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COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

VERBATIM RECORD OF THE ONE HUNDRED AND NINETIETH MEETING

Held at Headquarters, New York,
on Monday, 18 June 1979, at 10.30 a.m.

Chairman: Mr. JANKOWITSCH (Austria)

Organization of work

Adoption of the agenda

Statement by the Chairman

Statement by Mr. Perek, Chief of the Outer Space Affairs Division

General exchange of views *Pakistan*

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79-70410

The meeting was called to order at 11.10 a.m.

ORGANIZATION OF WORK

The CHAIRMAN: Before welcoming you all here today in the customary manner and before we proceed to our business I call on the Secretary of the Committee who has a number of technical announcements to make.

Mr. ROBINSON (Secretary of the Committee): The Secretariat has been requested by the Department of Conference Services to bring to the attention of the Committee several organizational aspects of our meetings arising from the decisions of the General Assembly.

First, and in compliance with General Assembly resolution 32/71, I should like briefly to outline the arrangements which have been made for this year's session.

The duration of the session will be from 18 June to 3 July, that is a total of 12 working days and a total of 24 meetings is envisaged, one each morning and one each afternoon. If necessary, the Committee could hold four further meetings on 5 and 6 July. This room has been allocated to the Committee for its current session. As in the past we will have simultaneous interpretation and verbatim records in English, French, Russian and Spanish, and it has been arranged to have sound recordings made for all meetings.

In view of the potential savings which could be made if such records were dispensed with, the General Assembly in resolutions 32/71, 33/55 and 33/56 requested that all conference bodies evaluate their needs and eliminate such records where they are not absolutely necessary. The results of such consideration are to be reported to the General Assembly at its thirty-fifth session.

A second more general consideration is the importance of utilizing our time and conference resources as effectively as possible. In an effort to increase the efficiency of United Nations meetings, the General Assembly approved resolution 33/55 in which it calls upon all conference bodies to make every effort to conclude their work within scheduled time-frames. The Committee on Conferences will be monitoring our utilization of conference resources in order not only to ensure compliance with that resolution but also in order better to

(Mr. Robinson, Secretary
of the Committee)

assess our future conference needs. What is important in this connexion is not to cancel scheduled meetings unless absolutely necessary and to begin the meetings promptly at 10.30 a.m. and 3 p.m.

A related consideration is the desire which is frequently expressed for informal meetings or working groups. Should we choose to hold such meetings, the necessary conference services, particularly interpretation services, can be provided only at the expense of scheduled meetings of the Committee.

ADOPTION OF THE AGENDA

The CHAIRMAN: I now invite representatives to turn their attention to the provisional agenda for the twenty-second session which is before them in document A/AC.105/L.107. The first item of business is the adoption of the agenda. Does any representative wish to comment on the agenda?

Mr. ALBORNOZ (Ecuador) (interpretation from Spanish): Mr. Chairman, I should first like to say how pleased I am to see you again guiding the work of our Committee.

With respect to the provisional agenda, it would appear to me that there is an omission in item 4 (c). The title of this subparagraph is not complete. In the past when we dealt with this subject in the auxiliary bodies of the Committee and the Sub-Committee we were dealing with the "definition and/or delimitation of outer space and of outer space activities, bearing in mind the issues relating to the geostationary orbit". The phrase beginning with the words "bearing in mind ..." is missing here and I should like that omission to be corrected.

The CHAIRMAN: In this respect I should like to draw the attention of the representative of Ecuador to item 4 (f) which I believe contains the aspects which he has in mind. If he refers to page 4 of the annotated agenda, document A/AC.105/L.107, he will find explanations which in my view cover his point and also deal with the discussion of the legal aspect of the geostationary orbit. Does that satisfy the representative of Ecuador?

Mr. ALBORNOZ (Ecuador) (interpretation from Spanish): Well, item 4 (c) is from the Legal Sub-Committee, where the definition of the item included the words "bearing in mind questions relating to the geostationary orbit". However, item 4 (f) is an item that comes from the Scientific and Technical Sub-Committee. I do not see that there should be any problem in following the practice adopted in the past for item 4 (c).

The CHAIRMAN: I do not think there should be any problem in amending subitem (c) according to the proposal of the representative of Ecuador. If there are no further comments on the agenda, I shall consider the agenda adopted, as orally amended.

