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COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

VERBATIM RECORD OF THE ONE HUNDRED AND THIRTY-FOURTH MEETING

Held at Headquarters, New York,  
on Wednesday, 3 July 1974, at 10.30 a.m.

Chairman: Mr. JANKOWITSCH (Austria)

- General debate (continued)

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GENERAL DEBATE (continued)

Mr. HUCKE (German Democratic Republic): The German Democratic Republic is in the favourable situation of having been nominated for membership in this Committee at a moment when a great number of evident results have been presented. The report so ably introduced by Mr. Turk on behalf of the Chairman of the Legal Sub-Committee gives eloquent proof of this.

Allow me, Mr. Chairman, to thank you and the representatives, on behalf of my delegation, for the friendly words of welcome to the new members of the Committee.

Since 1958 the German Democratic Republic has taken part in space research. The activities started with the optical survey of the orbit of the second artificial Soviet satellite Sputnik 2 and have been continued very intensely in the field of ionosphere research with the aid of the signals of the satellite Sputnik 3.

Since the foundation of the organization Intercosmos in 1967, the German Democratic Republic, together with the other socialist States, has participated in the programme for the peaceful exploration and use of the cosmic space. Thanks to the generous offer of the Soviet Union, the German Democratic Republic has been in a position to participate actively in space research and to install measuring instruments for the purpose of research and use of satellites.

In the framework of Intercosmos 11 satellites with equipment from different socialist States have been launched up to now. The German Democratic Republic participated in seven satellites of this type, as well as in the launchings of two vertical rockets and several small meteorological rockets. The scientific background of this co-operation is the exploration of the physical qualities of the cosmic space close to earth. Problems of the earth's magnetic field, of the zone of radiation and of the influence of solar radiation on the different strata of the earth's atmosphere and its energy household were of special interest. Besides, meteorological data on the distribution and formation of clouds of our planet were of importance; global observations and continued control made an improvement of the weather service possible.

(Mr. HUCKE, German Democratic Republic)

With the satellites Intercosmos 1, Intercosmos 4, Intercosmos 7 and Intercosmos 11, a permanently completed series of satellites for solar research has been established. Its main goal was to research the active area of the sun as a source of the strongly variable short-wave ultra violet and radium radiation. The German Democratic Republic takes part in these explorations with several measuring units in the ultra violet area. These researches have led to improved pattern conceptions on dynamic regions on the sun.

(Mr. Hucke, German Democratic Republic)

The satellites Intercosmos 2, Intercosmos 8 and Intercosmos 10, as well as the rockets Vertical 1 and Vertical 2, served for examining plasma-parameters in the ionosphere and magnetosphere of the earth. The experiments supplied not only data on individual processes of the ionization of the atmosphere but also global surveys on the turn-over of energy of solar radiation in the earth's atmosphere. For the purpose of those experiments, the German Democratic Republic has developed and applied airborne instruments. Moreover, a depot of ground receiving sets has been established. It is applied for receiving and processing satellite signals. Among them there is a powerful receiving system for satellite weather imagery.

Realizing necessary developing works and elaborating legal fundamentals, the organization Intercosmos brought about the preconditions for creating the system Intersputnik. By signing the agreement on the foundation of the international system and of the organization for cosmic telecommunications, Intersputnik, the German Democratic Republic became a member of that international organization in 1972.

In the field of cosmic communications, Intercosmos deals with any questions concerning the permanent development and improvement of the cosmic transmission of information. For the purpose of participating in the exchange of information by telecommunication satellites -- telephone and teleprint communication, transmission of data, exchange of television and broadcast programmes -- a ground radio station will soon be established on the territory of the German Democratic Republic.

The first phase of space research within the framework of the co-operation Intercosmos served the purpose of acquiring and improving space technology. Besides the construction of sensors, important is the development of a complex telemetry system able to store the data accumulated in cosmic space, to codify them, to transmit them to the ground stations and to evaluate them by means of appropriate computer systems.

For the second phase, satellites are being projected which are in a position to pursue remote sensing of the earth by satellites. In applying space research technology for the benefit of humanity, the German Democratic Republic attaches extraordinarily high importance to the aimed employment of such satellites.

(Mr. Hucke, German Democratic Republic)

Those satellites are also important aids to the exploration of environmental pollution as well as to the development of methods aimed at protecting our living space.

In the brief span of its co-operation in the Committee on the Peaceful Uses of Outer Space, in its Sub-Committees and Working Groups, the German Democratic Republic has attached major importance to solution of the legal problems of outer-space activities within the framework of the basic principles of international law. Allow me, therefore, to comment on some subjects covered by the report of the Legal Sub-Committee.

According to General Assembly resolution 3182 (XXVIII), the Legal Sub-Committee must with priority deal with the Draft Treaty Relating to the Moon and the Draft Convention on Registration of Objects Launched into Outer Space, as well as with the principles governing the use by States of artificial earth satellites for direct satellite television and broadcasting.

As far as the Draft Treaty Relating to the Moon is concerned, the German Democratic Republic proceeds from the fact that there is fundamental agreement that the moon and other celestial bodies must be used only for peaceful purposes and that the motivation and exercise of rights of sovereignty over them are excluded. The reaching of that agreement is, we think, a decisive positive basis for the early completion of the set of agreements. On the other hand, the session of the Legal Sub-Committee in Geneva has shown that there are difficulties regarding the regulation of the administration and exploitation of moon resources. But that is understandable enough because, for the time being, we cannot say that the technical and economic preconditions exist for such exploitation. The German Democratic Republic therefore holds the view that at present there is no practical and therefore no international necessity to concentrate the deliberations on the elaboration of an international régime of law concerning the administration and exploitation of moon resources.

The Draft Treaty Relating to the Moon is an important work, and there has already been considerable progress in its elaboration. My delegation expresses the hope that it will be possible within a reasonable time to find another acceptable solution to those problems that are still unsolved.

(Mr. Huccke, German Democratic Republic)

My delegation also welcomes the elaboration by the Legal Sub-Committee of the Draft Convention on Registration of Objects Launched into Outer Space. We are certain that the Convention will contribute to facilitating settlement of cases of loss which could possibly be caused by outer-space objects.

In respect of the problems involved in working out the principles for direct satellite television and broadcasting, the German Democratic Republic proceeds from the principle that this new television and broadcasting engineering must be used exclusively in the interests of peace, the reduction of international tensions and the development of friendly relations between peoples. Direct satellite television and broadcasting are, in our opinion, admissible only if the recipient State has expressly agreed to the television and radio reception. Television and radio transmissions by satellites without the agreement of the States concerned are both a violation of their sovereignty and interference in their internal affairs.

The German Democratic Republic therefore supports the draft convention submitted in 1972 by the Soviet Union which defines the aims and manner of those direct transmissions and which also provides for the responsibility under international law of those States violating the principle that direct transmissions by satellites must be put into effect only after agreement has been given by the recipient State.

(Mr. Huccke, German Democratic Republic)

At the last session of the Scientific and Technical Sub-Committee, the delegation of the German Democratic Republic stated that the activities of the Sub-Committee and its Working Group had been useful. The basis for the further work of the Sub-Committee should be the programme suggested in its final report. That programme sets the right crucial points and is oriented towards necessary works. In this connexion we would like to state that the further activities should be carried out in accordance with focal points in the main Committee and in the Sub-Committee and less in working groups. We hold that this guarantees greater effectiveness.

With regard to the problems of remote sensing of the earth by satellites, the delegation of the German Democratic Republic would like to refer to the fact that in the application of the new technology the interests of States are directly affected. We therefore support the proposal of both the Working Group on Remote Sensing of the Earth and the Scientific and Technical Sub-Committee that the Legal Sub-Committee should devote itself with high priority to the politico-legal aspects of this new technology.

With regard to the United Nations programme for space applications for 1975, the German Democratic Republic agrees in principle with the report of the Scientific and Technical Sub-Committee. We consider it important, however, to stress once again that increases in the budget are not the only way out in solving the problems that the United Nations Expert is facing. The focal point in the elaboration of future programmes has to be the rational and effective employment of means. The members of the Committee on the Peaceful Uses of Outer Space should be given a stronger influence in the elaboration by the earliest possible presentation.

Those are the first thoughts of my delegation on the work that we have to accomplish. During the discussion of the various items of the agenda, my delegation will comment again on the problems relevant to them.

Mr. EL-ZOEBY (Egypt): I should like at the outset to join you, Mr. Chairman, and other delegations and extend my delegation's warmest welcome to the nine new members of this Committee who are attending this session for the first time. We express our firm conviction that they will add a valuable contribution to our work. We already witnessed the beginning of that contribution during the last sessions of the Working Group on Remote Sensing and the Scientific and Technical Sub-Committee.

I should also like to express our sincere congratulations to the delegations of those countries which during the last year have conducted successful activities in outer space.

We have always welcomed the growing co-operation among space Powers in exploring outer space, as well as their co-operation with non-space Powers. We firmly believe that such international co-operation is one of the important assets in consolidating international political détente, thus serving the cause of peace.

Another cause which is very closely related to the cause of peace and which can also be served through co-operation in outer-space activities is the cause of development. There is no doubt any more about the important role that space technology can play in solving problems of development in developing countries. That will be possible only after achieving a certain degree of awareness of that role and having the necessary technological base through training and education. In that respect and with all due appreciation and gratitude for the efforts made either on bilateral bases or within the United Nations system, we still feel, among other developing countries, that an additional serious effort should be made.

