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COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE
VERBATIM RECORD OF THE ONE HUNDRED AND FORTY-FOURTH MEETING

Held at Headquarters, New York,
on Monday, 9 June 1975, at 3 p.m.

Chairman:

Mr. JANKOWITSCH

(Austria)

- Opening of the eighteenth session
- Adoption of the agenda
- Tribute to the memory of Mr. A. Blagonravov, Union of Soviet Socialist Republics; Mr. Jean-Felix Charvet, France; and Mr. Franco Fiorio, Italy
- Statement by the Chairman
- Election of the Rapporteur
- General debate

Austria

USSR

Sweden

UK

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OPENING OF THE EIGHTEENTH SESSION

The CHAIRMAN: I declare open the eighteenth session of the Committee on the Peaceful Uses of Outer Space.

ADOPTION OF THE AGENDA (A/AC.105/L.82)

The agenda was adopted.

TRIBUTE TO THE MEMORY OF MR. A. BLAGONRAVOV, UNION OF SOVIET SOCIALIST REPUBLICS; MR. JEAN-FÉLIX CHARVET, FRANCE; and MR. FRANCO FIORIO, ITALY

The CHAIRMAN: In opening the eighteenth session of this Committee I should like to welcome all of you to this meeting.

My first words will be dedicated to the memory of three distinguished representatives who served this Committee and its subsidiary bodies for many years, Academician A. Blagonravov of the Soviet Union, Mr. Jean-Félix Charvet of France, and Mr. Franco Fiorio of Italy.

Academician Blagonravov participated in meetings of this Committee from its inception. His contribution to the work of the United Nations in the area of the peaceful uses of outer space will always be remembered. The Soviet Union has lost one of its most distinguished scientists and we, in the Committee, have lost a man who contributed a great deal to international scientific co-operation.

(The Chairman)

Mr. Jean-Félix Charvet was a member of this Committee for many years and his contributions, especially in the legal field, were truly outstanding. The Treaty on Registration of Objects Launched into Outer Space owes a great deal to his prolific mind and his tireless and imaginative efforts at compromise solutions. We are deeply saddened that he is no longer with us at a time when we have arrived at important crossroads in our legal work.

Finally, Mr. Franco Fiorio, also one of the original members of this Committee, was an outstanding contributor to the work of the United Nations in the peaceful uses of outer space, particularly in the area of remote sensing. He was, as you know, the Chairman of the Working Group on Remote Sensing of the Earth and also the Chairman of its Task Force. For many years the efforts of the United Nations in this area were closely associated with Franco Fiorio. We have lost a warm friend who was always willing to co-operate in our work.

The deaths of Academician Blagonravov, Mr. Jean-Félix Charvet and Mr. Fiorio have been great losses to the Committee and its subsidiary bodies; and, on behalf of all of you, I wish to convey the condolences of this Committee to the Governments of the USSR, France and Italy, and to the bereaved families.

I request the Committee to observe a minute of silence in honour of our deceased colleagues.

The representatives, standing, observed a minute's silence.

STATEMENT BY THE CHAIRMAN

The CHAIRMAN: Before proceeding with the statement of the Chairman, which traditionally takes place at the beginning of our work, I should like to welcome here Mr. Lubos Perek, who has assumed the duties of Chief of the Outer Space Affairs Division in the United Nations Secretariat. He succeeds Mr. Abdel-Ghani, who left the Division and has since joined the services of his Government and whom we welcome here today in another capacity. On behalf of the Committee, I therefore welcome Mr. Perek. We look forward to co-operating with him in our work, as we did with his predecessor.

(The Chairman)

The past year which is under review in our work was one of many significant developments relating to the exploration of outer space. A great number of remarkable scientific feats were and are being conducted in outer space, particularly by the major space Powers. Mention should be made here of the continued success of the United States LANDSAT I programme and the progress of the United States ATS-6 satellite, which has now been moved over India with experimental educational satellite programmes to begin there shortly. These are programmes which relate directly to our work. We hope that these experiments will be most successful so that operational programmes with far-reaching impact for economic and social development can be launched in a short while.

On behalf of the Committee, I wish to congratulate India for having successfully orbited an experimental satellite -- ARYABHATA -- thereby joining the outer space club. This effort is particularly significant as the satellite and its experiments have been fully developed by scientists from a developing country. It is thus a truly outstanding achievement, and I should like to ask the representative of India to convey our sense of admiration to his Government.

In Europe, an event of great importance took place on 30 May 1975 when the European Space Agency (ESA) officially came into being. The signing of the Convention of ESA on that day in Paris followed an agreement of principle for the creation of the Agency some two years ago. The Agency, which up to now has consisted of 10 members, is the successor of ELDO and ESRO and will, as one of the most important of its projects, take part in the development of the Spacelab programme.

Finally, it was with great satisfaction that we noted the success of the preparations for the joint Apollo-Soyuz flight in the coming month of July. The Apollo-Soyuz programme, which originated during the visit to Moscow of President Nixon in May 1972, has offered a splendid opportunity to peaceful international co-operation in outer space and is thus of a significance which widely transcends the actual event. It is our hope here that the path traced by the Apollo-Soyuz flight will remain open and that the example of friendship and co-operation set by the American and Soviet astronauts will be widely emulated.

(The Chairman)

And, for the spaceflight on 15 July, the good wishes of this Committee go to cosmonauts Aleksei Leonov and Valeriy Lubasov of the Soviet Union and to astronauts Thomas Stafford, Vance Brand and Donald Slayton of the United States of America.

Those are just a few of the outstanding space events of the past year, and it is only because of the limitations imposed by time and the agenda that more of them cannot be mentioned here. However, I am sure that the Committee would like to express a tribute of gratitude and admiration not only to all space nations but, in particular, to all space scientists, space workers and astronauts, who in the past year gave new proof of their exceptional devotion to the idea of space exploration.

As representatives are all aware, during this year the subsidiary bodies of this Committee have accomplished a great deal of work to be reviewed during this session of the Committee. The reports of these bodies now before us embody the extent of the work carried out by them. Their successes were due in great part to the most able leadership of their chairmen: Mr. Carver of Australia, who again chaired the Scientific and Technical Sub-Committee; and Ambassador Wyzner of Poland, who chaired the Legal Sub-Committee; to both of whom I wish to convey the appreciation of this Committee.

In briefly reviewing the work of those two committees, I shall begin with the Legal Sub-Committee, which, in accordance with the provisions of General Assembly resolution 3234 (XXIX), gave priority at its last session to three principal areas of work: first, the moon treaty; secondly, the elaboration of principles governing direct broadcast satellites; and thirdly, implications of remote sensing of the earth by satellites. With regard to those subjects, the Sub-Committee established a Working Group on the moon treaty, chaired by Professor Gyorgy Harazti of Hungary, a Working Group on Direct Broadcast Satellites, chaired by Mr. Vellodi of India; and a Working Group on Remote Sensing of the Earth by Satellites, chaired by Mr. Abdel-Ghani of Egypt.

(The Chairman)

While the reports of each of the Working Groups were accepted by the Sub-Committee virtually without change, discussions within the Working Groups reflected the difficult issues confronting the Sub-Committee in regard to these topics and the extent to which reconciliation of conflicting viewpoints was considered possible.

The debate concerned the draft moon treaty, which began in 1972 and resulted in agreement in 1973 on the text of 21 articles and the preamble but which, as members know, had not shown much progress since then, continued to focus, at the last session, on the question of the appropriate legal régime governing the exploitation of the natural resources of the moon. Several new proposals were made and were discussed in Working Group I of the Sub-Committee.

As a result of the debates in the Working Group and the Sub-Committee, the texts concerning natural resources were redrafted into articles X and X bis. In the draft, however, a number of words or sentences still appeared in square brackets, owing to the lack of a consensus. For the same reason, certain provisions were formulated in two versions, and, in that case, both texts were placed in square brackets. The texts of articles X and X bis are reproduced as annex I to the report of the Legal Sub-Committee.

No final agreement was reached on the main outstanding issues relating to the legal status of the natural resources of the moon and the scope of the treaty, and therefore the Sub-Committee considered that it should continue its work at its next session again with the same high priority. As this is a matter that was considered in detail in formal and informal meetings at the last session of this Committee, we might perhaps consider holding consultations with a view to narrowing the gap between the various views held by members on these two main outstanding issues. As in the past, I shall hold myself available for any action, formal or informal, the Committee might wish to take in this matter.