The agenda, as amended, was adopted.

STATEMENT BY THE CHAIRMAN

The CHAIRMAN: I use this occasion first of all to welcome you most cordially to the twenty-second session of the Committee on the Peaceful Uses of Outer Space. I am happy to see here many familiar faces, those of delegates who have attended previous sessions of the Committee and also to see the many new persons who have come to strengthen our deliberations.

(The Chairman)

Let me also welcome the observers from organizations which in the past have given a great deal of assistance to the work of this Committee and its subsidiary bodies. I look forward to working with all of you over the forthcoming two and a half weeks, and I hope that together we can make substantial progress in the work before us.

Let me now, for the benefit of all of you, review briefly, as we have done on past occasions, the work of our subsidiary bodies, which have provided a great deal of assistance to the Committee. Credit for this is due, above all, to their Chairmen. I wish to pay tribute here to Mr. Carver of Australia, Chairman of the Scientific and Technical Sub-Committee, and to Mr. Eugeniusz Wyzner of Poland, who again presided over the Legal Sub-Committee.

In accordance with General Assembly resolution 33/16, the Legal Sub-Committee, under the chairmanship of Mr. Wyzner, at its last session gave priority to three principal areas of work: first, to the elaboration of draft principles governing the use by States of artificial earth satellites for direct television broadcasting; secondly, to the consideration of the legal implications of remote sensing of the earth from space, with the aim of formulating draft principles; and, thirdly, to the draft treaty relating to the moon.

In order to speed up work on these subjects, the Sub-Committee resorted to the well-tried method of establishing working groups, and these were presided over by Mr. Haraszti of Hungary, Mr. Elaraby of Egypt and Mr. Winkler of Austria. I wish to pay a tribute to the work of these Chairmen of working groups.

The three working groups completed several readings of the full texts of the three drafts before the Sub-Committee. On remote sensing, for one, a principle-by-principle reading of the text elaborated by the working group last year, a report on which can be found in an annex to the Legal Sub-Committee's report, was undertaken and some additional provisions were incorporated on a tentative basis. Members will find the resulting text in the appendix to annex I of the report of the Sub-Committee.

(The Chairman)

On direct television broadcasting by satellite, the working group made an article-by-article reading of the text elaborated upon last year, and reproduced as annex II to last year's report, as well as of the clean text presented by Canada and Sweden. The Canadian/Swedish draft incorporated the text previously elaborated by the Sub-Committee and the Committee, but added compromise formulas for the unresolved issues. The result of the readings was again inconclusive, I regret to say, and the text that was produced is to be found as appendix A of annex II to this year's report of the Legal Sub-Committee. The Canadian/Swedish clean text is also reproduced as appendix B of annex II to that report.

On the draft moon treaty, members will recall that the representative of Austria presented a consolidated text reflecting the level of compromise that it had been possible to attain at the conclusion of the last session of the Sub-Committee. This text was reproduced as annex I to the report of the Sub-Committee last year, and Governments were called upon to study the possibility of accepting that text as a compromise. Unfortunately, there was no such consensus this year and the working group therefore studied the text article by article.

The resulting text still contains several square brackets and is now reproduced as appendix A to annex III of the Legal Sub-Committee's report this year.

Members will note, therefore, that while a useful exercise of an article-by-article or principle-by-principle reading of these drafts was conducted, this exercise failed to resolve the outstanding issues, which remain essentially the same as last year and which are too well known to the Committee to deserve repetition. Indeed, the end result of the work was not altogether encouraging, and we have to face this fact here quite squarely. It would seem, as was noted by several delegations at the Sub-Committee's final session, that what we in fact did was even take some steps backwards.

(The Chairman)

Although a number of factors contributed to this lack of progress, one problem remains central: the positions of various members on key issues remain virtually the same as the positions taken by them in previous years. In essence, this might have been expected, because the issues which were most easily reconcilable have now been resolved and the hard core issues therefore remain. The latter are the very issues - sometimes just a single issue or subject - that are most complex and that are basic to the fundamental but divergent views of Member States.

The natural consequence of this is that progress by the Sub-Committee on the outstanding issues will take place only as Member States display an active desire and, let me say, a somewhat stronger political will to achieve the necessary compromises. We should take courage from the arduous negotiations that so successfully produced, over 10 years ago now, the Outer Space Treaty and other international agreements, and we should not fail to seek acceptable compromises, in the spirit of our Committee, in order to complete the three important international instruments on which we have been working so hard over the past few years.