By way of example, we attach great importance to the expansion of the United Nations programme on space applications techniques. We certainly agree with views expressed here by some delegations concerning the importance of rational utilization of the resources assigned to that programme, however, we fail to see the possibility of developing a worth-while programme in that area - not to speak about an expanded programme -- within the sadly limited funds assigned to it at present.

As for choosing the most meaningful projects and fields of activities of that programme, my delegation was glad to be one of those which supported and co-sponsored the idea of initiating a dialogue with the developing countries in order further to define areas of interest and needs of those countries in the field of space applications. We hope that the questionnaire which is about to be finalized will be unanimously adopted by this Committee.

With regard to remote sensing of the earth by satellites -- in which my country has taken particular interest -- my delegation has, in the Scientific and Technical Sub-Committee, supported the idea of recommending that studies be commissioned on the organizational and financial requirements for the establishment of an international remote sensing data centre under United Nations auspices. We hope that while those aspects of remote sensing of the earth by satellites are studied further, a higher degree of priority can be given to the consideration of remote sensing and its legal implications in the Legal Sub-Committee.

My delegation welcomes the important step taken in the Legal Sub-Committee in reaching agreement during its last session on the text of the Convention on Registration, which is an important step to complement the Convention on International Liability for Damage Caused by Space Objects. I would like to express my delegation's congratulations to the Chairman of the Legal Sub-Committee and to the Chairman of its Working Group 2 for the great efforts they have made in preparing that draft Convention.

With regarding to the reconvening of working groups in the future, it is my delegation's opinion that the Committee should adopt a flexible policy. We also see merit in the view expressed here by some delegations concerning the possibility of extending the period of meetings of Sub Committees in case the Committee decides not to reconvene any of the working groups in 1975.

Mr. Chairman, I have wished to make a brief statement as I know that you have a long list of speakers. I shall conclude by expressing my delegation's pleasure at participating in the work of this session under your very well-known and able chairmanship.

Mr. LINDENBERG SETTE (Brazil): Mr. Chairman, the delegation of Brazil is very pleased to participate in the seventeenth session of the Committee on the Peaceful Uses of Outer Space under your already proven and able leadership.

Your opening statement, Sir, gave us an accurate picture of the latest developments in the field of the peaceful utilization of outer space. Meeting the challenge of keeping up with the fast pace of current achievements in outer space, our Committee and its subsidiary bodies, for their part, have chalked up an impressive record of achievements to display in the current year.

In fact, this may well have been the most active year in the Committee's history, its subsidiary bodies having, I might add, produced some very positive results. Not that I intend at this point to touch upon all aspects of their work. My delegation will have the occasion to present its detailed points of view when specific questions are discussed in the course of the present meeting. My general statement today is intended to outline briefly my Government's position on what we consider to be the most salient and relevant aspects of our work both in the legal and in the scientific areas.

I think that we are all in accord in extending our warmest congratulations to the Legal Sub-Committee for the successful completion of the registration convention. Thanks to the meritorious spirit of understanding and compromise prevailing at the last session of the Sub-Committee in Geneva, it will now be possible for the Committee to present to the twenty-ninth session of the General Assembly a final text of this much needed convention. Although my delegation would have preferred a text containing more precise and mandatory provisions on marking --- which we have always considered an indispensable feature of the convention --- we were able to go along with the compromise formula on the understanding that questions related to the identification of space objects will be kept under constant review. We certainly consider the text as finally approved in the Legal Sub-Committee to be a positive step towards our ultimate goal of covering the whole range of space activities with precise and interconnected binding legal norms.

While we are happy with the completion of the registration convention, we certainly regret the fact that the Legal Sub-Committee could not finalize the moon text. Unfortunately, there are still some strongly held positions against the elaboration of norms on the legal status of the natural resources of the moon

(Mr. Lindenberg Sette, Brazil)

and other celestial bodies. It has been and continues to be the considered stand of my delegation that without such norms, and in particular without the declaration of the natural resources of the moon as the common heritage of mankind, no moon treaty would make sense at this stage. In fact, if one takes the text as it now stands without the provisions relating to natural resources, progress over already existing outer space instruments is barely discernible; in my delegation's view, the few advances, if any, incorporated into the text are hardly likely to justify the elaboration of an autonomous international agreement. It is thus our belief that the Committee should proceed with the utmost caution in this matter. I stress that there should be no undue haste in finalizing a text until it becomes clear that it embodies a common denominator of the views held by all delegations.

Concerning questions related to direct broadcast by satellites, my delegation is definitely encouraged by the fact that the Legal Sub-Committee has finally --- albeit quite timidly --- reached the drafting stage. One factor in particular made this possible --- the very useful work performed by the Working Group on Direct Broadcast Satellites in March. By exploring and debating the broad spectrum of political, legal and technical questions under its mandate the Working Group on Direct Broadcast Satellites was able to lay solid foundations for the Legal Sub-Committee's work. It is my delegation's hope that the brackets that still clutter up the texts discussed in Geneva will soon be eliminated and that further drafting will shortly be attempted and our Committee will be in a position to fulfil its mandate as laid down in resolution 3182 (XXVIII).

In the view of my delegation, however, the most urgent task before us in the legal area is perforce the elaboration of a binding, juridical framework for activities of remote sensing of natural resources of the earth by satellites. I say this not only on the strength of the intrinsic importance and clear international legal implications of such activities but also because it cannot be denied that remote sensing is already a reality, the technical parameters of which are sufficiently known to the international community, while its economic and political connotations are becoming increasingly evident. As an adequate way of demonstrating its concern with the matter of remote sensing, my Government



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decided to present an official proposal entitled: "Treaty on Remote Sensing of Natural Resources by Satellites: Draft Basic Articles" (A/AC.105/122).

My delegation took the occasion to present its detailed comments on that draft during the last meetings of the Working Group on Remote Sensing and of the Legal Sub-Committee. At this stage I shall not repeat what we said then. However, my delegation will be pleased to provide additional clarification or whatever further comments are called for on the text if this is deemed appropriate in the course of the present session. At this point, let me emphasize that we welcome all the support our text can generate and are prepared to discuss it at any time with interested delegations. My delegation is completely convinced that there is an urgent need for the elaboration of legal norms to govern remote sensing activities. Until such legal norms are drafted, that is to say, until we have a clear picture of the rights and obligations of States actively or passively involved in remote sensing activities, we think it would be premature, to say the least, to agree on an organizational set-up or even to embark upon long-range studies in that direction. We would therefore caution the Committee against taking any decision that might in any way be interpreted as prejudging the course to be finally followed regarding the whole question of remote sensing. In this connexion we note with satisfaction that the Scientific and Technical Sub-Committee itself recognized in paragraph 14 of its report that

"... further study of organizational and financial matters should progress together with consideration of the legal aspects of remote sensing."

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When we come to the discussion of priorities for the future work of the Legal Sub-Committee, my delegation would thus favour assigning an equal degree of priority to direct broadcast satellite and remote sensing questions. In our opinion, a flexible priority should be accorded to the remaining items of the agenda: the moon treaty and definition or delimitation questions. By flexible priority I mean an understanding whereby the debate on these questions would be activated only when it was felt the discussion would lead to productive results. Otherwise, they should not be allowed to divert the attention of the Legal Sub-Committee from the most urgent as well as the politically and economically more sensitive issues before it,

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namely, remote sensing and direct broadcast satellites. Let me add, finally, that my delegation would give favourable consideration also to any other suggestion for expediting the consideration of the legal aspects of these two questions.

I should like now to refer to the report of the Scientific and Technical Sub-Committee. This organ of our Committee, whose meetings are traditionally conducted in a very businesslike manner, had, in addition to other important matters, the ample tasks of considering the report of the Working Group on Remote Sensing of the Earth by Satellites, reviewing the United Nations Programme on Space Applications and delineating the framework of its future action. We are pleased to state that in our delegation's view the Scientific and Technical Sub-Committee was able to discharge its functions in quite a satisfactory fashion.

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With reference to the United Nations Programme on Space Applications, as reviewed in the aforementioned report, we certainly go along with commending the Expert's work, which encountered an exceedingly positive reaction from Member States, judging by the numerous panels, seminars and training workshops held in both developing and developed countries. In this context we are deeply grateful to the initiatives undertaken by Mr. Murthy, who, with very scarce financial resources, has been able to carry out the Programme as endorsed by the Sub-Committee. We certainly hope that the financial restraints which limit the scope of United Nations work in this field will be alleviated and that the objections of certain delegations to the granting of more funds to the Expert can be overcome. A small but significant contribution on the part of Brazil to this effort towards wider dissemination of the benefits of space application will be its hosting of an interregional seminar on remote sensing applications to cartography, to be held early in November of this year in Sao José dos Campos.

In relation to the proposal our delegation had the honour of cosponsoring for a questionnaire on the needs of developing countries for assistance in the field of practical applications for space technology, we feel that, whatever the form in which it is eventually presented, it can certainly prove to be an indispensable tool in drawing up the future framework of the United Nations Space Applications Programme.

One aspect of the Scientific and Technical Sub-Committee's report has particularly drawn our attention, and that is the close scrutiny it gives to its programme for future work.