The principal task assigned to the Legal Sub-Committee in regard to the item on direct broadcast satellites was the formulation of principles governing such broadcasts, with a view to concluding an agreement or agreements on that subject. The Sub-Committee's task in dealing with this item at its session in 1974, as well as this year, was made easier by the interdisciplinary discussions

(The Chairman)

carried out previously by the Working Group on Direct Broadcast Satellites, which had been meeting since 1969 to discuss the technical, political, legal, social and economic implications of this new technology.

At its 1974 session the Legal Sub-Committee, drawing on the report of the Working Group in document A/AC.105/127, discussed five of the fourteen principles identified by the Working Group on which the formulation of principles were required, and reached a general consensus in regard to five of those principles -- namely, applicability of international law; rights and benefits of States; international co-operation; State responsibility; and possible settlement of disputes.

The Legal Sub-Committee, through its Working Group II, at its session this year discussed both the five principles dealt with earlier and the other remaining principles not hitherto discussed. It was able to make considerable progress in this area, succeeding in reducing many of the bracketed phrases in the first five principles formulated in 1974 and also in formulating a number of other principles on which a great deal of consensus could be reached. Thus, it reached complete agreement on State responsibility and peaceful settlement of disputes and formulated alternative principles in regard to other principles -- such as the ones on purposes and objectives, consent and participation, and duty and right to consult, without bracketed phrases, as well as in regard to some others with virtually no brackets, such as the ones on the principles relating to international co-operation and spill-over. The discussions also helped members to move toward a general consensus: that the concept of prior consent and the concept of freedom of information, which are the key issues relating to these questions, were not necessarily incompatible. The text of the principles worked out by the Sub-Committee through its Working Group, some of which include words or sentences in square brackets or alternative formulations on matters where a consensus could not be reached, are reproduced as annex II to the report of the Sub-Committee.

(The Chairman)

The Sub-Committee has thus made considerable progress and, with the co-operation of all members concerned, I hope we can assist in the process of trying to resolve some more of the outstanding items at this session of the Committee.

The case of the final priority item on the Legal Sub-Committee's agenda was different from that of the two preceding subjects, where the Sub-Committee was called upon to complete a draft treaty or formulate principles with a view to concluding an agreement. On that subject -- that is, remote sensing -- the Sub-Committee, which was considering the item for the first time, was called upon merely to consider the legal implications of the matter in the light of various proposals and views emanating from Member States. Thus, the task assigned to the Legal Sub-Committee in this area was difficult in terms both of procedure and of substance. However, with the help of its Working Group, it was able to agree on identifying certain common elements in the proposals before it, including, for instance, the principles that, first, remote sensing should be conducted for the benefit of mankind and, secondly, all States have the right to conduct remote sensing under international law.

Further progress in the Sub-Committee would seem to require more substantive discussions in regard to a number of important issues related to this matter, and I hope we shall be able to clarify some of them at the present session of this Committee.

Paragraph 15 of the report of the Legal Sub-Committee expresses the opinion that at its next session the Sub-Committee should continue to consider with the same high priority the three issues I have discussed earlier in this statement: the moon treaty, direct broadcast satellites, and remote sensing of the earth by satellites.

The Sub-Committee discussed also at one of its meetings the question of the definition and/or delimitation of outer space and outer space activities, and there was a useful and interesting exchange of views. During the discussion the importance of the subject was stressed and the hope was expressed that at its future sessions the Sub-Committee would be able to consider the item in greater detail.

(The Chairman)

Finally with respect to the work of the Legal Sub-Committee, it had an interesting and detailed discussion also with regard to the date and venue of its future sessions. In paragraph 16 of its report, the Sub-Committee, responding to the recommendation made by this Committee last year, has now proposed that its future sessions be scheduled for the month of May each year.

Also in response to a request made by this Committee last year, the Sub-Committee considered the question of the venue of its sessions. It had before it a note prepared by the Office of Financial Services on financial implications; that note is reproduced as annex IV to the Legal Sub-Committee's report. A number of arguments were advanced in the Sub-Committee both in favour of and against holding all future sessions of the Sub-Committee in Geneva. The Sub-Committee regretted, in the circumstances, that it was unable to make an agreed recommendation on the question to this Committee, and it is now up to us to consider the question further and take a decision on it.

The Scientific and Technical Sub-Committee, considering the final report of the Working Group on Remote Sensing of the Earth by Satellites, concluded that the work in this area, initiated by the Working Group, should be continued, and it recommended that the Secretary-General prepare certain studies. In accordance with that recommendation, the Secretary-General submitted several comprehensive studies on the question. In deliberations on the organizational aspects of international co-operation in the field of remote sensing, those studies proved to be most helpful in an area of great interest to many delegations. During those discussions the Sub-Committee had before it also several proposals submitted by members, and it took note of the work done by the Legal Sub-Committee in this area and discussed the current pre-operational/experimental phase as well as possible future global international operational remote sensing systems.

(The Chairman)

The Sub-Committee noted that facilities for data storage and dissemination have been established by Member States as well as by the Food and Agriculture Organization and that several States have established national repositories with the help of data obtained from the United States LANDSAT programme. It felt that it would be extremely useful to have reports from centres which have established or are about to establish national facilities on their experience with such centres.

The Sub-Committee further noted the importance of providing adequate training facilities in all aspects of remote sensing, particularly to developing countries. The Sub-Committee also felt that in order to consider the establishment of an appropriate organizational framework for a possible global operational system it would be essential to have a clear understanding of the real needs of the users and also more detailed information on the cost and benefits of remote sensing to Member States. Taking all these factors into consideration, and believing that further study of organizational and financial matters should progress together with the consideration of the legal aspects of remote sensing, the Sub-Committee has in paragraph 29 of its report recommended to this Committee that the United Nations Secretariat be requested to prepare for the consideration of the next session of the Sub-Committee several studies with the aim of clarifying the issues mentioned earlier.

It also agreed that the Secretary-General should be requested to take practical steps, in co-operation with the appropriate specialized agencies, to explore the feasibility of utilizing existing facilities and expertise to establish on an experimental basis an international centre which could train and assist persons from developing countries to make the most effective use of remote sensing information. If the study demonstrated that such an experiment could be implemented without additional financial implications, it should be carried out and reported on to the Sub-Committee at its next session.

In regard to the United Nations space applications programme, the Committee will be pleased to know that, under the guidance of the Sub-Committee and within its limited financial resources, the programme continues to make worth-while contributions in bringing to the attention of developing countries the benefits of space exploration and making them meaningful to these countries by the educational and training programmes conducted under this heading.

(The Chairman)

Among them note should be taken of the United Nations panel meeting on Satellite Broadcasting Systems for Education, held in Japan; the joint United Nations-Food and Agriculture Organization Regional Seminar on Remote Sensing of the Earth Resources and Environment, held in Egypt; the United Nations Interregional Seminar on the Applications of Geodetic and Remote Sensing Data from Satellites and Cartography, held in Brazil; and the United Nations Interregional Technical Seminar on Remote Sensing, held in Canada last month. These panel meetings, seminars or workshops have taken place since we met last year. Several others are planned for the immediate future -- for instance, a joint United Nations-UNESCO Regional Seminar on Satellite Broadcasting Systems for Education, to be held in Mexico in September 1975; a United Nations-World Meteorological Organization Seminar on Satellite Meteorology, to be held in Kenya in November 1975; and finally, a United Nations-Food and Agriculture Organization Regional Seminar for Remote Sensing Applications in November 1975, to be held in Indonesia.

Several more panel meetings and seminars are scheduled for 1976, including two seminars on remote sensing to be held in co-operation with UNESCO in Iran and the United Kingdom respectively; a seminar on remote sensing in the Federal Republic of Germany; and possibly another on the same subject in Pakistan.

Also in 1976, a training workshop in remote sensing jointly sponsored by the United Nations and the International Astronomical Federation will be held in the United States, and a technical visit by participants from developing countries to India in the course of the Satellite Instructional Television Experiment (SITE) is also planned so that they can get first-hand information regarding the various aspects of this experiment.

A number of fellowships offered by Member States in various disciplines relating to space applications are also being administered by the United Nations. The United Nations Expert on Space Applications and regional consultants have visited several developing countries in order to promote awareness of the practical applications of space technology, and several more such visits are planned for the future.

A number of these projects have been undertaken in co-operation with the specialized agencies, which have continued to conduct their own programmes in this field -- for example, ITU in the field of space telecommunications and FAO in the area of remote sensing. UNESCO carried out programmes in the area of space communications and remote sensing.