In this connexion, the time might even have come for us to reassess our respective positions in order to see whether we cannot really bridge this gap. And if, in all honesty, we find ourselves unable to do so, the time might also have come to devote our energies - at least for the time being - to other important areas of concern which deserve our attention.

Two such items were discussed in the Sub-Committee this year. First, there was a further exchange of views on the question of the definitions and delimitations of outer space, bearing in mind questions relating to the geostationary orbit. The views of Member States on this matter are reflected in section IV of the report of the Sub-Committee. Although the Sub-Committee made no formal recommendations concerning this item, extensive discussions were held; particular attention was focused this year on the proposal by the USSR to delimit

(The Chairman)

air and outer space at an altitude not higher than 100 to 110 kilometres, leaving the area below that to be the subject of negotiation among States, while providing for freedom of transit for space objects in that region. Many members expressed their support for a serious effort on the part of the Sub-Committee to determine a boundary. However, many recognized the arbitrariness of the selection of criteria for such a boundary and recommended that other criteria also be examined. For instance, it was pointed out that satellites have already orbited at 90 kilometres; as a result, discussions were concluded without any formal action being recommended.

(The Chairman)

Secondly, there was an active discussion relating to the use of nuclear power sources in outer space under the item "other matters" and the views of Member States on this question are reflected in section V of the report of the Legal Sub-Committee. A proposal was made that this question should be included as a separate item on the agenda of the Sub-Committee next year. There was no consensus on this proposal and, in view of the diverse opinions expressed during the debate, the Sub-Committee considered that the parent Committee, at the current session should, unless it decided otherwise, resume discussion on the matter, in particular, on the advisability of including on the agenda of the Legal Sub-Committee a separate item dealing with the use of nuclear power sources in outer space.

Accordingly, members might wish to consider what action should be taken in this connexion, as well as determine whether further progress can be made at the current session on the questions relating to the draft treaty on the moon and draft principles on direct television broadcast satellites, as requested by the Legal Sub-Committee. The Chairman will, of course, make himself available for any formal or informal discussions which members may wish to have on these matters.

Looking at these subjects, we should be conscious of the fact that our efforts are being closely monitored by world public opinion. The importance that is increasingly attached to the elaboration of modern principles of space law is demonstrated by the attention given to this subject by bodies which are as vitally representative, as, for instance, the Inter-Parliamentary Union. The sixty-sixth Conference of the Inter-Parliamentary Union, which will be held in Caracas next September, will have before it an important resolution on space law, which was adopted by the recent meeting of the Council and Committees of the Inter-Parliamentary Union held in Prague, Czechoslovakia. We welcome the interest expressed in our work by representative bodies, such as the Inter-Parliamentary Union, as close co-operation between Governments and parliaments is one of the essential prerequisites for the successful further development of space law.

(The Chairman)

I shall turn now briefly and summarily to the work of the Scientific and Technical Sub-Committee. Here again we note that priority was given to questions relating to remote sensing. The Sub-Committee had before it several reports prepared by the Secretariat which helped in its discussions. Particular consideration was given to the classification and dissemination of remote sensing data. The Sub-Committee, however, was not able to agree upon specific recommendations concerning the need for the classification of data or the manner in which such a classification might be made. The Sub-Committee therefore agreed that the Secretariat should be requested to submit a supplemental study for consideration at its next session.

The Sub-Committee further noted the importance of providing adequate training facilities, including on-site training, in all aspects of remote sensing, particularly to the developing countries, in order to enable them to derive the maximum benefit from this new important technology.

The Sub-Committee also considered the co-ordinating role of the United Nations in the area of remote sensing. A report was submitted by the Secretariat as requested concerning a proposed panel of experts, to be established under United Nations auspices, which would co-ordinate international activities. Although this matter has been under consideration for several years in the Sub-Committee, no consensus was reached on the establishment of such a panel this year.

