar del Plata.

139. With regard to the activities of this base, in the letter distributed as a document of the Committee on the Peaceful Uses of Outer Space [A/AC.105/44], my Government has described our experiments and projects at length. I would therefore like to take this opportunity to repeat our appreciation for the sympathetic reception given to our request and to say once again that according to schedule, very probably in June or July 1969, there will be a more suitable opportunity to welcome the visit of the group of scientists referred to in operative paragraph 6 of resolution 2260 (XXII).

140. The Committee on the Peaceful Uses of Outer Space has made headway in many respects, essentially because of the prevailing spirit of co-operation and the valuable suggestions made by the member delegations.

141. In our view, now that we have completed the initial stages of our work leading up to the definition of the aims of space operations, it may be well at this point to set new goals and to give renewed impetus to the Committee on the Peaceful Uses of Outer Space with a view to moving ahead with greater flexibility and expanding the possibilities for the fulfilment of the aims involved.

142. Speaking for the Argentine delegation, I wish to state that it has attached particular importance both to the steps taken at Vienna and to the comments and suggestions made in the course of the eleventh session of the Committee on Outer Space, particularly those of the delegations of India and Sweden [A/AC.105/PV.53 and 55]; it will study them in detail in a constructive frame of mind, and it will give its views on them when the time comes. In this connexion, we feel that the Scientific and Technical Sub-Committee should be convened as soon as possible.

143. In the light of the foregoing, my delegation is co-sponsoring draft resolution A/C.1/L.463, which outlines the essential basis for future work.

144. The CHAIRMAN: We have ten delegations inscribed to speak this afternoon, so that if we begin at a reasonable time, I think we shall be in a position this afternoon to proceed to the vote and dispose of this item.

145. It would also enable the Chairman to continue to try hopefully to complete the intensive consultations which he has been having with regard to the last item, so that we could be in a position to complete our work within the schedule we have established—that means Thursday morning, 19 December.

The meeting rose at 1.05 p.m.