(The Chairman)

Of particular interest to the United Nations this year is the effort of the Inter-Governmental Maritime Consultative Organization (IMCO) in London regarding the establishment of a maritime satellite system, for which it has convened a diplomatic conference. The discussions relating to the establishment of the INMARSAT system, as it will be known, will have a significant influence on the establishment of international collaborative efforts in other matters related to space, such as remote sensing, and should therefore be of particular interest to this Committee. Also of interest is the meteorological research and operations programme of the World Meteorological Organization (WMO) to improve international service and the action taken in response to a resolution of the General Assembly at its twenty-eighth session on the WMO Tropical Cyclone Project to find ways and means of mitigating the harmful effects of tropical storms by using space technology.

COSPAR and IAF have continued to extend considerable support to the work of the Scientific and Technical Sub-Committee. In view of their role in outer space activities, the Sub-Committee at its last session requested them to consider the possibility of preparing an annual report which would cover such items as the state of the art of scientific and technological developments in the exploration and practical use of outer space, a forecast of future scientific and technological training and developments and, finally, an assessment of the areas where national space organizations could undertake such activities within an international framework.

Reviewing the United Nations Programme on Space Applications, which has now been in existence for several years, the Sub-Committee had before it a report on the needs of developing countries for assistance in the practical application of space technology. The Sub-Committee expressed the view that while the number of replies from Member States was still relatively small, they reflected to a certain degree the needs of developing countries and particularly the importance of education and training. The Sub-Committee suggested that the Secretary-General again draw the attention of Member States to the questionnaire in order to obtain a wider range of replies for consideration by the Sub-Committee at its next session. The Committee might wish to give guidance to the Sub-Committee regarding the evaluation of the impact of this programme with the respective objectives given it in 1969 so that a complete review might be carried out at the next session of the Sub-Committee.

(The Chairman)

In concluding my remarks on the space applications programme, I wish to take the opportunity to express on behalf of the Committee sincere appreciation to the Expert, Mr. Murthy. He has done splendid work on which he is to be highly commended.

The Sub-Committee on scientific and technical matters also discussed the possibility of holding a second United Nations conference on the peaceful uses of outer space. A report on this question prepared by the Secretary-General was before the Sub-Committee.

(The Chairman)

The Sub-Committee agreed with the view expressed by the Secretary-General that it would be difficult to make an assessment regarding the convening of a conference on the basis of the relatively small number of replies received so far. The Sub-Committee recommended, therefore, that Member States which have not yet done so should submit their views as soon as possible. It also noted support from some Member States for the holding of such a conference, as well as other views expressed at the meeting of the Sub-Committee. In view of the possibility that space applications might be included in the United Nations Conference on Science and Technology, the Sub-Committee asked the Secretary-General to provide to it at its next session all available information relating to this matter so that the purpose, objectives and scope of available options could be further clarified. This is also a matter to which this Committee might wish to give some attention at this session.

The Sub-Committee also gave consideration to the need for ensuring the effective co-ordination of the activities of the United Nations and the specialized agencies in the area of space applications. In this connexion the Sub-Committee recalled the request it had made to the Secretary-General at its last session for a report on co-ordination among the specialized agencies and the United Nations in space applications programmes. The Secretary-General will be submitting a report on this matter to the Committee at this session for our consideration.

As I have had occasion to say in the past at this juncture, I feel that the main Committee has a very special function in relation to its sub-bodies. While it will generally, for lack of time, not be possible to discuss the various items in great detail, we should nevertheless be prepared to review the work done by the Sub-Committees and we should try to put various questions in a somewhat wider perspective and also attempt to solve outstanding issues or at least to narrow existing differences of opinion, so as to facilitate the work of our Sub-Committee.

We are fortunate indeed that we can rely on work well done and on excellent reports which have been submitted by our two Sub-Committees.

Acknowledging this fact, however, should not mean that we have to rubber-stamp these reports and pass them on to the General Assembly without first having carefully considered the main issues involved. I think this is particularly important and appropriate where problems are discussed whose nature requires that

(The Chairman)

they be looked at from different angles. Furthermore, and perhaps even more important, it should be one of the primary objectives of this Committee to shape the activities of the United Nations in outer space matters for the years to come. This will require that the Committee be prepared to give guidelines and to issue specific directions, where appropriate, to its Sub-Committees in relation to priorities to be set in the time ahead.

Only then will we have fulfilled the obligations which are incumbent upon us as the focal point in the United Nations for all space-related matters.

This Committee, in the past two decades, has made important contributions in a new sphere of human activity, the peaceful conquest of outer space. We are aware today of the immense benefits this endeavour has brought to mankind as a whole, benefits deriving from the development of many new branches of technology, which are summarized under the concept of space application; but also benefits deriving from the increase in international co-operation which the extension of outer space activities has brought about.

While this Committee is still constructively engaged in many fields of present space activity, trying to make them parts of a future international network of space co-operation, new vistas are opening before our eyes.

We are becoming aware that outer space is not filled with inanimate objects, dead even geologically for millions of years, but with bodies of tremendous importance for the planet earth: indeed, some of the most important future sources of energy may be found in outer space -- perhaps solar energy is an example. Let me quote from a recent paper by Professor William E. Heronemus of the School of Engineering at the University of Massachusetts, which contains a most pertinent evaluation of some uses of solar energy for the international system:

"The energy plans of the world today are based on consumption of petroleum, coal and uranium. The distribution of those fuels around the world is far from equitable, no matter how equity is defined. Trading for those fuels and other actions, short of and including military action to assure their availability, has a significant impact on major subsystems of the global system. As time goes on and three or four economic giants become even more dependent upon fuels remote from their shores, the likelihood of

(The Chairman)

serious clashes increases. The entire gamut of international ploys, including blackmail, is likely to be experienced. Men, accustomed to warmth and light, can become angry when forced to endure the cold and the dark. The petroleum and coal situation is serious enough, but one must contemplate some of the real consequences of any significant international use of the nuclear fission processes. Each reactor plant and the fuel associated therewith to varying extent becomes a source of poison or bomb material which in the wrong hands could threaten the very foundations of international stability.

"The earlier promises of nuclear energy to all nations now appear to have been some kind of a nightmare. Still, current plans for energy for the future are pegged to combustion and fission, and fusion if it can be reduced to practice. One might think that an appropriate policy of a world government or system attempting to secure world stability for the future would be a ban, a total ban, on the proliferation of devices capable of generating high-level wastes or bomb materials. The geopolitical significance of energy practices based upon combustion, fission or fusion appears to be capable of dominating all else in the future. On the other hand, a world system organized towards the practical and reasonably paced conversion to solar energy practices appears to offer a geopolitical situation within which all could trade and grow, paying maximum attention to things more in keeping with the dignity and aspirations of man. Solar energy, in its ability to drive a large number of processes, is indeed quite equitably distributed amongst all all."

The distinguished Professor continues:

"If the wealthy nations learn how to make solar energy processes more economic than combustion, fission or fusion, then those who can hardly afford combustion -- and who have never had the least chance of affording fission or fusion -- might have a new chance to expand their energy resources. With luck, the United States will find her own way via solar energy, and there should be no reason why all nations cannot share her research and development results. There is enough solar energy for all, it is well distributed and it cannot be used to bring down rival nations.

(The Chairman)

"It is quite clear that any developing nation who first sees the need for increased energy, then decides to accumulate the capital required for solar energy plant, should seriously consider the next step of building much of it itself. This could never be the case with nuclear power; it could scarcely ever be the case with modern combustion plants. It should be the case with solar energy. There can be a system of technology and management skill transfer used here which permits the more affluent to help the less affluent to help themselves. A whole new dimension could be given to the concept of development aid if practised in the solar energy context."

As other bodies in the United Nations system have done before us, we might therefore now ourselves begin to look at our own potential future role in developing the kind of international co-operation necessary to bring the benefits of new sources of energy from outer space to all nations.

I trust we shall be able to co-operate together during this session of the Committee and find the ways and means to further efforts for international co-operation in the area of peaceful uses of outer space.

ELECTION OF THE RAPPORTEUR

The CHAIRMAN: Before we begin the general debate, I wish to inform you that, because of his official functions in the Brazilian Embassy in Buenos Aires, the Rapporteur of our Committee Mr. Luiz Felipe de Seixas-Correa of Brazil, is no longer in a position to assume the duties of Rapporteur of this Committee. I say this with great regret, since Mr. Seixas-Correa was of great assistance to our Committee. This leaves us with the task of electing a new Rapporteur. May I therefore ask the Committee whether there are any nominations for this post.