In regard to the United Nations Space Applications Programme, continued vigorous efforts were made within its limited financial resources, which have often been the subject of comments in this Committee, to provide to developing countries increased access to space applications. The principal instruments for the achievement of this aim have remained the educational and training activities which can be carried out under the Programme in order to assist the developing countries in all regions of the world. Among the highlights of the Programme during the course of last year were the training seminars and workshops held in Rome with the co-operation of the Food and Agriculture Organization (FAO), in Manila, in Nairobi with the assistance of the United Nations Environmental Programme (UNEP), in San Jose dos Campos with the assistance of UNESCO, in India again with the assistance of FAO, and in Tokyo with the assistance of the World Meteorological Organization (WMO). Several other such seminars and

(The Chairman)

workshops are planned for the immediate future, two on remote sensing applications in agriculture, to be held in Ibadan, Nigeria, and Damascus, Syria, and another on the use of remote sensing in the area of non-renewable resources, to be held in Argentina later this year. Several other panel meetings and seminars are also scheduled for the coming year, 1980, and these will be held in Costa Rica, Japan, Greece, Upper Volta and the Union of Soviet Socialist Republics. In addition, the United Nations Space Applications Programme administers a number of fellowships offered by Member States in various disciplines relating to space applications. The transfer of technology, which is of such crucial importance to economic and social development in many member countries, will thus receive strong assistance from such efforts.

In concluding my remarks on the Space Applications Programme, I should like to express, on behalf of the Committee, our appreciation to the Expert on Space Applications, Mr. Murthy, for the excellent manner in which he has conducted a very useful programme on space applications, particularly for the member countries of the developing world. We recognize the importance of the work he has accomplished, not only during the last year, but during the past seven years in which he has directed the Space Applications Programme. I make particular note of this today because I have learned, as other members may have done, that Mr. Murthy will retire from United Nations services at the end of this year. I therefore wish to thank Mr. Murthy for the assistance he has given this Committee, particularly for conducting the United Nations Space Applications Programme in such an outstanding manner, and to wish him every success in the future. At the same time, it is with great pleasure that we welcome the news that Mr. Padang, the Secretary of the Scientific and Technical Sub-Committee, will take over as the head of the United Nations Space Applications Programme. I have no doubt that, under his able guidance, the Programme will continue to give useful assistance to the developing countries and, on behalf of the Committee, I wish Mr. Padang every success in his future activities.

I now revert to the work of the Scientific and Technical Sub-Committee. That body also gave consideration to questions relating to space transportation and to

(The Chairman)

the views of Member States on those questions. Those views are reflected in section IV of its report (A/AC.105/238). Similarly, the Committee considered the question of the physical nature and the technical attributes of the geostationary orbit and the views of Member States on this matter can be found in section VI of the report of the Sub-Committee. On both items, the Sub-Committee proposes to continue its consideration at the next session and has requested the Secretariat to prepare a number of reports in order to assist it in its discussions.

(The Chairman)

The Scientific and Technical Sub-Committee also discussed questions relating to the use of nuclear power sources in outer space and for this purpose it established a working group of experts as called for in General Assembly resolution 33/16. The report of the Working Group is reproduced as annex II of the report of the Sub-Committee. As members will note, the Working Group has carried out extensive preliminary work on this question and concluded that nuclear power sources can be used safely in outer space, provided certain safety considerations specified in the report are fully met. It stated that the decision to use nuclear power sources in outer space should be based on technical considerations, provided that safety requirements can be satisfied while mission requirements are fulfilled. The conclusions and recommendations of the Working Group are set out in paragraphs 39 to 44 of its report. It has recommended that arrangements be made for it to meet for another week during the next session of the Scientific and Technical Sub-Committee and that Member States and international agencies be invited to contribute studies on the technical aspects and safety of nuclear power sources, particularly regarding four areas of concern which the Working Group has identified for further consideration. These arrangements seem to augur well for successful completion of the future work of this Working Group. In considering the recommendations of the Working Group we must also bear in mind the relevant recommendation made by the Legal Sub-Committee to which I referred earlier.

Finally, I come to what is perhaps the most important subject considered by the Scientific and Technical Sub-Committee. The Sub-Committee was, as members will recall, particularly active this year in serving in its capacity as the Advisory Committee to the Preparatory Committee of the second United Nations Conference on the Peaceful Uses of Outer Space. Several important recommendations have been submitted in connexion with the convening of this conference, in accordance with General Assembly resolution 33/16, and these can be found in paragraph 55 of the Sub-Committee's report. They relate most specifically to the title of the conference, its agenda, its preparation and organization, including the form it is to take, its date and venue, as well as its bureau and secretariat.