Our delegation cannot but concur with the views expressed in the Scientific and Technical Sub-Committee's report regarding the proliferation in the creation of working groups. Should the creation of technical working groups be of an indispensable nature, utmost care should be exercised to prevent them from duplicating the work of the parent body. They should, in any case, for reasons of economy and in order to facilitate attendance by developing countries, be held concurrently with the meetings of the Scientific and Technical Sub-Committee.

Our delegation anticipates that the future work of the Scientific and Technical Sub-Committee will concentrate more and more on the consideration of

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the United Nations programme on space applications. In this sense, it welcomes the recommendation that the Sub-Committee's twelfth session should give priority to this question.

These are the brief observations my delegation judges opportune to make at this stage. Let me conclude by expressing the hope that productive results will be forthcoming from the present session so that we may be in a position to give the whole membership of the United Nations, as represented in the General Assembly, an adequate measure of the growing importance of international co-operation in the field of Outer Space as promoted and co-ordinated in our Committee.



Mr. BENNETT (United States of America): Let me begin by expressing my delegation's welcome to the new members of the Committee on the Peaceful Uses of Outer Space. We have already benefited from their injection of fresh ideas and new energy into the Committee's programme of work during the past six months, and we look forward to their making an even larger contribution in the future.

I should also like to record my delegation's gratification, Mr. Chairman, that the Committee again at this session is proceeding under your able guidance and wise leadership.

The Committee has before it the duty of considering the reports of its subsidiary bodies and, in light of these reports, to set forth a proposed work programme for the coming year. In accordance with our agenda, let me first take up the report of the Legal Sub-Committee.

This report in itself reflects a notable accomplishment. The Sub-Committee, after extensive and at times difficult negotiation, successfully completed work on a draft Convention on the Registration of Objects Launched into Outer Space. Especially in light of differing and strongly held views on several key issues, it was no small achievement to overcome those differences and to reach a consensus on a treaty text. My delegation shares the appreciation, which was well stated by Mr. Helmut Turk, Chairman of the Sub-Committee's Working Group II, at the opening of the session, and since echoed by a number of delegations, of the process of mutual accommodation of viewpoints which is reflected in the text before us. Mutual accommodation is indeed necessary, in the view of my delegation, if our consensus procedure is to continue to work.

In a statement at the conclusion of the Sub-Committee's recent session, the United States representative gave an extensive account of the background and negotiating history of the Registration Convention, and in our opening meeting here in the Committee we heard a detailed and highly useful exegesis of the text set out by the Chairman of Working Group II. I therefore shall not try to recapitulate what those speakers have said. Let me simply restate several main elements of United States policy on the question of a registration treaty, particularly as that policy has developed over the past couple of years.

First, as most delegations will recall, the United States was not among the early advocates of a binding convention. In fact, during the Sub-Committee's

(Mr. Bennett, United States)

1972 session -- the first to come to grips with full-scale negotiation of a text providing for a mandatory international registration régime -- the United States remained outside the negotiating process. In our view the existing system, under which launching States made voluntary submissions to the Secretary-General of information concerning their spacecraft, was satisfactory.

However, taking into account the evident interest of many members, during the year following the 1972 negotiations the United States adjusted its position and prepared its own draft of a treaty providing for mandatory registration. The United States text was introduced at the Legal Sub-Committee's 1973 session. Together with a moderately revised draft submitted by the Canadian and French cosponsors of the 1972 treaty proposal, it became the basis for renewed negotiation, in the course of which the Sub-Committee made significant progress. Further steps forward resulted from informal consultation in this Committee's 1973 session.

Nevertheless, one significant area of difference remained to be overcome. It concerned a requirement for launching States to mark their spacecraft with an identification number or symbol intended to survive re-entry from orbit. As Dr. Turk noted in his statement of 1 July, the Scientific and Technical Sub-Committee in 1970 had determined that such a requirement was impracticable, on both technical and economic grounds; the United States maintained, and continues to maintain, that no technological developments since 1970 have intervened to change this appraisal. We nevertheless appreciate the concession made by the advocates of compulsory marking in accepting the formulation in article V of the text agreed to in this year's session of the Sub-Committee. Article V leaves marking as a voluntary act but provides that when an object is marked with an appropriate designator or registration number, this information shall be furnished, along with the other information required, in the basic registration submission.

Again, I should like to reiterate my delegation's conviction that, considering the inherent economic and technical obstacles, marking would not add incrementally to the process which we consider a primary objective of the Registration Convention: to assist in the identification of a space object which may have returned to earth and caused damage.

(Mr. Bennett, United States)

In contrast, we do believe that this objective could be furthered by the procedure set out in article VI of the Convention, under which States having space monitoring and tracking facilities undertake to provide assistance upon request to another State which may experience difficulty in identifying such an object through its own national means.

In sum, my delegation considers the Registration Convention a useful text reflecting considerable credit upon those who negotiated it and upon this Committee as the institution under whose guidance the negotiation took place.

I will deal more briefly with the other major agenda items covered in the Legal Sub-Committee's report. Regarding the Moon treaty, we have already heard the state of negotiation on the outstanding issues succinctly outlined. It is the United States understanding that the question of the scope of the treaty has been at least informally resolved and that the treaty will apply to the moon, planets and other celestial bodies of the solar system except, of course, the earth. Differences seem to persist over how this scope is to be formulated. For our part, we remain unable to accept some form of "incorporation by reference" in which "Moon" is taken to mean all the other bodies covered by the treaty; we consider that this would imply only some degree of provisional application to those bodies, potentially leading to subsequent initiatives for separate treaty coverage for which we cannot anticipate any justification. Surely, in the light of planetary exploration now going on and solar exploration planned for the immediate future, there is no discernible reason not to extend the full coverage of the treaty explicitly to those bodies as well as the moon.

But we agree with a number of other delegations that the ultimate resolution of the issue of treaty scope -- as well as that of the other major outstanding issue, that is, whether to require the submission in advance of launching of plans concerning missions to the moon and other celestial bodies -- should await agreement on how to handle the question of possible future exploitation of natural resources of those bodies. We are, of course, willing to discuss this question here in informal consultations. However, on

(Mr. Bennett, United States)

balance it may be preferable to retain the Moon treaty as a priority item on next year's Legal Sub-Committee agenda, with further consideration meanwhile being given to the question, raised by a number of delegations including the United States at the Legal Sub-Committee and renewed here in our general debate, whether this treaty needs to include provisions on resource exploitation at all. As we noted at the Legal Sub-Committee, we think the articles already agreed contain some genuinely useful provisions, especially on scientific exchange and environmental protection, which would be worth adopting in a text which in essence would become a treaty on exploration and navigation.

With regard to the Sub-Committee's work on direct broadcasting by satellites, my delegation must note some surprise at the difficulty encountered in negotiation of a few draft principles which seemed largely non-controversial. We would have thought that the Sub-Committee, building upon the progress already achieved in the Working Group on Direct Broadcast Satellites -- which I shall examine further in connexion with that Group's report -- could define an area of agreement and express it in the form of such principles. A list of the subjects which were the agreed basis of negotiation would seem to justify that expectation: the applicability of international law; rights and benefits of States; international co-operation; State responsibility; and the peaceful settlement of disputes.

Unfortunately, however, none of these principles proved susceptible of complete agreement. As formulated and reproduced in the Sub-Committee's report, each contains significant elements enclosed in brackets. We would hope that in negotiation to come delegations can move closer to a common position at least on these topics; we would anticipate no quick resolution of the more difficult issues which the Sub-Committee did not attempt to cover in this year's May session. Nevertheless, we shall approach further work on direct broadcasting with the same objectives which guided United States delegations this year: to seek to maximize agreement and to continue to promote the beneficial use of a technology which could promise much to many countries, particularly those countries in the earlier stages of development.

(Mr. Bennett, United States)

The United States would expect to take essentially the same approach to further work on legal questions relating to remote sensing. Specifically, we are prepared to discuss possible guidelines or principles designed to facilitate the maximum international availability and effective utilization of data derived from satellite remote sensing systems. However, we would underscore a cautionary note already stated at some length by United States spokesmen in the Working Group on Remote Sensing, and again in the Legal Sub-Committee. In considering principles to apply to this still experimental, still very developmental space application, we must be especially careful to be aware of and to analyse the practical consequences of any such principles. Regional considerations, along with those applicable to individual countries, must be taken into account. We must be especially watchful lest possibly unintended legal consequences result in inhibitions against the further expansion of international co-operation in the use of the technology.

Let me repeat what the United States representative told the Working Group on Remote Sensing: while we intend to continue an open dissemination policy with respect to data derived from our experimental space remote sensing programme, we have no wish or intention to force that data on others who do not want it. We continue to believe, however, that imposition of international restrictions on the general availability of such data would work to the disadvantage of precisely those countries which are most in need of the information derived from the data. We would hope, therefore, that this Committee and its subsidiaries would avoid taking a restrictive course in their future work on remote sensing.

Let me turn now to the report of the March session of the Working Group on Direct Broadcast Satellites. In preparation for that session and subsequent discussions of direct broadcasting, my Government undertook a very serious effort to address the questions involved in establishing guidelines for the international use of the technology. Taking note of the views of countries wishing to develop more detailed ground rules for the conduct of direct broadcasting, we tried to formulate a set of voluntary principles reflecting essentially agreed ideas, based on our understanding of the positions expressed by States in past discussions of this subject.