Mr. CHRISTIANI (Austria): It is a great honour and a great pleasure for the Austrian delegation to nominate the Deputy Permanent Representative of Brazil to the United Nations, Minister Luiz Paulo Lindenberg Sette, for the post of Rapporteur of the Committee on the Peaceful Uses of Outer Space.

In the course of his career, Minister Lindenberg Sette, apart from assuming responsibilities in bilateral negotiations, has participated in a large number of international meetings and conferences as adviser, alternate, delegate and head of delegation. Such meetings and conferences have included those of the United Nations General Assembly, the Assembly of the International Civil Aviation Organization, the Inter-American Economic and Social Council, the Conference of American Presidents, the Conference of the Contracting Parties of the Latin American Free Trade Area, the International Coffee Council, the International Sugar Council, the General Agreement on Tariffs and Trade, and numerous other organizations. Minister Lindenberg Sette has presided over working groups and committees in many of the aforementioned organizations. In the United Nations family itself, he has been Vice-Chairman of the Committee on Financing of the Trade and Development Board, and Chairman of the Committee on Shipping and Invisibles Related to Trade of the Second United Nations Conference on Trade and Development.

I think it is common knowledge in this Committee that Mr. Seixas-Correa, personally and the delegation of Brazil, in general, have over the years made great contributions to our common work in the furthering of international co-operation in outer space. We have been fortunate indeed to benefit from the

(Mr. Christiani, Austria)

co-operation of Rapporteurs from Brazil, so it gives my delegation great pleasure to nominate Minister Luiz Paulo Lindenberg Sette for this post, and I trust that this nomination will receive unanimous support.

Mr. COCCA (Argentina) (interpretation from Spanish): I should like most sincerely to support the sentiments just voiced by the representative of Austria. It has been a tradition in our Committee for the delegation of Brazil to occupy the post of Rapporteur, a tradition that has been upheld by such brilliant diplomats as Mr. da Costa e Silva and Mr. Seixas-Correa. At this time the candidature of Minister Lindenberg Sette offers the Argentinian delegation a renewed opportunity to support him with the same warmth, with the same sincerity and with the same enthusiasm as it supported the previous candidacies of Mr. da Costa e Silva and Mr. Seixas-Correa. The Argentinian delegation joins in the proposal just made by the representative of Austria, Mr. Christiani, and reiterates its warm support.

Mr. LOPEZ BASSOLS (Mexico) (interpretation from Spanish): The Mexican delegation supports the proposal of the representative of Austria with great pleasure. It is for us a privilege to support the candidature of the Minister from Brazil.

The CHAIRMAN: The representative of Austria has nominated the Deputy Permanent Representative of Brazil, Mr. Luiz Paulo Lindenberg Sette, for the function of Rapporteur of this Committee. His nomination has been supported by the delegations of Argentina and Mexico. If there are no other nominations, I shall take it that the Committee wishes to elect Mr. Lindenberg Sette as Rapporteur of the Committee on the Peaceful Uses of Outer Space, and I therefore declare him elected to that post.

Mr. Lindenberg Sette (Brazil) was elected Rapporteur.

The CHAIRMAN: In congratulating him, I wish to say that the Committee and I personally are looking forward to close co-operation with him during the present session. May I invite Mr. Lindenberg Sette to take the seat designated for the Rapporteur.

(The Chairman)

I now call on the newly-elected Rapporteur, who wishes to make a short statement.

Mr. LINDENBERG SETTE (Brazil), Rapporteur of the Committee: I am, of course, most appreciative and deeply conscious of the honour that is done to my country in maintaining one of its representatives as the Rapporteur of this Committee. I am particularly grateful to Mr. Christiani, to Ambassador Cocca and to Minister Lopez Bassols, who have proposed and supported my candidature for this post, and for the kind words that you, Mr. Chairman, and they had on my nomination. I can only assume that those were expressions of esteem for my country -- esteem that is fully reciprocated, as you know.

References made by you, Sir, and informally at times by other members of this Committee to my predecessors in this post have led me to believe that they discharged their duties in a manner that was reasonably satisfactory to the Committee. I can only promise you and assure the Committee that I will do my best to discharge my duties at least half as well as they did.

Once more, Sir, I should like to thank the Committee and you and reiterate my full disposition to be of service to all present here.

The CHAIRMAN: Before opening the general debate, I wish to inform the Committee that I have received a letter dated 22 May 1975 from the Director of the Department of Legal Affairs of the European Broadcasting Union, in which that Union is applying for observer status in this Committee. As may be noted from the application, the European Broadcasting Union, which comprises at present 31 active members in Western Europe, Eastern Europe, North Africa and the Middle East, is very interested in the work of this Committee, particularly in the field of direct broadcast satellites, where our deliberations undoubtedly will have a decisive impact on broadcasters all over the world, regardless of the organizational or legal structures or configurations of broadcasting entities in various countries. It was also on these merits that the European Broadcasting Union was granted observer status in the Working Group on Direct Broadcast Satellites two years ago. It is my personal feeling that at a time when the work of the Committee is becoming more and more complex and is also increasingly directed towards the application of space technology in our daily lives, it may be in the interest of the Committee to establish and keep close contacts also with those non-governmental institutions which at an appropriate time will have to make a decisive contribution in translating abstract rules and principles emanating from our Committee into practical life. Thus I feel that the Committee might gain from the expertise of any organization or body, governmental or non-governmental, in the field of outer space. In placing the application of the European Broadcasting Union before the Committee for consideration I might point out that the Committee may wish to take the step of granting observer status to that organization on the clear understanding that the same status might be accorded to any other regional broadcasting organization which might later apply for it. Having brought this application to the attention of the Committee, I realize of course that members may wish to reflect on the matter for a little while before taking a decision. Therefore it is my intention to take up the question for decision by the Committee later this week, if it is agreeable to the Committee.

It was so decided.

The CHAIRMAN: Finally, I wish to draw the attention of representatives to the provisional schedule of work for our session which I asked the Secretariat to circulate as conference room paper No. 1 some time ago. I trust that this conference room paper is before representatives. This proposal for our schedule of work has been prepared in order to assist delegations in planning the attendance of their experts. It should be regarded as a flexible framework and it can be subject to revision whenever the need arises in order to make the fullest possible use of the time allotted for the meetings of this session. Some items, particularly the one on remote sensing, play an important part in the consideration of the report of the Legal Sub-Committee as well as that of the Scientific and Technical Sub-Committee, and it seems to be clear that those questions cannot be entirely separated along the lines of the reports, so that there will be some overlapping. Therefore it will become necessary to make certain cross-references while dealing with the subject during this week and next week. May I, then, conclude that the schedule of work as proposed, with the understanding that it will be a flexible one, is agreeable to the Committee?

It was so decided.

GENERAL DEBATE

The CHAIRMAN: We shall now commence the general debate. Before I call on the first speaker, who will be the Under Secretary-General for Political and Security Council Affairs, speaking on behalf of the Secretary-General, I wish to appeal to all delegations to inscribe their names for participation in this debate as early as possible in order that we can finish the general debate on Wednesday afternoon as just agreed. In accordance with the decision just taken, the list of speakers will be closed at 5 p.m. tomorrow.

Mr. SHEVCHENKO (Under Secretary-General for Political and Security Council Affairs): I wish to take this opportunity, on behalf of the Secretary-General, to welcome you to this eighteenth session of your Committee. In the many years since the United Nations first began to discuss the subject of international co-operation in the peaceful uses of outer space, we have witnessed not only a tremendous growth in scientific and technological accomplishments in outer space but a corresponding growth in the political and legal problems arising from such scientific and technical advancement. It is a tribute to the work of your Committee that, having adopted the procedure of consensus, you have been able to come forward with political and legal solutions which have enhanced international co-operation in the peaceful uses of outer space.

There are very important tasks before the Committee at its present session, and you, Mr. Chairman, have provided the Committee with a comprehensive review of these tasks in your opening statement. For our part, we in the United Nations Secretariat responsible for the servicing of your Committee can assure you and the members of the Committee of our sincere co-operation in assisting you to meet the goals and objectives you have designated. In my capacity as Under-Secretary General of the Department under which the Outer Space Affairs Division functions, I pledge my best efforts in providing guidance in the important work performed by that Division. I wish you continued success in your deliberations.

The CHAIRMAN: I thank the Under-Secretary-General for his pledge of co-operation with this Committee, which we accept gratefully.