(The Chairman)

I am happy to say that on some of these issues the Sub-Committee was able to agree upon detailed recommendations such as those regarding the subjects to be included in the agenda of the conference. However, some of the key issues relating to the preparation of the conference such as the date, the venue, the form and the secretariat of the conference, were not agreed upon. As a result, this Committee, which is entrusted with the task of acting as the Preparatory Committee under resolution 33/16, is expected to make most of these decisions at the current session. I trust that, with the co-operation of all the members of the Committee, we shall be able to agree expeditiously on at least those questions that must be decided so that the arrangements for the conference can go forward without delay. I am, of course, open to suggestions as to how we may best accomplish this task.

Before concluding the summary of the work of the Scientific and Technical Sub-Committee, I should like to refer members to the recommendations which it made concerning its future work and which are reflected in paragraphs 76 to 82 of its report. Members will note that the Sub-Committee has recommended a slightly different agenda from that which it had last year, and we shall have to consider this question along with that of the agenda of the Legal Sub-Committee. Here members will note that the Legal Sub-Committee has made no recommendations this year concerning its agenda. Similarly, we must decide upon the scheduling of the meetings of the two Sub-Committees, the Working Group and this Committee for next year. So there is a great deal of work to be done.

I hope that I have been able to give the Committee, though in many instances in very brief and succinct form, some of the highlights of the work performed by our subsidiary bodies. Members will note that we have much work ahead of us during the next few days. With the co-operation of members, I have no doubt that we shall be able to accomplish much.

But let us also cast, as we sometimes do, a look at the future work of this Committee. Several thoughts come to mind in this respect, and I should like to share with the Committee some reflections, which I expressed at the recent space affairs event, the Goddard Memorial Symposium, held in Washington, D.C. the purpose of which was to consider new opportunities for international co-operation in the exploration and peaceful use of outer space.

(The Chairman)

The principal consideration is perhaps that the impact of satellite technology upon global politics, which has already become apparent over the past two decades, is now growing at an increasing rate. This becomes evident when one considers the significance of some of the future space ventures which are being discussed today and not by science-fiction writers but by scientists and engineers who have participated in every aspect of space research from its very outset.

We are now seriously considering daily flights to orbit which might serve and supply large technical facilities such as research laboratories, astronomical laboratories, earth resources observatories, manufacturing facilities or communication centres. We are also considering expanding direct-to-home television broadcasting throughout the world; and erecting large structures in space, stabilizing them and moving them about. The possible early demonstration of a large structure that could be part of a large solar experiment is under active consideration. And, finally, we are examining the possibility of setting up large earth-like communities several hundred thousand miles up in space.

For the realization of projects of this magnitude, there can be no doubt that an essential element will be international agreement and co-operation not only in formulating political and legal policies but also in co-ordinating financial and technical assistance. And this is, I believe, where we should focus our attention in looking forward to the future, because it seems that the international community has a right to expect that the men and women who have so brilliantly developed mankind's ability to venture into outer space should also accept the responsibility for developing appropriate means for increasing participation by all nations in future space activities. And, indeed, the vast potential for technological innovation that space technology provides should be used for no less bold innovations in international co-operation than the joint flight of Apollo and Soyuz.

We who represent Governments in this international forum can play an important role in developing and promoting international co-operation in outer space. Like our scientists and engineers, we have to be bold and imaginative. But, like them, we must also be realistic and practical.

(The Chairman)

In taking this role seriously we must of course recognize that no one country or even a group of countries can assure that its interpretation of the peaceful uses of outer space and its benefits is necessarily shared by all. We must also recognize that a way must be found to engage all countries of the world at the very outset of any major new space project, especially if such a project is at all related to practical benefits which can be enjoyed by all.

As these new means of co-ordination are developed, I believe that we can at the same time look with satisfaction on the progress we have made so far. And, indeed, substantial progress has been made. However, this is not the time to become complacent about the state of international space co-operation, as new technological developments are expanding the possibilities of such co-operation every day. And in outer space, as in world politics in general, co-operation can be used successfully to preclude confrontation.