(Mr. Bennett, United States)

As a result of this effort, the United States delegation to the Working Group was able to put forward a set of draft principles which we felt reflected generally agreed ideas. Our hope was that even though serious differences remain on a number of important issues, a basic and significant area of agreement could be reached without having to await resolution of all differences of opinion, a development which would not seem to be readily attainable. We considered the discussion of the various draft principles at the Working Group to be a helpful contribution to the identification of complex issues and to the clarification of the different views of delegations. Although the Legal Sub-Committee found more difficulty than we had anticipated in drafting even in a number of these relatively non-controversial areas, we continue to feel that this approach holds the best prospects for constructive progress in the development of detailed principles. We anticipate that the Legal Sub-Committee will continue to take account of the contributions that the Working Group has made with regard to assessing direct television broadcasting by satellites. However, as to the question of reconvening the Working Group at an early date, my delegation holds an essentially neutral view.

(Mr. Bennett, United States)

Now, before commenting on the report of the Scientific and Technical Sub-Committee, I should like to note that the report, standing alone, does not reflect the full measure of the Sub-Committee's accomplishment in pursuing, both directly and indirectly, its fundamental goal of co-operation in space research. To appreciate what it has done, one needs to turn to the reports of Member States on national and co-operative international space activities and to note the remarks made by national representatives during the Sub-Committee's recent session. Doing so, one realizes that a new fabric of international scientific and technical relationships has developed in the past dozen years.

I shall not repeat the review which the United States representative presented to the Scientific and Technical Sub-Committee, but I do wish to recall in this forum some of the principal co-operative achievements of our National Aeronautics and Space Administration (NASA) and its partners abroad during this past year.

The Skylab programme, completed in February, was an important focus for a variety of international scientific investigations. Four foreign experiments were flown: a French ultraviolet panorama experiment, a Swiss solar wind composition experiment, and Belgian and Japanese space processing experiments which used the multipurpose electric furnace facility on board. In addition, a United Kingdom scientist acted as a consultant in a NASA welding experiment, and physicians from Germany and the United Kingdom joined the Skylab biomedical team to evaluate effects of long-duration space flight on crews. Correlated astronomical sounding rocket programmes were conducted with Germany and the United Kingdom, and foreign guest investigators from France, Japan and the United Kingdom participated in the Skylab solar telescope programme.

One of Skylab's most significant payload components was its Earth Resources Experiment Package (EREP), a complement to ERTS-1, the Earth Resources Technology Satellite launched in 1972. Using data from both ERTS-1 and EREP, some 140 foreign investigations have involved scientists from 37 countries and two international organizations. In addition, Brazil and Canada have established their own ERTS data acquisition and processing facilities, and plans for similar stations are under way in Europe, Africa and

(Mr. Bennett, United States)

Asia. Early last month, the Government of Italy, acting through the Italian company Telespazio, agreed to build a ground station to receive data from NASA experimental earth-resources satellites.

Culminating almost four years of discussions and negotiations, NASA and the European Space Research Organization last September agreed to the development in Europe of a manned orbital laboratory, designated Spacelab, for use with the United States Space Shuttle in seven-to-thirty-day manned sortie missions for space science and applications during the early nineteen-eighties. In this more-than-400 million effort, ESRO is responsible for the design, development, manufacture and delivery to NASA without cost of one flight unit. Additional Spacelab units of the same basic design needed for United States programmes will be procured from Europe. Spacelab will provide -- for the first time -- opportunities for foreign scientists and engineers to accompany their experiments into space. Together, the Shuttle and Spacelab will lower the cost of operations and widen the opportunities for other nations to share in the benefits of space research.

The past year has seen major progress in the United States-Soviet Union Apollo-Soyuz Test Project. Docking system designs have been completed and verified, and both nations report that the development and fabrication of all necessary hardware is on schedule. The flight crews have begun the intensive phase of their joint training. Joint experiments have been selected. Still ahead lies the detailed development of such operational aspects of the joint mission as crew activities and control-centre operations and the testing and fit checking. Both partners are confident that the mission will be launched on schedule in July 1975. We consider this joint flight, as well as United States-Soviet co-operation in space science and applications generally, to be significant not just for the United States and the USSR but for all who believe that different countries can contribute to a better world by working together on projects that broaden human knowledge and extend man's capacity to cope with his environment.

Looking to the year that lies ahead, we note two other projects that rank high in significance. In October, NASA will launch the first of two spacecraft being prepared by the Federal Republic of Germany in Project Helios.



(Mr. Bennett, United States)

These spacecraft will fly within 28 million miles of the sun, closer than any spacecraft has flown before. Already they have advanced the technology of space flight. We anticipate that they will make major contributions to the knowledge of our sun. I would also note ATS-6, the Advanced Technology Satellite launched last 30 May.

ATS-6 is already being employed in instructional and medical data transmission experiments in the Appalachian region of the United States. In the coming months it will be used in educational broadcasts to schools in remote areas in the United States Rocky Mountains, Alaska and Brazil.

Next summer, the satellite will be moved eastward, to a station over Eastern Africa. From that position it will be able to relay a television signal to viewers in India. The Indian Government will use it for about four hours a day for one year to conduct the Satellite Instructional Television Experiment. In this experiment, India is developing its own programmes to stress improved agricultural methods, family planning and hygiene, school instruction and teacher education, and occupational skills. The programmes will originate from Indian ground stations and will be received by augmented television sets of Indian design and manufacture. The United States contribution is to make the satellite available as a relay station. With nations throughout the world, we await the results of this effort to apply space technology to the ancient art of instruction.

I now turn to some actions and recommendations listed in the report of the Scientific and Technical Sub-Committee.

In our view, the most important section of the report deals with remote sensing. Let me review briefly where we stand.

The Remote Sensing Working Group has discharged its original mandate, which in simplest terms was to assess the potential of remote sensing of the earth from space and to consider systems alternatives and capabilities which might meet international, regional and global requirements to promote the optimum utilization of space remote-sensing techniques. Recognizing that its efforts in a field developing so dynamically could not be exhaustive, the Working Group has asked its parent bodies to decide whether further action is required and under what terms of reference.

(Mr. Bennett, United States)

The Scientific and Technical Sub-Committee recommended that the activity begun by the Working Group should be continued. The Sub-Committee considered that the decision to do so was the proper province of the Outer Space Committee, particularly because when this Committee met it would have before it the results of the discussion of remote sensing in the Legal Sub-Committee.

The Scientific and Technical Sub-Committee recognized that further study of organizational and financial matters relating to remote sensing should progress together with consideration of its legal aspects. To prepare for that, the Sub-Committee recommended that studies be undertaken by the Secretary-General as specified in paragraph 14 (a) through (e) of its report. These studies would focus on the organizational and financial requirements for international and regional centres under United Nations auspices, for associated educational and training facilities, and for a future space segment for global coverage by a joint international enterprise, either independent or under United Nations auspices.

(Mr. Bennett, United States)

Against that background, the United States delegation continues to believe that a practical understanding of the organizational and financial aspects of remote sensing are an essential basis for fruitful consideration of legal aspects. We believe that the studies recommended by the Sub-Committee could contribute helpfully to such understanding.

The studies would of course need to be reviewed, supplemented as necessary and synthesized, if they are to assist the work of the Legal Sub-Committee. This could be done either by the Working Group on Remote Sensing, reconvened for that purpose, or by the Scientific and Technical Sub-Committee. However, we share the concern expressed by a number of delegations over the recent tendency towards a proliferation of separate sessions of subsidiary bodies of the Outer Space Committee. Accordingly, we would suggest that the Scientific and Technical Sub-Committee be charged with the task, possibly in a session lengthened by a few days if this seems necessary. Alternatively, consideration might be given to convening the Working Group briefly, either within the framework of the Sub-Committee or immediately preceding its session. We would be interested in the further views of other delegations as to the best way to proceed in this connexion.

The other section of the report of the Scientific and Technical Sub-Committee which I should like to address concerns the United Nations Programme on Space Applications. Here, the Sub-Committee approved the programme recommended by the Expert on Space Applications at the same financial level approved for 1974 and agreed to give in-depth consideration at its 1975 meeting to the purpose of the entire United Nations Space Applications Programme and to its proper and effective co-ordination.

The Sub-Committee recommended that in preparation for such in-depth consideration the Secretary-General be requested to prepare a comprehensive report covering the areas of interest, priorities and types of assistance needed by Member States, especially the developing countries, in the field of space applications. In this connexion, the Sub-Committee suggested that the Secretary-General obtain the views of Member States with the help of an appropriate questionnaire. We consider the draft questionnaire prepared by

(Mr. Bennett, United States)

interested delegations for consideration by this Committee to be a useful vehicle. The United States delegation welcomes all means which offer prospects of improving the effectiveness of the total effort of the United Nations system in space applications. This is in keeping with our long-standing support for the broadest possible involvement of all countries in space technology -- a technology that we are convinced holds much promise for all mankind in the years to come.

The United States will continue to do its best in the Outer Space Committee and its related organizations to help further the fulfilment of that great promise.

Mr. JACHEK (Czechoslovakia): The favourable atmosphere which dominates international relations facilitates international co-operation in numerous fields. Much proof of that has already been heard in this debate, particularly in the statements made by the representatives of the USSR and the United States, testifying to the fact that international co-operation in the field of peaceful exploitation and exploration of outer space is advancing especially quickly.