Mr. PIRADOV (Union of Soviet Socialist Republics) (interpretation from Russian): A month ago the whole of peace-loving mankind celebrated the thirtieth anniversary of the historic victory over Hitlerism, a victory won by freedom-loving peoples in the course of the most bloody and destructive war in the history of the world. It would be no exaggeration to state that the victory of the United Nations over fascism was and continues to be of decisive importance for the creation of the international climate in which

(Mr. Piradov, USSR)

we live today, in which today we are witnessing the evolution of a policy of détente in international relations. On the thirtieth anniversary of the great victory, the Soviet State, which, as is well known, bore the brunt of the conflict with fascism, once again appealed to the nations of the world, the parliaments and the Governments of all countries, to do away once and for all with the dangerous policy of the cold war, to cease intervention in the internal affairs of other countries and to direct their efforts to the creation of an atmosphere of trust in a peaceful future for mankind and the ensuring of a stable and lasting peace on earth.

(Mr. Piradov, USSR)

In this connexion, we should like to stress that Lenin's principle of peaceful coexistence, which today has become the acknowledged basis of relations between States with different social systems, presupposes not merely good-neighbourliness between countries and peoples but active co-operation between them in fields which are of common interest. Such areas, without doubt, include the conquest of space, which by its very nature presupposes broad international co-operation. Accordingly, what we are witnessing here is a natural convergence of the principles of coexistence and co-operation.

In the 17 years which have elapsed since the first launching of the first artificial earth satellite, research into space and the conquest of space has achieved really tremendous success. What began as experimental launchings have now turned into what may be called the systematic use of artificial satellites for scientific purposes in the interests of the development of the economies and cultures of countries of the world. As it was figuratively stated by one of the scientists concerned, artificial earth satellites have now put on overalls and have become faithful helpers of mankind in the most varied fields of activity.

Widespread use is now being made of various systems of communication by the aid of satellites. For example, in our own country, in 1968 and 1969, television broadcasting by means of artificial earth satellites covered an area of about half a million square kilometres, while in 1975 the area covered amounted to over 800,000 square kilometres -- in fact, the area has almost doubled. There has been a considerable expansion in the possibilities of space meteorology. Satellites have registered thousands of cyclones and have located many thousands of atmospheric fronts. With the participation and use of meteorological satellites, vessels have been able to choose the best possible courses, which have made it possible to save annually an average of 5 to 7 per cent of the time spent at sea. Thanks to the meteorological satellite Cosmos-114, the eastern sector of the Arctic was opened to navigation one month earlier, and in this way the period of possible navigation of the northern sea route was considerably increased.

(Mr. Piradov, USSR)

In recent years growing attention has been focused on the use of space technology for research into the environment and the natural resources of the earth. In this field the possibilities of space resources, space methods and the economic advantages which they yield are really inexhaustible. The application of space methods is extremely important for geological purposes and for prospecting for minerals. One could go on endlessly talking about the interesting and very promising satellite activities. And of course, what will be even more fascinating will be the further steps which are going to be taken in this field.

In our own country, the people working to achieve these fascinating purposes are admired and respected by everyone. In this regard, Mr. Chairman, I should like to convey to you my deep gratitude on behalf of the delegation of the Soviet Union for the warm words of condolence you expressed on the occasion of the death of Academician Blagonravov, who was one of the pioneers of the conquest of space.

The principal task in research into space in the earth's vicinity remains the study of the upper layers of the atmosphere, the magnetosphere and solar earth links. Geophysical work has gradually come to transcend the framework of space in the earth's vicinity and is entering the realm of interplanetary space. In the next 10 years scientists think that by means of satellites they will be able to get information about practically all the planets in the solar system.

As we can see, cosmic activity is solving many problems of a global character. The global nature of space research, without any doubt, is promoting the development of international scientific and technological co-operation and is in this way bringing peoples closer together and intensifying their feelings of common responsibility for the fate of our planet. Space research is genuinely a work of titanic scope which requires the mobilization of vast material resources and the uniting of the efforts of many teams of scientists and specialists from different countries. The Soviet Union has always viewed co-operation with all interested countries in the work of research into and the conquest of space for peaceful purposes as a matter of great national importance.

(Mr. Piradov, USSR)

Such co-operation, as we know, is increasing with every year. We are witnessing the strengthening and development of space co-operation between the Soviet Union and the socialist countries based upon the sound foundation of the comprehensive programme of socialist economic integration. This is demonstrated by the regular launchings of satellites in the Intercosmos series, by means of which the most important problems of space physics are being studied -- short-wave, x-ray and ultraviolet radiation from the sun, the northern lights, and many other subjects. The scientists of the socialist countries are taking an active part in the construction of these satellites.

Recently, in April, an agreement was concluded between the Soviet Union and the People's Republic of Bulgaria on scientific and technological co-operation in the preparation and use of air space methods of remote sensing of the earth.

On 19 April 1975, the first Indian earth satellite was launched from a Soviet station and was carried into space by a Soviet rocket. The launching was carried out in connexion with the agreement on scientific co-operation between the Indian Organization for Space Research of the Government of the Republic of India and the Academy of Sciences of the Union of Soviet Socialist Republics. The Indian satellite, named after an Indian astronomer and mathematician of the fifth century named Aryabhat, is designed to carry out a broad range of research, and its launching was a demonstration not only of the progress achieved by the scientists of India, but also a demonstration of the strengthening friendship and co-operation between the Soviet Union and India.

(Mr. Piradov, USSR)

Three days after the launching an agreement was signed between the Academy of Sciences of the USSR and the Organization of Space Research of the Government of India on further co-operation in the next few years.

A great contribution to the strengthening of many years of co-operation between the USSR and France was the conclusion of the ARAX project, one of the major Soviet-French experiments concerning magnetically connected points of the earth --- Kerguelen Island in the Indian Ocean and the Archangel region. The ARAX experiment, organized within the framework of co-operation between the National Space Research Centre of France and the Intercosmos Project of the Academy of Sciences of the USSR took place in two stages: in January and February 1975. The French rocket had on board a Soviet electron accelerator and other machinery designed in the USSR and France. Scientists from the USSR also took part in the experiment. Preliminary data on the results of the experiment have shown that it was successfully conducted. Interesting data were obtained and this will, without any doubt, stimulate new ideas. Neither country is in the least inclined to leave things where they are.

Before the opening of our Committee's session on 5 June 1975, the pleasant news was announced that a Soviet rocket had carried into space a small French independent satellite, MAS II; its flight is being followed by earth stations in France.

In speaking of Soviet-French co-operation in space activities, I note, with great sorrow, that today we no longer have Mr. Jean-Félix Charvet among us; he passed away a few months ago. Mr. Charvet who for so many years so worthily and skilfully represented his country, France, in our Committee and in sub-committees, was a great space enthusiast, a man of great heart and a great friend of the Soviet Union. The delegation of the Soviet Union would like to convey to the Government and delegation of France its deepest condolences on the untimely death of Mr. Charvet and to request that the bereaved family be informed that we share its limitless grief.

(Mr. Piradov, USSR)

We should also like to express our deep condolences to the delegation of Italy on the death of Mr. Franco Fiorio, who did so much for the success of the work of our Committee and its organs.

At the beginning of December 1974 a six-day flight of the Soviet spacecraft Soyuz-16 took place. This was carried out in connexion with Soviet preparation for the experimental flight of the Soviet spacecraft Soyuz and the United States Apollo, scheduled for July 1975. Astronauts Anatoli Philiptchenko and Nicolai Rukavishnikov tested in actual space-flight conditions a new docking device, orientation systems, steering systems and life-support systems, modernized to meet the requirements of the forthcoming joint flight.

On 22 May in Moscow, in the Presidium of the Academy of Sciences of the USSR, there was a solemn ceremony in connexion with the signing of the summary document on readiness for the joint Soyuz-Apollo flight. I should like to say something more about this international expedition into space in the earth's vicinity undertaken for the first time in the history of space travel.

The significance of this joint launching can be judged if only from the fact that the International Aviation Federation, created to promote the development of aviation and space technology, recently made changes in its code. Formerly the Federation had registered only national records of individual countries; but recently it decided to register the forthcoming flight, as the greatest world achievement by astronauts who have carried out flight into space in the spacecraft of two or more States. Thus the flight of the Soviet and American spacecraft will become the first international record, a record which properly belongs to the whole of mankind.