(The Chairman)

The exploration and use of outer space for peaceful purposes will therefore certainly remain an essential concern of efforts to give international co-operation a new quality with broader scope. As the focal point for such efforts, this Committee in the more than 20 years of its existence has succeeded in laying the foundations of an international legal framework as well as of a number of institutions that can serve this purpose.

In the next few weeks - perhaps even during the time that this Committee is assembled for its twenty-second session - this framework for international co-operation that the Committee has created might be called upon to play its part in the mastering of an event linked to the exploration of outer space - the re-entry into the earth's atmosphere of the SKYLAB orbital workshop. Not only the members of this Committee but also international institutions at large have given great attention to this event and to the great variety of efforts made by the launching State to make this as safe as possible.

On the one hand, the history of SKYLAB certainly holds important lessons for the future and provides dramatic illustrations of the present limits on the control that space technology can set over objects launched into outer space. On the other hand, we can certainly take satisfaction from the fact that the measure of uncertainty linked to events of this nature can be reduced by the legal and political framework for space co-operation that this Committee has created.

I therefore express, on behalf of all representatives, our fervent wish that this return may proceed safely with the minimum of damage and with human lives unharmed, our hopes enhanced by the knowledge that we no longer face space contingencies empty-handed and powerless.

Looking realistically at the current state of world affairs, one must recognize that the degree to which confrontation can be replaced by co-operation depends to a large extent on the relations between the major industrial and military Powers. Efforts to strengthen and deepen détente in outer space should therefore be pursued no less energetically than similar efforts for détente here on earth. In order to preserve outer space as a predominantly peaceful environment, every effort should therefore be made to negotiate meaningful space arms control agreements.

(The Chairman)

It is perhaps not inappropriate to remind ourselves of these urgent necessities on the very day on which an important and wide-ranging agreement on the limitation of strategic arms has been signed, in the same room in which this Committee met two years ago in Vienna; and we can take heart from the words of peace that President Brezhnev and President Carter have exchanged on this historic occasion. The fact that we start our tasks on a day so auspicious for world peace will, I hope, augur well for our work and I therefore invite representatives to embark together on a new effort at peaceful co-operation in outer space.

That concludes agenda item 2, "Statement by the Chairman", and I invite representatives to turn their attention once again to the agenda.

The agenda which was adopted at the beginning of this meeting reflects a new pattern of work for the Committee. At the end of the document, on page 7, is a tentative schedule of work. Our common efforts are required to keep to that schedule and make it work. As can be seen from the schedule, we shall continue this morning with a general exchange of views and start off this afternoon with the consideration of agenda item 4, which is made up of several subitems under the title "Applications of space science and technology and activities in outer space". They are principally the various subitems before the two Sub-Committees.

In the following days when items 3, 4 and 5 have been exhausted, the Committee will assume its role as the Preparatory Committee for the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space. As representatives will see, it is proposed that the Committee, in order to perform that task more speedily and more effectively, set up a working group on the Conference which will then report to us under item 6. I, therefore, now invite the Committee to decide on the setting up of such a working group and to appoint a Chairman. As far as the chairmanship is concerned, the Committee and its Sub-Committee have, during past periods of work, profited from the experience of Professor Yash Pal of India who has successfully performed similar tasks. I therefore propose to the Committee that we decide to set up a working group on the Conference under the chairmanship of Professor Yash Pal.

(The Chairman)

If I hear no comment, I shall take it that the Committee agrees to the proposal.

It was so decided.

The CHAIRMAN: So far as the work of the Working Group is concerned, the schedule of work on page 7 of document A/AC.105/L.107 shows that the Working Group will hold its first meeting on Tuesday, 26 June. I would not, however, exclude the possibility that the Working Group, under its able Chairman, might meet somewhat earlier if one or other of the scheduled meetings of the Committee on other items were not held. Representatives will of course bear in mind, in this respect, the stern warning that we received from the Committee Secretary not to squander the valuable and financially expensive time that the Organization has allocated to us.

STATEMENT BY MR. PEREK, CHIEF OF THE OUTER SPACE AFFAIRS DIVISION

The CHAIRMAN: I now call on the Chief of the Outer Space Affairs Division who wishes to make a short statement.

Mr. PEREK (Chief, Outer Space Affairs Division): Permit me to present to the Committee the third report on the activities of the Outer Space Affairs Division in the light of its involvement in activities connected with the function of this Committee and its Sub-Committees. It is submitted in accordance with the request of the Committee made at its nineteenth session.