The Czechoslovak Socialist Republic does not belong among the "outer space" Powers, however, it too makes its active contribution to these international efforts aimed at conquering outer space in the interest of peace and to the benefit of all peoples.

Within the framework of the research programme of Intercosmos, Czechoslovak scientists and technicians have participated in constructing the technical equipment of 10 earth satellites that have been launched. Czechoslovak scientists work on solving certain complex tasks such as, for example, the study of the influence of relations between the sun and the earth on the human organism, geophysical research, the study of the ionosphere and other tasks. It is particularly in the field of research into the relations between the sun and the earth that Czechoslovak scientists, thanks to the opportunity fully to use Soviet outer space technology, have achieved remarkable successes, as testified to by a number of studies recently published in scientific literature. Information on Czechoslovak national activities in the field of outer space exploration and



(Mr. Jachek, Czechoslovakia)

on international co-operation covering the year 1973 is contained in document A/AC.105/123/Add.4.

Czechoslovakia is aware of the fact that the accelerated advancement of space science and technology will continue in the future to pose ever more demanding and pressing challenges for the United Nations and in particular for this Committee and its organs. The Czechoslovak delegation therefore welcomes the fact that during the last session of the Legal Sub-Committee agreement was reached on the text of the Draft Convention on Registration of Objects Launched into Outer Space, which will undoubtedly become an important part of international outer space law.

My delegation likewise views as an important result the working out of the complex of questions pertaining to the remote sensing of the earth and in this connexion it is of the opinion that the joint Soviet-French draft of principles governing the activities of States in the field of remote sensing of earth resources, submitted to the Legal Sub-Committee, deserves particular attention and creates a solid basis for future international legal regulation of this problem.

Two international instruments which my delegation views as extremely important, in accordance with the relevant resolutions adopted by the General Assembly, are still in the stage of elaboration in the Legal Sub-Committee. I am referring to the Draft Treaty Relating to the Moon and to the Draft Principles Governing the Activities of States in the Field of Direct Television Broadcasting. We are convinced that the problems that have thus far prevented completion of the work on the Treaty Relating to the Moon can be overcome and the adoption of this significant Treaty accelerated. The question of the legal status of the natural resources of the moon, in the light of the present stage of exploration of the moon, may be dealt with separately, while fully respecting the principles of equal rights of States in exploring the moon and exploiting its resources.

(Mr. Jachek, Czechoslovakia)

r. Chairman, my delegation welcomes the fact that at this session, under your chairmanship, characterized by a spirit of mutual understanding and constructive approach to the solving of various problems, informal consultations have begun with a view to eliminating the obstacles standing in the way of adopting an international legal document on the space body on which scientific and technological research has nowadays focused.

As far as the second equally important task faced by the Committee is concerned, that is, the elaboration of international legal principles related to direct television broadcasting by means of satellites, my delegation is likewise of the opinion that the codification of these principles represents -- taking into account the present stage of technology -- an exceptionally important and pressing task and that it is therefore necessary that the Legal Sub-Committee pays utmost attention to it at its next session. In our opinion, this is a field which in its final stage requires also a regulation in an international legally binding document which would place direct television broadcasting from artificial satellites in the service of mankind and its peaceful co-operation and would prevent its misuse for political purposes.

The Czechoslovak delegation believes that the future agenda of the Committee should concentrate particularly on the speedy completion of the Treaty relating to the Moon and on the reaching of substantial progress in working out the legal principles governing direct television broadcasting from artificial satellites. As we have already stated, my delegation is also aware of the significance of the further task faced by the Legal Sub-Committee, that is, the elaboration of the legal principles governing the remote sensing of earth resources by means of space technology, which also deserves appropriate attention taking into account the securing of the legitimate rights of both the countries engaged in the exploration as well as of those observed.

It is the opinion of my delegation, in full concurrence with the relevant resolutions of the United Nations General Assembly, that it would not be purposeful to divide our work in the future among the various organs but, on the contrary, that it would be useful to concentrate our attention on the afore-mentioned exceptionally significant questions of international co-operation, whose solution lies fully within the possibilities and within the competence of both

(Mr. Jacek, Czechoslovakia)

Sub-Committees, and particularly of the Legal Sub-Committee. My delegation therefore fully supports the proposals submitted by the USSR relating to the organization of the future work in this field, which are not only rational but should be also considered in the light of the economy of means.

In conclusion of the few general remarks I have made on the activities of the Committee, permit me to join other previous representatives and welcome most heartily the new members of our Committee and thank the Director of the Outer Space Affairs Division Mr. Abdel-Ghani, for his long-lasting and highly deserving activities in the field of international co-operation in the peaceful exploitation of outer space and to wish him many successes in his new career.

Mr. VELLODI (India): Mr. Chairman, I should like to begin my statement by joining you and previous speakers in welcoming the nine new members who are participating in the work of this Committee for the first time. We have already had the benefit of their participation in the meetings of the Sub-Committees and the Working Groups earlier this year, and the contribution they have already made goes to prove the wisdom displayed by the General Assembly last year in deciding to expand the membership of the Committee.

My delegation is extremely happy to participate in this session again under your very able and excellent leadership, Mr. Chairman, and in particular we wish to thank you for the very useful and constructive remarks which you made at the opening meeting of the session.

My delegation wishes to congratulate the major space Powers, as well as other countries, for the many significant achievements made during the past year. We should also like to take this opportunity to greet the establishment of the new European Space Agency and wish it well in the various programmes already announced.

Our gratitude and best wishes also go to the specialized agencies and other international organizations, in particular COSPAR, for the many constructive and significant steps they have taken, particularly in the area of the practical benefits of space applications.

(Mr. Vellodi, India)

As we shall have ample opportunity during the coming days for making detailed observations on the various reports before us at this session, I shall on this occasion confine my remarks to some very general observations on the major issues with which this committee and its subsidiary organs have been concerned during the past several months. However, before I make these comments I wish to make a brief reference to the Satellite Instructional Television Experiment which we plan to undertake during 1975-1976 with the help of the ATSF satellite successfully launched by NASA on 30 May last. The preparations for the experiment, which we believe will be a very exciting one, are proceeding satisfactorily.

I wish to take this occasion to thank NASA not only for making available to us the ATSF satellite but equally importantly for helping us in many different ways during the preparatory stage. I should also like to announce on this occasion that we shall make suitable arrangements for interested persons from abroad to visit India during the time frame of the experiment and get first hand information on the operational aspects of the experiment. As we have already indicated, it is also our intention to make available to all interested Governments at the appropriate time the results of the experiment based on careful and detailed evaluation that is being planned.

I shall not take the time of the Committee by making detailed comments on the rest of our space programme. We have furnished detailed information through our national report which has been published as a document of this Committee.

(Mr. Vellodi, India)

I should like, however, to take this opportunity to express our deep gratitude to all external agencies that have helped us in our programme. In particular, I wish to express our thanks to the Soviet Union, and especially to the USSR Academy of Sciences, for the very valuable and generous assistance they are providing in the launching of our first satellite, which will carry three major scientific experiments. During the past year we have also received significant assistance from the space agencies in France and the Federal Republic of Germany.

Without going into the details of the report of the Legal Sub-Committee, I should like to make a few observations on the major issues dealt with in that forum. I should like to join others who spoke before me by expressing our Government's deep satisfaction at the successful completion of the text of a draft Convention on the Registration of Objects Launched into Outer Space. We should like to express our appreciation of the contributions made to this end by the Chairman of the Sub-Committee, and in particular by Mr. Turk, the Chairman of Working Group II, as well as by several delegations, including in particular those of Canada and France.

On the Moon Treaty the Legal Sub-Committee did not make any progress, and the issues concerning the scope of the treaty, the legal régime over natural resources of the moon and the information to be furnished on missions to the moon remain unresolved. We shall have more to say on this issue when we take up the report of the Legal Sub-Committee for detailed consideration.

It was suggested earlier in the general debate that efforts should be made during the current session of the Committee to make progress on the Moon Treaty. In a brief intervention on Monday afternoon I indicated my delegation's reaction to this suggestion. In particular, I stated that if such efforts were to be undertaken -- and we were not objecting to that, in principle -- we would request that we be given adequate notice so that we could take steps to ensure adequate participation in such consultations.

(Mr. Vellodi, India)

I further stated that, unlike last year, when the Legal Sub-Committee had made a specific recommendation regarding the advisability of, in a sense, continuing its work during the session of the main Committee, there had been no such suggestion this time and, consequently, my delegation was not in a position, in terms either of personnel or of getting the necessary instructions from my Government, to engage in consultations of either a formal or an informal nature. I say this only because it was not possible, in the context of what we had already stated, for us to participate in the consultations that are currently going on.

It is our hope that any positive results achieved during the consultations -- and we are certainly interested in knowing if there are any possible ways of making a break-through -- will be reflected in the statements during the consideration of the fourth item on our agenda.

In the area of remote sensing, my delegation believes that the Working Group, under the very able leadership of its Chairman, Mr. Fiore of Italy, has made a very significant and extremely useful contribution, not only by increasing our understanding of the techniques of remote sensing, but also in the exploration of ways and means of utilizing the practical benefits of this new and exciting technology.

On the organizational side, we are happy that there has emerged in principle a consensus in support of the setting up of an international centre, and we await the results of the studies that are being entrusted to the Secretariat.