The purposes and details of preparations for the forthcoming flight are well known and, therefore, I will not go into any details about them before such a competent audience. The Apollo-Soyuz experiment will, without any doubt, be a tremendous step forward, technically speaking. Of no less significance, however, is the political aspect of the event and its place in the history of the

(Mr. Piradov, USSR)

development of international co-operation. In the words of the famous Soviet astronaut Vladimir Shatalov, who is in charge of training Soviet astronauts and who has undertaken three space flights and was the first to complete the docking of manned spacecraft, the Soyuz-Apollo project

"... is something more than a mere joint space experiment of two countries. It is ... a qualitatively new state in the development of space flights... Putting it figuratively, it is the construction of a space bridge of co-operation in the name of the future and for the good of mankind."

As a lawyer, it is especially pleasant for me to note that as a basis for this experiment tremendous work has been done over the course of three arduous years to produce the agreement between the USSR and the United States of America on co-operation in research into and the use of outer space which was signed on 24 May 1972 in Moscow and which also includes in its provisions very well known lines -- paragraph 4 -- on the need for co-operation in the strengthening of a legal régime for space.

There is no need to say that international co-operation in the conquest of space is most directly linked with the foreign policy of States. The degree of co-operation in this sphere of activity which so vitally affects the interests of States must, of course, depend on the political relations between them. At the same time, broad international co-operation in space research and the use of space produces a favourable effect on the strengthening of trust between States and makes its own contribution to the strengthening and intensification of the process of détente. It is only in conditions of détente that it is possible for genuinely successful development to take place in international scientific and technological co-operation which is of so much use and advantage to all States, regardless of their stage of technical development.

(Mr. Piradov, USSR)

Clear evidence of the favourable influence that détente has in the world and of its effect on relations between States in recent years can be found in the multifarious bilateral and multilateral agreements on the carrying out of joint scientific and technological programmes, exhibitions and experiments in the most varied fields, including of course the area with which we are concerned here: space. Man is ever more boldly and confidently penetrating the hitherto forbidden kingdom of weightlessness.

On 24 May there was launched in the Soviet Union the spacecraft Soyuz-18, piloted by the astronauts Pyotr I. Kilimuk and Vitaly L. Sevastyanov. The purpose of that launch was to carry out further experiments from the orbiting scientific space station Salyut-4. As we know, these experiments began on 12 January 1975 with the joint flight of the space station Salyut-4 and the transport craft Soyuz-17, with astronauts Gubarev and Grechko aboard. The flight of Soyuz-18, which successfully docked with Salyut-4, is, we are informed, proceeding normally and the condition of the astronauts is good. We hope that we shall witness a brilliant conclusion to this important experiment. Just a few hours ago we learned that there has been launched in the Soviet Union a new type of spacecraft, Venus-9, which is now flying towards that mysterious, distant space neighbour, shrouded in clouds.

In the Soviet delegation's opinion, we have every reason to regard the activities of the subsidiary bodies of our Committee during the past year as successful on the whole.

The fourteenth session of the Legal Sub-Committee was a busy and businesslike session, imbued with a spirit of co-operation. Of course, delegations had various differences of view, but that is all part of the natural process of harmonizing the texts of any international agreement. Our delegation understands that very well, and for our part we have always done and shall continue to do everything in our power to bring about sensible compromises leading toward consensus, which of course is a fundamental principle of the work of our Committee and its subsidiary bodies.

(Mr. Piradov, USSR)

We can credit three successes to the fourteenth session of the Legal Committee. First, there is the preliminary preparation of a draft compromise text of two articles concerning the most difficult problem in the draft treaty on the moon: the problem of the moon's natural resources. In our view, those texts have brought us much closer to a consensus on the draft treaty as a whole. Secondly, the first reading of the draft principles on direct television broadcasting was concluded and a single text was prepared. That will make it possible for us to continue our work now not on the basis of the comparative table containing four draft texts, but on the basis of a single text that has been discussed in a preliminary way. Of course, there are still square brackets and alternative formulations in the text, but it is nevertheless a common draft. What we must do now is eliminate from it the brackets and the alternative formulations. Thirdly, there has emerged a broad degree of agreement on certain aspects of the legal regulation of the use of space technology for the study of the earth's natural resources.

All that gives us grounds for hoping that at this session of the Outer Space Committee it will be possible to take further steps towards narrowing the differences or at least achieving a better understanding of our various positions. Naturally, we would prefer to see a narrowing of differences.

The Committee could, of course, recommend to Member States that they carefully study articles X and X bis of the draft treaty on the moon, in order that a compromise may be reached as soon as possible. Our delegation would be prepared to do that work even at this session.

With regard to the principles of direct television broadcasting, it seems to us that this session should be used for a further exchange of views and possibly the preparation of texts, containing alternative formulations, on those principles. If the Committee should establish a working group for that purpose, our delegation would be ready to take part in its work.

(Mr. Piradov, USSR)

On the question of the legal regulation of remote sensing of the earth, we are also prepared to participate in the broadest possible exchange of views in order to make progress towards producing draft principles governing the use of satellites to study the natural resources of the earth.

A useful session was held also by the Scientific and Technical Sub-Committee, which is doing a great deal to make even more effective its work in response to the points that have been made in regard to it.

Member States should be given the opportunity to study in detail the research into the organizational and financial aspects of the work in the field of remote sensing done at the request of this Scientific and Technical Sub-Committee. There are many complicated questions in this regard, and we must, as the saying goes, make haste slowly -- festina lente. The course of the further discussion of organizational, technical and financial aspects of remote sensing and also the extent of possible agreements on these aspects will largely depend on which legal principles will become the basis for this type of space activity. Here I should like to stress the need to strengthen the links between and the co-ordination of the work of the two Sub-Committees. Undoubtedly, early agreement by the Legal Sub-Committee on the political and legal principles governing remote sensing of the natural resources of the earth will enable the Scientific and Technical Sub-Committee to approach more boldly and decisively the practical questions of organizing international co-operation in this promising field. On the other hand, the Scientific and Technical Sub-Committee could assist its legal partner in producing scientific definitions of, for example, such concepts as the natural resources of the earth and information on the earth's natural resources.

It would be extremely useful to have an expert opinion by the Scientific and Technical Sub-Committee on the question of the definition or delimitation of outer space and certain technical aspects of the draft treaty on the moon. It seems to me that we have here many untapped possibilities to which we should give some thought.

(Mr. Piradov, USSR)

In conclusion, our delegation would like once again to express its conviction that this session of the Committee, under your experienced and wise leadership, Mr. Chairman, will write a new, glorious and full page in the logbook of the good ship International Co-operation in the domain of research into the use of outer space for the benefit and in the interest of mankind, peace and social progress.

Mr. RYDBECK (Sweden): Mr. Chairman, in your opening statement you recalled the sad fact that since we met last three eminent colleagues have passed away. The important contributions made to the work of the United Nations in the field of the peaceful uses of outer space by Academician Blagonravov of the USSR, Mr. Charvet of France and Mr. Fiorio of Italy are well known to us all. We all held them in the highest esteem. The Swedish delegation joins with you, Sir, and the members of this Committee in expressing sincere condolences to their Governments and their families.

The annual session of the outer space Committee provides an important opportunity to review events in the field of outer space that have taken place in the past year. The main emphasis should, of course, be on a review of the work of the United Nations, with this Committee, assisted by its sub-bodies, as the focal point. This exercise, which in effect amounts to forward-looking self-criticism, where appropriate, and self-congratulation, where possible, must not be limited to a formal procedure. From time to time it is necessary to make an over-all assessment of the substance of the respective issues dealt with. This will allow us to make clear recommendations to the General Assembly as to the best way of ensuring that our future work will be pursued along lines that will lead to balanced and generally acceptable solutions to the various problems before us. This can be achieved only if appropriate procedural opportunities are allowed for the consideration of all aspects relevant to each issue.

In some cases work on a particular item may be divided between different bodies within this Committee. This is thus the case with remote sensing, which is a priority topic in both sub-committees. In other cases it may be appropriate to concentrate consideration of a certain item in one body. In the final analysis it is, however, quite evident that an over-all multidisciplinary approach is necessary. This approach can and should be assumed by the main committee, which of course must also be free at any given time to avail itself of the possibility of appointing additional sub-bodies ad hoc to carry out specified tasks of this character. Our views on what thus might be called the political importance of any procedural recommendations are, I believe, generally shared. It is in the light of these considerations that I shall address myself to some of the items at present dealt with by the Legal and Scientific and Technical Sub-Committees.