The main activities of the Outer Space Affairs Division since its report to the Committee last year have included: maintaining the register of objects launched into outer space; implementing the United Nations Space Applications Programme; co-ordinating outer space activities within the United Nations system; providing substantive secretariat services and support for the Committee and its technical subsidiary bodies; acting as secretariat for the preparations for the United Nations Conference on the Exploration and Peaceful Uses of Outer Space; and, finally, preparing for possible future technical activities and agenda items that may be decided on by the Committee on the Peaceful Uses of Outer Space.

(Mr. Perek)

With reference to the register of objects launched into outer space, the announcements of launchings continued to be received regularly, both under the Registration Convention and under General Assembly resolution 1721 B (XVI). Series ST/SG/SER.E, which contains announcements made in conformity with the Registration Convention since it came into effect in 1976, has reached its twentieth issue. The series containing announcements made in conformity with General Assembly resolution 1721 B (XVI), since the first announcement was received in 1962, has reached 381 issues.

The United Nations Space Applications Programme has been directed towards training and education in space communication, remote sensing and meteorology. In the most important area of the application of space technology, namely, remote sensing, training courses have been organized for participants from virtually all parts of the world. The Programme was most favourably commented upon by many delegations during the session of the Scientific and Technical Sub-Committee. The success of the Programme is due to the outstanding work of the United Nations Expert on Space Applications, Mr. Murthy.

(Mr. Perek)

Mr. Chairman, to your expression of appreciation of Mr. Murthy's work I should like to add my personal thanks for his co-operation and friendship during the time we have worked together in the Outer Space Affairs Division.

Next year, if the Committee so decides, the United Nations Space Applications Programme may assume an additional function. It could help developing countries in defining their needs for space applications and assist them in preparing national papers through the regional and topical interregional seminars that may be organized in the context of the United Nations Outer Space Conference. The programme would thus contribute to making Member States' participation in the Outer Space Conference wide and informed.

This difficult task would be in the hands of Mr. A. Padang. His full understanding of the political, legal and technical aspects of space applications and his extensive experience as Secretary of the Scientific and Technical Sub-Committee, as Secretary of inter-agency meetings and as Chief of Section in the Outer Space Affairs Division make him highly qualified to direct the Space Applications Programme when Mr. Murthy leaves the service of the United Nations. Mr. Padang will be assisted by Mr. Felske, Mr. Abiodun and a new member of our staff, Mr. Kharitonov.

I turn now to the co-ordination of outer space activities within the United Nations system. The machinery of the Administrative Committee on Co-ordination (ACC) for inter-agency co-ordination has, as is known, recently been restructured. As a result, various subsidiary bodies working in substantive areas, including the Sub-Committee on Outer Space Activities, have been discontinued, and their work will under the new structure be performed by the Consultative Committee on Substantive Questions (CCSQ), a high-level subsidiary organ of the ACC. The CCSQ, at its first session earlier this year, decided to continue - at least for this year - the practice of holding inter-agency meetings on outer space activities. The next meeting will be held in September at Geneva on the invitation of the World Meteorological Organization (WMO). It will deal with the co-ordination of the inter-agency aspects of the preparatory work for the Outer Space Conference, with the integrated report of the Secretary-General on outer space activities and with all other questions requiring inter-agency co-ordination. As usual, the Outer Space Affairs Division will play an active role in that meeting by preparing its agenda, providing its secretary and taking the initiative wherever necessary.

(Mr. Perek)

In so far as substantive support for the Committee is concerned, the Division continued to provide the secretaries for it, the Scientific and Technical Sub-Committee, its Working Group on Nuclear Power Sources and the Inter-agency Meeting on Outer Space Activities. It also provided the Chairman for the Interdepartmental Working Panel on Space Applications.

Documents were prepared for the sessions of the bodies just mentioned. Those prepared for the Scientific and Technical Sub-Committee are listed in paragraph 7 of its report. Several documents have been prepared for the present session of the Committee and are listed in the annotated agenda. Two documents have been issued more recently, namely, that entitled "List of geostationary space stations by orbital positions", issued by the International Frequency Registration Board, and that entitled "Updating of the texts of the special report on possible broadcasting satellite systems and their relative acceptability". Both documents might also be of interest to the Scientific and Technical Sub-Committee.