The legal implications of remote sensing are before the Legal Sub-Committee. Understandably, the Legal Sub-Committee did not have adequate time to devote to this question. At the same time, we are happy that, recognizing the importance of this issue, the Legal Sub-Committee has decided that at its next session it should continue work on this question as a priority item on its agenda.

(Mr. Velloodi, India)

We sincerely trust that the Legal Sub-Committee will have adequate time at its next session to deal with all three items to which, apparently, the same degree of priority has been accorded.

My delegation believes that the examination of the legal implications of remote sensing deserves special consideration because of certain practical considerations, on which I need not elaborate. Several useful proposals and suggestions have been submitted, including those contained in the latest working paper on principles, jointly submitted by France and the Soviet Union. My Government has always attached very considerable importance to the question of international co-operation in this as in other areas of space applications, and we have maintained that any legal framework which through its constraints and rigidity would come in the way of increased international co-operation would be a most unfortunate development.

At the same time, it is clear that uncontrolled and unregulated use of this new technology would give rise to serious problems and suspicions between States because of its far-reaching implications in the economic sphere. It is the conviction of my delegation that it is essential to provide for international binding regulations based on respect for the sovereignty of States and their inalienable right to their own resources.

In the area of direct television broadcasting by satellite, my delegation would like to congratulate the Chairman of the Working Group, Ambassador Rydbeck of Sweden, for the excellent work done in the Working Group, especially in assisting the Legal Sub-Committee in the formulation of legal principles governing the use of satellites for direct television broadcasting.

One very significant development during the meetings of the Working Group was the very welcome and encouraging change in the attitude of the United States delegation. We were all extremely happy that, making a departure from the stand that it had taken last year, the Government of the United States not only felt that it would be appropriate to participate actively in the work of the Working Group, but in fact came out with its own set of draft principles, many of which -- as the representative of the United States said in his statement a while ago -- are very constructive and very positive.

(Mr. Velloodi, India)

It is obvious from the report of the Legal Sub-Committee that we are still quite a long way from the finalization of generally agreed principles, and my delegation supports the view expressed by others before me that there would appear to be a need for the Working Group to be reconvened early next year, before the next session of the Legal Sub-Committee, to give further in-depth consideration to certain specified issues, such as those relating to prior consent, participation and spill-over.

Permit me now to make a few observations on the report of the Scientific and Technical Sub-Committee. I have already touched upon remote sensing. The other two issues discussed in the Scientific and Technical Sub-Committee relate to the United Nations Programme on Space Applications and the role of the Sub-Committee. On the question of the United Nations Programme on Space Applications, the views of my delegation are well known, as we have had occasion to elaborate them, both at the last session of this Committee and during subsequent meetings of the subordinate organs of this Committee. I shall not therefore dwell on this point very much; I shall merely reiterate our view that the existing programme is totally inadequate.

During the last session of the Scientific and Technical Sub-Committee it was pointed out by some delegations that before we could consider the expansion of the present programme, it was necessary to assess and understand the demands -- especially from the developing countries -- for assistance in the area of space applications. My delegation appreciated this point of view, and we, along with several others, suggested the idea of sending out a questionnaire to all Member States, the answers to which would help the Secretary-General in preparing, before the next session of the Scientific and Technical Sub-Committee, a comprehensive report on the subject. We were happy that the idea of the questionnaire was accepted in principle by the Sub-Committee; and, as recommended by the Sub-Committee, interested delegations have met during the past two days to undertake the preparation of the draft questionnaire. My delegation is confident that the questionnaire will help in mounting a meaningful programme of assistance in this area.

(Mr. Vellodi, India)

I should like in this connexion to join others who have expressed their deep appreciation of the excellent work done by the United Nations Expert on Space Applications within the very limited financial resources available to him.

I should like to make one other observation in connexion with the Programme on Space Applications. This concerns the contributions which my country has made in this area. Members are aware of the training programmes we have conducted during the past several years in the field of satellite communication technology at the Experimental Satellite Communication Earth Station at Ahmedabad in India. We have so far had nine training courses, each of three months' duration. In total 179 persons have participated in these courses. More than half of them -- 96 to be exact -- have been from abroad, from as many as 32 countries, mostly developing countries in Asia, Africa and Latin America.

(Mr. Vellodi, India)

We have spent more than 300,000 rupees by way of monthly stipends and internal educational tours. During my intervention in this Committee last year, I had indicated that we would finalize very soon, and in consultation with the United Nations Expert on Space Applications, another scheme for offering fellowships for training at the Vikram Sarabhai Space Centre at Thumba. We had hoped to make a beginning this year, but in view of the great interest shown by several countries in the Satellite Instructional Television Experiment scheduled to begin next year, we have decided to utilize the modest funds we have for fellowships, for making it possible at least for a limited number of persons from abroad to visit India during 1975-1976 and get a first-hand picture of the experiment. It is our intention to work out an arrangement with the United Nations Expert on Space Applications through which we hope to be able to extend financial assistance, covering not only internal expenses in India but possibly even international travel to persons -- a limited number -- whom we would like to invite to participate in the experiment.

The Scientific and Technical Sub-Committee had before it a suggestion that a United Nations conference on space applications might be held in the next few years. My delegation supported this suggestion. We are, however, like the delegation of Italy, somewhat concerned at the seemingly leisurely manner in which it is proposed to consider this question. At the same time we feel that a conference of such magnitude, if we are to go by the 1968 Vienna Conference, needs very careful planning, especially with regard to its objectives. As far as the timing of the conference is concerned we do not see how we can envisage the holding of the conference before 1977 or even 1978, if the decision to hold the conference cannot be expected before the thirtieth session of the General Assembly in the fall of 1975.

I do not wish to take up much time in commenting on the role of the Scientific and Technical Sub-Committee. We support the recommendations contained in paragraph 61 of the Sub-Committee's report on the priorities to be accorded during its twelfth session next year.



(Mr. Vellodi, India)

may I offer a few comments on the organizational aspects of our work next year. I have already indicated our view regarding the advisability of reconvening the Working Group on Direct Broadcast Satellites before the fourteenth session of the Legal Sub-Committee to consider specific issues which are outstanding and in respect of which the Legal Sub-Committee would undoubtedly benefit from further guidance from the Working Group. As regards the Working Group on Remote Sensing, we have an open mind. We, like other delegations in this Committee, feel that it is an extremely important area, an area in which adequate and full consideration is warranted. If we decide against reconvening the Working Group on Remote Sensing, we should make sure --- and I am repeating what others have already said --- that the Scientific and Technical Sub-Committee would have adequate time, in our opinion at least one more week, specifically earmarked to consider the question of remote sensing.

As regards the venue of the meetings of our Sub-Committees and other subordinate organs, my delegation has no strong views. We believe that facilities available in Geneva should be fully utilized.

In conclusion, I wish to indicate my delegation's full support of all the recommendations contained in the reports of the two Sub-Committees.

Mr. BYAMBA (Mongolia) (interpretation from Russian): First of all, Mr. Chairman, I should like to wish you and all the representatives here success in the work of this session, and I should like to say that under your guidance the Committee will come to very positive results on the various agenda items.

Our delegation would also like to welcome the new members of the Committee and to express our conviction that they will make a useful contribution to the work of the Committee.

Mr. Chairman, your statement of 1 July contained an over-all view of our work during the preceding period and it set forth the outlines for the future. We should like to thank you for that statement, Sir. We also welcome all States which have carried out space experiments and thus enriched our knowledge of outer space. First of all, we should like to point to the outstanding achievements of the Soviet Union and the United States in this particular field. The most

(Mr. Byamba, Mongolia)

recent series of these events culminated in the launching of the spaceship Soyuz 13 on a Mars orbit. The first international experiment in the study of the space atmospheres will be carried out by the Soyuz-Apollo project. This will be an outstanding event in the field of utilizing outer space for peaceful purposes.

In connexion with the reports of the Scientific and Technical Sub-Committee and the Legal Sub-Committee, I should like first of all to thank the Chairmen and membership of those two Sub-Committees for the work they have done during the past session.

As regards the report of the Legal Sub-Committee, our delegation has a very high opinion of it. The Legal Sub-Committee worked very intensively on the Draft Treaty relating to the Moon and also on the Draft Convention on Registration of Objects Launched into Outer Space, as well as on the question of remote sensing of the earth. Thus, one more step has been taken in promoting international co-operation for the purpose of utilizing outer space for the benefit of all peoples, and one more document has been added to the collection of United Nations documents in this particular field.



(Mr. Byamba, Mongolia)

I am referring to General Assembly resolution 1962 (XVIII) of 1963 and international legal documents that have been signed in the last seven years, such as the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space; the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space; and the Convention on International Liability for Damage Caused by Space Objects.

As regards the Draft Treaty Relating to the Moon, my delegation regrets that the Legal Sub-Committee was unable to complete it at its spring session.

There are other questions that must be dealt with, and we know that three outstanding items have been the focus of the attention of the Working Groups that have dealt with them. Unfortunately, the Working Group was unable to reach agreement on certain points that had been put forward. The proposals of Bulgaria and my own delegation might serve as a basis for agreement on such outstanding questions. It seems to me that the Legal Sub-Committee and the Committee itself should give great attention to the completion of the Draft Treaty Relating to the Moon as quickly as possible.

I now come to the question of direct television broadcasting from space. At its last session, the Working Group was able to prepare five principles dealing with this subject, and we welcome that beginning. My delegation considers that the elaboration and signature of an international convention containing principles concerning the utilization of satellites for direct broadcasting will greatly benefit all mankind. My delegation considers that the Legal Sub-Committee should at its next session apply all its efforts to the preparation of principles concerning direct television broadcasting.