(Mr. Rydbeck, Sweden)

The importance and urgency of the remote sensing item has been stressed by my delegation on numerous occasions and in a number of different forums. My own statement in the First Committee of the General Assembly last year inter alia made this point. The importance of remote sensing is underlined by the great contributions this space application may bring to social and economic development as well as to the solution of problems related to the human environment with obvious implications in particular for the developing countries. With this perspective, at present so topical in the United Nations, and rightly so, we can proceed to seek answers to the dual and closely linked questions of how to promote the optimum international utilization of remote sensing and at the same time how best to give consideration to the concerns of States for the fundamental principle of State sovereignty.

The urgency for the United Nations to arrive at generally agreed answers to these questions is demonstrated by another set of questions, namely: Does the international community wish to have an influence over the future operational use of this space application? Or should remote-sensing technology and the framework in which it operates be allowed to evolve by themselves, governed only by those who at present command the complex technology involved and those whose involvement is particularly great in the current experimental phase of the activity? The answer of this delegation is clear. We do not consider a laissez faire situation desirable. The international community, through our efforts here in the United Nations, should identify its common interests and take positive action to safeguard them. I shall revert to our views as to how this may best be done.

The Swedish delegation finds there is good reason to be satisfied with the work that has been carried out this year on the remote sensing item. The debates in the two Sub-Committees have certainly demonstrated that differences of view exist on some important issues, but they constitute proof in themselves of the sense of importance and urgency felt by a number of delegations besides my own. We also welcome the fact that the reports of both Sub-Committees on remote sensing include some points of agreement, preliminary conclusions or recommendations. Progress is being made and some steps forward have been taken in our efforts to define the optimum utilization of remote sensing, while keeping in mind problems connected with the principle of the sovereignty of States. The wish of the General Assembly that consideration of, inter alia, the legal and organizational aspects

(Mr. Rydbeck, Sweden)

of remote sensing of the earth from space should proceed together has been taken into account. I hope that we can continue with this commendable pattern of work next year also. We would wish to see recommendations to that effect included in our report to the General Assembly.

The international community can achieve nothing in the safeguarding of its interests in the field of remote sensing without fully taking into account the realities involved in this space application. These realities are extraordinarily complicated. Any viable solution must reflect that fact.

For a number of years the Swedish delegation has been advocating what has come to be labelled the organizational approach to such a solution. This does not exclude action on the legal side as well. After thorough studies we have come to the conclusion that certain agreed forms of international co-operation, complemented as necessary with provisions of international law, would offer the most realistic prospects of reaching the goal of optimum utilization of remote-sensing technology. I need hardly add that when I speak of optimum utilization I do so from the perspective of the international community as a whole, especially that of the developing countries.

Up to now the discussions have largely concerned questions related to the choice of an approach as such. The Working Group on Remote Sensing and the Scientific and Technical Sub-Committee have also attempted to list and to some extent to present the details of a number of organizational alternatives for the respective phases of remote-sensing activities.

This year the Scientific and Technical Sub-Committee went beyond a mere listing and presentation of alternatives and started the work of selecting certain of them which may be recommended for implementation. There is still a long way to go, but the fact that we may have entered into a more conclusive stage on the organizational side could very well have positive implications for the important consideration of legal aspects. We base this view on our conviction that meaningful efforts in international law with regard to remote sensing can hardly be undertaken unless a number of technical and organizational parameters have been sufficiently clarified. By way of an example of this interrelationship I may be allowed to recall the ongoing efforts to arrive at an agreed régime for the seabed beyond national jurisdiction, including the setting up of international machinery. In this frontier of human endeavour it has been

(Mr. Rydbeck, Sweden)

agreed that international law alone would be insufficient to safeguard the interests of the international community. Remote sensing also involves challenging inroads into new, complex and potentially most beneficial frontiers of technology. There might very well be some parallels in the nature of solutions, at least where the approach is concerned, to some of the problems involved.

In the coming year the Swedish delegation would wish to see the Scientific and Technical Sub-Committee pursue further its useful analysis of organizational alternatives. We believe that the main emphasis should be on a future international operational remote sensing system or systems. The consideration should cover all phases of the activity, thus including both data collection, conducted in outer space, and data reception, processing, storage and dissemination conducted on the ground. An endorsement by this Committee of the recommendations contained in the report of the Scientific and Technical Sub-Committee for certain studies and practical steps by the Secretariat would greatly increase the prospects for useful work. We hope it will prove possible next year to arrive at further findings of a conclusive character. The work of the Legal Sub-Committee should be kept in mind as the efforts on the organizational side progress in the Scientific and Technical Sub-Committee.

(Mr. Rydbeck, Sweden)

As to the Legal Sub-Committee, we would wish to see it, as well, nursing further its useful analysis of legal concepts related to remote sensing. It is quite clear that there are a number of essential concepts whose legal aspects have not yet been considered. We therefore fully associate ourselves with the concluding recommendation of Working Group III of the Legal Sub-Committee that this work should be continued as a matter of high priority at the next session of the Sub-Committee. It is our hope that it will prove possible next year to arrive at some points of agreement beyond those found this year. It should be clear from what I have already said that we believe that further progress on the legal side of remote sensing is closely related to the clarification of concepts on the organizational side. We therefore fully endorse paragraph 25 of the report of the Scientific and Technical Sub-Committee in commending relevant sections of that report to the Legal Sub-Committee.

This year the issue of direct broadcast satellites has been dealt with only in the Legal Sub-Committee. The results appear in the report of Working Group II of the Legal Sub-Committee. All the relevant principles were considered during the drafting exercise which took place. Even if some points which it had appeared had been agreed upon last year unfortunately were re-opened, it is our opinion that encouraging progress has been made. It seems that we have taken some important steps forward in the direction of fulfilling the mandate set us by the General Assembly in regard to this item. Thus we should now be considerably closer to the day when we might submit to the Assembly a set of agreed "principles governing the use by States of artificial earth satellites for direct television broadcasting with a view to concluding an international agreement or agreements". (General Assembly resolution 2916 (XXVII)).

There is, however, of course, much work that remains to be done. On some of the most central points fundamental differences of view still remain. It is our hope that progress on these points may be achieved in the Legal Sub-Committee next year. The spirit with which delegations approach the task indicates that one necessary element certainly is at hand. The atmosphere that surrounded the efforts of the Sub-Committee in this regard earlier this year was excellent and we would like to look forward for more of the same next year. The most vital element, however, clearly is the political will of States to submit to the real give-and-

(Mr. Rydbeck, Sweden)

take of conclusive negotiations. We do hope that evidence of this will be forthcoming during the future sessions of the Sub-Committee. The Swedish delegation, which is continuing its close and very rewarding co-operation with our Canadian friends, certainly pledges that it will continue to show flexibility in the drafting work that remains to be done.

Before leaving the direct broadcast satellites item, I would wish to recall the relevance of what is being done here in the United Nations to the World Administrative Radio Conference to be conducted by the International Telecommunication Union in early 1977. Even if it should not prove possible next year, during the thirty-first session of the General Assembly, to adopt the governing principles that we are seeking, the efforts in ITU context to elaborate further on the technical framework cannot, in our view, disregard what is more and more clearly establishing itself as a majority view on this item here in the political context of the United Nations. This calls for close co-ordination within our respective administrations. The right hand must know what the left hand is doing.

Remote sensing and direct broadcasting are certainly not the only matters to require our attention in this Committee. As far as the United Nations Programme for Space Applications is concerned, there tends to be a perennial debate on its scope and efficiency. Our support for the Programme should be seen against the background of its importance for the developing countries. The increased focus given to world economic problems in the United Nations, as manifested, inter alia, by the convening of the sixth and seventh special sessions of the General Assembly, may, as we hope, also have some positive effects as to the role of the programme envisaged by many delegations. As far as the mandate and conditions of work of the United Nations Expert on Space Applications is concerned, the views of my delegation may be summarized by two quotations from Article 101 of the United Nations Charter, to which my Government attaches great importance: "The staff shall be appointed by the Secretary-General ..." and "The paramount consideration in the employment of staff and in the determination of the conditions of service shall be the necessity of securing the highest standards of efficiency, competence and integrity".

(Mr. Rydbeck, Sweden)

In this statement I have addressed myself to some of the most important issues before us. In this point in the general debate I shall refrain from any comments as to other matters. My delegation will return to these and other questions under the respective items on our agenda, which we hope can be adequately dealt with within the framework of the excellent work programme which was just adopted at your suggestion.

Mr. MACRAE (United Kingdom): Mr. Chairman, the time has come for the main Committee once again to review the activities of its subsidiary bodies in the year that has elapsed since we last met. As usual, to assist us in this task, we have had the benefit of the lucid tour d'horizon contained in your introductory statement. Given its breadth and scope, there is little left for me to do, except to single out one or two particular developments for special emphasis.

But before doing that, I should like to turn to the world of space at large where there have been a number of developments of interest to this Committee, of which I shall somewhat arbitrarily single out three for mention.

The first is the successful launching of Landsat B. My delegation would like to offer its congratulations, through the representative of the United States, to the National Aeronautical Space Agency. In that connexion we have also noticed with appreciation the intention of NASA to launch Landsat C in 1977.

The work done on the establishment of a maritime satellite system is also of interest to this Committee. We are indebted to IMCO for the report of the first session of the International Conference on the Establishment of an International Maritime System held in London between 23 April and 9 May. Useful progress was made at that meeting, and while the Committee on the Peaceful Uses of Outer Space is not directly involved in the work, it is fitting to recall the impetus given at the early stages by our Working Group on Navigational Satellites.

(Mr. Macrae, United Kingdom)

The third development concerns the decision to set up a European Space Agency. This decision was taken by European Ministers in 1973, and in April of this year they approved the text of the resulting Convention. This completes the transition of ESRO from its original status of a purely scientific research organization to one where, under the deliberately broader title of "space agency", it is fully equipped to pursue integrated European space activities right across the scientific, technological and applications fields.

(Mr. Macrae, United Kingdom)

On behalf of my Government I wish to draw the attention of this Committee to this important step in the emergence of Europe as a source of space programmes and hardware.

As you mentioned, Mr. Chairman, this year has also brought its sadnesses: Academician Blagonravov of the Soviet Union, Mr. Franco Fiorio of Italy, and Mr. Charvet of France have been taken from us and will not in the future be able to make their outstanding contribution to the work of the Committee and its subsidiary bodies, to which they all devoted so much effort in the past. They may have gone, but their contribution will remain.

Turning now to the work of the Legal Sub-Committee, despite its best efforts, the Sub-Committee failed to solve the knotty problems associated with the draft treaty relating to the moon. This was not for want of trying. There was movement; there was progress; but just as the boulders in a stream are sometimes too heavy to be moved by the water flowing past, so it proved impossible to obviate the difficulties. Perhaps next year the current will be stronger.

On the question of elaborating principles governing the use by States of artificial earth satellites for direct television broadcasting, the Sub-Committee made commendable progress. I should like to mention just three factors which, in our view, contributed to this satisfactory state of affairs.

First -- and without wishing to be invidious in any way -- one must pay tribute to Mr. Vellodi of India, Chairman of the Drafting Group, without whose skill, patience and tireless energy it is difficult to believe that a single, albeit bracketed, text could have been achieved. We trust that he will be able to continue his endeavours next-year.

Secondly, there has undoubtedly been a realization, as the work has progressed on this subject, that the earlier original fears -- fears which promoted the rocketing to the surface of this subject in a slightly dramatic way -- are exaggerated. Credit for this, in turn, must be paid to the Working Group on Direct Broadcast Satellites, whose multidisciplinary terms of reference and character have been largely responsible for ensuring that the elaboration of legal principles should take fully into account practical developments in the field of direct television broadcasting by satellite.

(Mr. Macrae, United Kingdom)

In our view, it is important that this state of affairs should continue, and that a gulf should not be allowed to open between the practical and organizational aspects, on the one side, and the legal aspects, on the other. General Assembly resolution 3234 (XXIX) recommended, in operative paragraph 10, that the Outer Space Committee should consider reconvening the Working Group on Direct Broadcast Satellites if and when it deems it useful; and this is a question which the Committee will no doubt wish to consider at this session.

The Legal Sub-Committee also had a useful discussion on the legal implications of remote sensing of the earth from space. We believe that it would have been possible for the report contained in annex 3 of document A/AC.105/147 to have been more informative and to have dealt in somewhat greater detail with the various issues that were raised. Nevertheless, the report will still be useful as a basis for further substantive work next year.

Remote sensing, again, is a subject whose legal aspects cannot be dealt with in vacuo: an understanding of the technical and organizational aspects is an essential prerequisite to the elaboration of any kind of principles on the subject.

To take but one example, some of the draft international instruments that have been submitted on this subject appear to intend to limit their scope to the remote sensing of the natural resources of the earth. But an examination of the physical processes involved quickly shows that the remote sensing technique cannot in itself distinguish between the actual resources and other features of the earth and its environment: the data base is the same. This is a very fundamental point, and perhaps it was this to which the representative of the Soviet Union was alluding just now when he mentioned that there was work for the Scientific and Technical Sub-Committee in elaborating certain points such as this.

My delegation believes that a proper and adequate description of the remote sensing activity to be examined should refer to remote sensing of the earth and its environment, including its natural resources. The subject of remote sensing was also one of the major items dealt with by the Scientific and Technical Sub-Committee at its twelfth session. This is apparent from the section of the report dealing with this subject, and from the number of detailed recommendations made by the Scientific and Technical Sub-Committee.

(Mr. Macrae, United Kingdom)

In the view of my delegation, one of the major contributions of the Sub-Committee at its last meeting was the recognition of the clear distinction which exists between the current pre-operational/experimental phase of remote sensing and any future global/international operational remote sensing system or systems. The recognition of this clear distinction enabled the Sub-Committee to start to decide on the appropriate action needed in the two phases.

My delegation is ready wholeheartedly to endorse all the various recommendations made by the Scientific and Technical Sub-Committee. And, in this connexion, I should like to single out for particular comment paragraphs 27 (iii) and (x) of the report, which deal with the subject of the establishment of national and international regional reception and dissemination facilities. The keynote here is co-operation, and I am sure that there are many useful lessons to be learned, particularly by those thinking of establishing such centres, from those who have already done so. My delegation is very conscious of the importance of this new technology, particularly for developing countries. For some time now, we have been considering the possibility of holding a training seminar on remote sensing in the United Kingdom, and I am happy to be able to announce that the way is now clear for this seminar to take place. It will be held at the University of Reading from 14 July to 13 August 1976, and will be on the applications of remote sensing for natural resources survey, planning and development for the benefit specifically of developing countries. We have been pursuing this question in close consultation with Mr. Murthy, the Expert on Space Applications, and I am happy to pay tribute to his sterling work which has, I am sure, paid good dividends. We approve of his programme for the coming year as outlined to the Scientific and Technical Sub-Committee.

On the remainder of the report of that Sub-Committee, I shall be very brief. This is not because we attach any less importance to it, but because we shall leave over our detailed comments to later, when we are considering the specific subject on our agenda. Thus on the possible United Nations conference on space we shall have more to say later on. But, as I think is clear from the relevant paragraphs of the report, we do not regard the case for holding such a conference as yet proven. No doubt, when more Governments have given their views on the

(Mr. Macrae, United Kingdom)

subject, including the possibility that space applications should be included in the United Nations Conference on Science and Technology proposed for the late seventies, we shall be in a better position to take a final decision.

I should like to end on a personal note. So far as I know, this will be my last appearance in the United Nations Committee on the Peaceful Uses of Outer Space, or its subsidiary bodies. I should therefore like to put on record how much I have enjoyed participating in its work. Some may consider it tangential or even esoteric. I have found it relevant and always absorbing. That we work by consensus can be maddening at times, but I believe that the method of work has its advantages, and that progress, if slower than we should like, is sure. The subjects dealt with by our Committee are becoming increasingly important, and in the years ahead I believe that, all going well, the world will look back with gratitude on what we have done.

But a committee is nothing without its chairman. In so far as we deserve it, at least some of the credit must go to you, Sir, for your untiring efforts to keep up the momentum. And since momentum is a vector, keeping up the momentum includes seeing that we continue to move in the right direction.

(Mr. Macrae, United Kingdom)

The motto of the Royal Air Force of the United Kingdom is: Per ardua ad astra -- "through hard work to the stars". I have always thought that, with a slight addition, that would make a good motto for this Committee. The addition I would propose is: pro bono humanitatis -- "for the benefit of all mankind".

The CHAIRMAN: I thank the representative of the United Kingdom for his kind words. It is with profound regret that we learn that this will probably be the last session of the Committee in which he will co-operate. I am sure that all will share my regrets at seeing Mr. Macrae leave. I trust that the coming two weeks will provide us with an opportunity to co-operate with him in the manner to which we have become accustomed, and this somehow mitigates our sense of loss.

If no other representative wishes to speak in the general debate at this time, I should now like to thank delegations for the kind words addressed to the Chair and adjourn the meeting.

The meeting rose at 5.20 p.m.