Although the Legal Sub-Committee was unable during its session to discuss in detail the question of remote earth sensing my delegation nevertheless welcomes the fact that it was able to proceed to a short exchange of views on the subject. My delegation is in favour of the rapid preparation of such a project.

The Scientific and Technical Sub-Committee achieved some success at its recent session, and my delegation fully appreciates the work it did during

(Mr. Byamba, Mongolia)

that session. That Sub-Committee and its Working Group have given great attention to the question of remote sensing of the earth, and we greatly appreciate the successes achieved by the Working Group in dealing with the problem of remote sensing, which will, of course, make a valuable contribution to space technology.

As to the idea of setting up an international centre for the compilation of space data, my delegation feels that such an international centre should not entail any financial implications. We consider that the United Nations Programme on Space Applications for the past year has been successfully applied and has been very useful. However, that programme would have been more useful if it had been more specific, and if it had been aimed at the primary needs of the developing countries.

Mr. BAYANDOR (Iran): Let me begin this statement by saying that I share with other representatives a sense of gratification in welcoming the new members of our Committee. The General Assembly's decision to expand the membership of this Committee is vivid testimony to the need to broaden the Committee membership to allow for more equitable geographical distribution. It is, in addition, a clear indication of the fact that as the spread of modern technology weaves a web of interdependence among nations this phenomenon must encompass an ever-increasing array of nations, including the developing ones, in the decision-making process in this area at the international level. It is by enhancing the opportunity for such co-operative interaction at the international level that we shall ensure that space technology becomes a force of benefit to all mankind rather than a disruptive force in the affairs of men. It is that type of enlightened approach that will increasingly make this Committee one of the most action-oriented and prolific bodies in the United Nations.

As we review the developments in the field of outer space exploration during this past year, we are once again aware of the significant activities that have highlighted man's attempt to push back ever further the frontiers of his knowledge in this field. We have been impressed by the accomplishments not only of the two major space Powers -- the United States and the Soviet Union -- but also by the significant milestones achieved in this field by some other States as well.

(Mr. Bayandor, Iran)

In my country, on a very modest scale, the Government has since 1969 taken effective measures towards the practical application of space technology for its development projects in the areas of communication, education, meteorology, geophysics and earth resources. It is not my intention to sketch a finely detailed description of Iran's activities in these fields, since information pertaining to this can be found in a sufficiently elaborated form in document A/AC.105/123/Add.5. Nevertheless, it might be useful to recapitulate here some of the major highlights of my country's activities in this area.

In the field of communications, the Iranian PTT Satellite Communication Earth Station has been in operation since 1969, and there are now 36 circuits passing through that station on a continuous basis.

A new antenna system to be installed at Assadabad is now under construction. This antenna system and the associated equipment uses the latest techniques available today. When the new installations are completed, the Assadabad Earth Station will be one of the most versatile and capable satellite communications stations in the world.

In the field of education, the newly planned objective of expanding the mass education facilities via satellites and television will come into operation within the next few years. The motivation behind this project has been to provide elementary and secondary education along modern lines to all sectors of the community, particularly in the rural areas.

(Mr. Bayandor, Iran)

The equipment will comprise three satellites: one to be operating in a stationary orbit at a height of 36,000 kilometres, one as a standby and the third to be put into orbit when and if required. The TV sets to be fed from 12 independent channels will be coupled to the satellites.

Although primarily designed for education, the satellites will not only be used for that specific objective but will also be instrumental in expanding the existing communications network by facilitating the addition of some thousands of extra microwave channels. Thus, the entire surface area of the country, comprising 1,648,000 square kilometres, will be afforded perfect coverage from the point of view of education and communication.

With respect to remote sensing of the earth by satellites, we find that Iran has paid special attention to the application of the remote-sensing technique for its resources development, particularly in the agricultural field. A new Department of Information and Remote Sensing has been established which operates under the aegis of the Ministry of Agriculture and Natural Resources.

Finally, with regard to activities related to multistage sampling, ERTS-1 imagery was used to develop a colour mosaic of Iran.

Turning now to some of the major issues which are being considered by this Committee, I would like to state that in view of the substantive discussion upon which we are about to embark soon I shall, at this stage, confine my remarks to some observations of a very general nature. My delegation therefore reserves its right to address itself to the substance of these issues when they come up.

With respect to the work accomplished by the Legal Sub-Committee, my delegation greets with satisfaction the adoption by the Sub-Committee of the Draft Convention on Registration of Objects Launched into Outer Space. As a result of this action the international community has taken a further stride towards strengthening the role of law in the field of outer space.

One would have hoped that an assessment of progress made with regard to the Moon treaty could have been as encouraging. However, as we all know, no agreement has been reached on the major outstanding issues, in particular those related to the legal status of the natural resources of the moon. All these

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questions were discussed in a detailed manner in the Working Group set up during the last session of the Legal Sub-Committee to continue consideration of the Draft Treaty.

In connexion with the legal status of the natural resources of the moon, my delegation has on previous occasions supported the view expressed by those who would consider such natural resources to be part of the common heritage of mankind. My delegation hopes that this and other outstanding issues which have impeded further progress in this important area will be resolved in an equitable manner satisfactory to all parties concerned.

My Government still holds the view that a good basis for arriving at a settlement of this issue is to be found in the formula which emerged from the deliberations of the so-called mini-group during the 1973 session of the Legal Sub-Committee. That formula was a package compromise on a cluster of issues related to the exploitation of the natural resources of the moon. In spite of the impasse which later emerged and some new suggestions to dodge the issue of natural resources, my delegation feels that any realistic attempt to conclude a moon treaty must turn its focus once again to that formula.

In studying the report of the Working Group on Direct Broadcast Satellites (A/AC.105/127), we perceive that various issues still prevent the bridging of the gap between differing viewpoints. Among such issues which one can cite are those related to the question of the potential role of international organizations in this field, as well as matters deriving from its political, legal, economic and technical aspects. However, progress has been made and the Working Group has been instrumental in enabling the Legal Sub-Committee to formulate some legal principles.

Turning to the report of the Scientific and Technical Sub-Committee (A/AC.105/121), my delegation is happy to note that progress was made during the last session in the area of remote sensing of the earth by satellites, a field to which my Government attaches considerable importance. In this connection, we gratefully acknowledge the useful work carried out by the Working Group on Remote Sensing of the Earth by Satellites and its Task Force. We also share the view -- just expressed by India and others -- that, should the Working Group discontinue its work, the Scientific and Technical Sub-Committee should

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allocate sufficient time for consideration of this matter at its forthcoming session.

The possibility of establishing an international global centre for remote sensing under the auspices of the United Nations, as well as the setting up of regional data acquisition and/or data storage and dissemination centres, must be further explored. Considering the immense complexities involved in the process of implementing some of these measures, we welcome the Sub-Committee's recommendation to this Committee that the Secretary-General be requested to undertake, in conjunction with the specialized agencies concerned, studies related to the organizational and financial implications involved.

My delegation takes pleasure in commending the excellent work done by the United Nations Expert in charge of space applications, Mr. Murthy, to whose forthcoming visit to Iran we eagerly look forward. In view of the significance of the work being accomplished in this area we believe that the United Nations space applications programme should receive greater financial support in order that it might be more effective.

With respect to the suggestion of the United Nations Expert in charge of Space Applications for the convening of a United Nations conference on space applications, my Government sees no difficulty in supporting this idea in principle. Such an event could, if appropriately structured, become instrumental in marshalling the necessary resources for providing concrete assistance to the developing nations of the world.

We share the view that such a conference should not be allowed to degenerate into merely another academic exercise. It must be action-oriented and must provide practical answers to concrete problems rather than becoming a forum for the review of problems in this area. In view of its potential significance my delegation holds the view that careful preparation should precede the holding of a conference of that nature.

Before concluding my remarks, I would like to join with others in voicing regret at the departure from the United Nations of Mr. Abdel Ghani, Chief of the Outer Space Affairs Division, and in paying a tribute to his outstanding contributions in this field during his long years of association with the Organization.

Mr. SALATUN (Indonesia): Mr. Chairman, permit me to begin by expressing the appreciation of my delegation for the warm welcome which was extended by you in your opening remarks and by previous speakers, particularly by the representative of Australia, our neighbour from down under, to the new members of the Committee. The broadening of the membership which has resulted from the deliberations of the Committee and the decision of the General Assembly is to be applauded, both because it allows a more equitable geographical distribution of the membership itself and because it will certainly do much to extend the benefits of the peaceful uses of outer space to the developing countries.

Indonesia is pleased to be able to pledge its full co-operation to you, Sir, and to the other members of the Committee in dealing with the vital questions which concern us in this body.

Since this is the first occasion upon which Indonesia has participated in the deliberations of the full Committee, I should like to take the opportunity briefly to acquaint members with my country's space activities, past and present, since I think it will serve as a typical illustration of such activities in developing countries.

Indonesia has been engaged in space activities under the direction of LAPAN, the Indonesian National Institute of Aeronautics and Space, since 1963. We started the research and development of a scientific sounding rocket -- Kartika-1 -- in 1963. This effort was motivated by two factors. First, during the world-wide International Geophysical Year Programme in 1957-1958, we had been unable to make a satisfactory contribution. Hence, there was a general desire at the time that we should do our best for the International Quiet Sun Year in 1964-1965. The second factor was that during 1963 there was no hope of obtaining foreign currency for importing rockets from abroad. Therefore, it was decided to undertake the development of an indigenous rocket system.

The Kartika-1, or "Star", made its first flights in August 1964 from a cape on the south coast of West Java named Cilaut-Eureun. It is believed to have been the second scientific sounding rocket launched in Asia, following the Japanese. Its telemetry system during earlier tests had succeeded in receiving signals from the American TIROS weather satellite, thus becoming the second indigenously built receiver in Asia to do so, after that of India.

When foreign currency later became available, it was decided to import ten Japanese Kappa-8 rockets together with an additional number of small RT-150 rockets for radar testing. A scientific rocket launching station was built at Cilaut-Eureun in 1965 in only six months, and three Kappa-8 rockets were subsequently launched to an altitude of 200 kilometers and more, obtaining ionospheric data which were highly valued. At about the same time, thanks to Japan, Indonesia became a member of COSPAR, to which the results of the sounding rockets were reported later.

It is to be regretted, however, that this spectacular debut of Indonesian space research could not be continued because of certain unfavourable developments which followed. The sounding rocket activities came to a complete halt when the radar and telemetry system was damaged in early 1966 by a wind storm,

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while the economic situation at the time prevented its immediate repair. It should also be noted that in 1964 we received a ground station from the USSR Academy of Sciences for tracking the Proton satellites.

In the first five-year plan -- April 1969 to March 1974 -- the space activities authorized by the Government consisted mainly of the construction of two APT stations, one in Jakarta and one in Biak, around 4,000 kilometers to the east, for the utilization of information from American weather satellites, and the use of ERTS imageries under a LAPAN-NASA Agreement signed in 1972. Mention should also be made of trainees sent to Ahmedabad, India, for space communications training; to the United States for space meteorology and ERTS training; to the Netherlands for research at the Laboratory of Professor de Jager and for training at the ITC in Enschede; to Brazil for remote sensing and systems analysis; to France for remote sensing and balloon technology; to Belgium for remote sensing; and to India for space technology. During the first five-year plan also, our country started to build and operate a space communication ground station, and since then it has been included in a speedy and convenient world-wide communication network. It is of interest as well to note that as long ago as the late 1960s Indonesia's Foreign Minister, Adam Malik, sent a letter to United Nations Secretary-General U Thant requesting the construction of a regional ERTS ground station in Indonesia under United Nations sponsorship.

I wish also to mention the fact that, thanks to the efforts of the United Nations Expert on Space Applications, we have been able to attend several meetings abroad, which proved to be highly beneficial.

In the second five-year plan, which began on 1 April last, the space activities authorized by the Government include the continuation of remote sensing, particularly for the purpose of compiling an inventory of natural resources; the upgrading of our APT stations, especially those concerned with hydrology and agro-meteorology; educational television satellites and other space applications developments; the laying of the foundations for aerospace technology developments; the rehabilitation of the Scientific Rocket Launching Station at Cilaut-Fureun, Java, and the reactivation of the Space Science Programme and aerospace affairs studies, which will also deal with such problems as the social impact of space technology on our society and other areas.

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We also wish to inform this distinguished assembly that Indonesia's new space science programme has been formulated on the basis of a memorandum submitted by Professor de Jager, the President of COSPAR, the Committee on Space Research, after consultation with Dr. Murthy of the United Nations, Professor Carver from Australia, Dr. Tepper and Dr. Weiffenbach from the United States, Dr. de Mendonca from Brazil, Dr. Labitske from West Germany and Dr. Morel from France as well as others. My delegation would like to express its appreciation to all these distinguished scientists for the aid they have given Indonesia in this regard.

Indonesia has been fortunate in having secured the aid of many countries in the planning and execution of space activities. The United States, France, Brazil, India, the Netherlands and Belgium have been generous in providing training to the Indonesian space programme. My delegation wishes to express its appreciation to them for their invaluable assistance in this regard. In addition, a space agreement is being finalized with France, while an expert team has been sent by West Germany to study the possibilities of space co-operation also. A number of other countries have pledged aid and/or co-operation of various types to the space programme.

I wish to draw the attention of this distinguished meeting to the fact that the geographical location of Indonesia offers most favourable conditions for space operations because it is located on the equator, while east lies the widest stretch of ocean in the world.

As Indonesia's programmes have expanded, the need for assistance to continue to develop space activities which will meet these needs has increased as well. At the present time, the assistance required may be categorized as follows: in the field of space applications, which consists of remote sensing, divided in ERTS ground stations, image- and photo-processing facilities, data-handling and storage facilities, airborne and rocket-borne remote sensing, and so on, space and rocket meteorology, educational television satellite and other space applications development; in the field of aerospace technology, which in the first phase consists of maintenance and repair; in the field of space sciences, including the use of the remaining seven Kappa-8 rockets and scientific payloads; and in the field of aerospace studies, including a technical information and training centre.



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As part of its programme of space activities, Indonesia has been most pleased to issue an invitation for a regional seminar on remote sensing to be held in 1975, as the Chairman noted in his statement. The benefits to Indonesia of this seminar will be twofold. In the first place, it will acquaint the people of my country, particularly its scientists and decision-makers, with the potential advantages to be derived from further development of the space programme and its related activities. In addition, it will also permit Indonesia to make a direct, though modest, contribution to the United Nations space programme.

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Permit me now to turn to a discussion of the major items on the agenda of the Committee for this session. My delegation would like to welcome the adoption by the Legal Sub-Committee of the draft Convention on Registration of Objects Launched into Outer Space. This is indeed a significant accomplishment in the continuing process of fashioning a rule of law governing the peaceful use of outer space.

It is the earnest hope of my delegation that the Working Group on the Remote Sensing of the Earth by Satellites will, at its next series of meetings, succeed in formulating principles governing remote sensing operations similar to those achieved by the Working Group on Direct Broadcast Satellites.

It is a source of some disappointment to my delegation that as yet no agreement has been reached on the remaining issues which have so far prevented the completion of the draft treaty relating to the moon. While we do regard the formulation of such a draft treaty to be a task which the Committee should discharge as speedily as possible, practical considerations, such as those raised by the representative of India in this connexion, would seem to require that this question would best be taken up as the priority issue in the regularly scheduled forthcoming meetings of the Legal-Sub-Committee. It is to be hoped that at this session, guided by the principle that the moon and other celestial bodies are the common heritage of all mankind, the problems which have so far prevented the completion of a draft treaty will soon be resolved.

If I may now turn to the work of the Working Group on Remote Sensing of the Earth by Satellites, my delegation must confess that it had hoped that concrete proposals concerning the application of remote sensing techniques to global problems would by now have been forthcoming from the Working Group. It is regrettable that the multiplicity of views expressed on this topic has so far prevented such proposals being put forth on this question. As the Chairman noted in his statement before the Committee:



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"It is to be hoped that remote sensing satellites and broadcasting satellites in particular will help to solve some of the problems of development with which the United Nations as a whole is preoccupied at present ..." (131st meeting, page 7).

Such problems are, by their very nature, of paramount interest to the developing countries, and it is our hope that concrete actions may speedily be taken upon the recommendations of the Working Group.

The action of the Working Group in proposing a study of the organizational and financial requirements for the establishment of a global centre and of regional centres for the storage and dissemination of remote sensing data is to be welcomed and will, we trust, be followed by steps consonant with the conclusions of the study.

The related but broader question of space applications under the United Nations space programme has also been of some concern to my delegation. As the Chairman has noted, the United Nations Space Applications Programme has continued to make useful contributions by drawing the attention of developing countries to the possible application of space technology to their problems despite a severely restricted budget. In the past these funds have enabled experts from developing countries to attend the seminars and panel meetings organized by the United Nations Expert, Mr. Murthy, which have proven highly effective and should not be curbed, but instead should be expanded. While the present programme of seminars and fellowships concerning this area is to be welcomed, the needs of the developing countries far outstrip the resources of the existing programmes. For this reason, my delegation deeply regrets that we had to accept the decision to freeze the budget at its current level of \$87,000 for 1975.

In the view of Indonesia such a decision is seriously flawed for two reasons: first, it clearly fails to take into account the pernicious effects of the world-wide inflation which all nations have experienced in the past year. Thus, although the budget in dollar terms remains the same, in terms of its purchasing power the programme has suffered an effective cut of at least 10 per cent. Equally serious is the failure of the Sub-Committee to cast its

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plans in the framework of the long-term needs of the developing nations rather than that of purely budgetary considerations. It is greatly to be hoped that in the future the Sub-Committee will find it possible to adopt an approach to planning the space applications programme which concentrates on the needs of the members and the most efficient way to meet those needs in terms of rational, long-range planning. Only if such a policy is adopted will it be possible to obtain a truly significant share of the potential benefits of space applications to the problems of development which are so important today.

I cannot conclude these remarks without taking note of the impending departure of Mr. Abdel-Ghani from his position as Chief of the Outer Space Affairs Division. In the brief time that Indonesia has been a member of the Committee my delegation has learned to value his assistance and wise counsel on a wide range of matters concerning the role of the international community in outer space. His abilities and knowledge will be greatly missed. It gives me pleasure to wish him well in the future service of his country.

The meeting rose at 1.10 p.m.