The post of the Secretary of the Committee will stay in the experienced hands of Mr. Marvin Robinson, Deputy Chief of the Division. The post of the Secretary of the Scientific and Technical Sub-Committee will, when it is vacated by Mr. Padang, be filled by Mr. N. Jasentuliyana, who is known to many representatives as a highly efficient secretary of the Working Group on Nuclear Power Sources and as one of the editors of the authoritative Compendium on Space Law. Mr. Jasentuliyana will be assisted by Mr. Shibunayev, Miss Wyns and a new member of our staff, Miss Ludwig.

With regard to the secretariat of the Outer Space Conference, last year the Committee endorsed the recommendation of the Scientific and Technical Sub-Committee that that secretariat should be provided by the Outer Space Affairs Division. In preparing for that task, the Division has attempted to outline the possible chief responsibilities of the Conference secretariat. The definition of these responsibilities could, of course, be finalized only with the necessary guidance of the Preparatory Committee and final endorsement by the General Assembly of the recommendations of the Preparatory Committee on the duration, venue and time of the Conference as well as on several organizational matters. The estimated requirements for strengthening the staff of the Division have been incorporated into the statement of financial implications for the Conference that is before this Committee. This document should not be interpreted as an attempt to

(Mr. Perek)

anticipate the total cost of the Conference, but rather as providing the Preparatory Committee with component elements of cost so as to facilitate its decisions. A new estimate of financial implications will be prepared for the General Assembly when it commences discussion of the recommendations of the Preparatory Committee.

In its capacity as the secretariat of the Conference, the Division could, if so directed by the Committee, prepare the draft rules of procedure and other documentation for consideration by the Preparatory Committee. It could also, if the Committee so wishes, issue in due time invitations to member States to prepare national papers and hold preliminary discussions on organizational matters with the host country of the Conference, as decided by the Preparatory Committee and the General Assembly. In this connexion, I should like to inform the Committee that the paper containing the list of meetings and conferences for 1981-1983 should also include the meeting of the Plenipotentiary Conference of the International Telecommunication Union (ITU). The ITU's Administrative Council, in its session last week, decided, subject to formal approval by ITU members, that the Plenipotentiary Conference would be held in Nairobi on Tuesday, 12 October 1982, for a duration of four weeks.

(Mr. Perek)

I come now to possible future activities. Space technology has advanced so rapidly in recent years that large space structures serving a variety of purposes and placed not only in low orbits but also in the geostationary and geosynchronous orbits and in other suitably selected parts or orbits in outer space have come under detailed consideration in several national programmes.

Such projects, if fully realized, will have international implications and of necessity will have to be considered by this Committee and its subsidiary bodies. The Outer Space Affairs Division must be prepared at that time to continue to give Secretariat support to facilitate the task of the Committee in its deliberations. With this in mind, we are planning to increase the expertise of the Outer Space Affairs Division as well as to shift the emphasis of our work to follow the Committee's new areas of interest. As these trends develop, I shall at a future date report to the Committee on the details of such plans.

The CHAIRMAN: I thank the Chief of the Outer Space Affairs Division for his report on the impressive array of the activities of that Division.

GENERAL EXCHANGE OF VIEWS

Mr. MEHMUD (Pakistan): Mr. Chairman, the Pakistan delegation is pleased to have you presiding over the twenty-second session of the Committee, which is distinguished from previous sessions in the sense that during this session itemwise agenda will be considered and the session is expected to be of three weeks duration rather than the customary two weeks, the additional week having been allowed to enable the Committee also to function as the Preparatory Committee for the second United Nations Conference on the Exploration and Peaceful Uses of Outer Space. The Pakistan delegation is confident that, by reason of your personal qualities of leadership and your deep understanding of the work of this Committee, you will be able to steer the work of this session to achieve optimum results.

Before offering its views on the various items of the agenda, the Pakistan delegation would like to place on record its appreciation of the excellent work done by the Scientific and Technical Sub-Committee and the Legal Sub-Committee, whose reports are before us for consideration, at their sixteenth and eighteenth sessions, respectively.

(Mr. Mehmud, Pakistan)

The Chairmen of the two Sub-Committees have contributed significantly to that work through their high level of personal competence and devotion to their assignments.

While we are meeting here, we are all aware of the concern of the world community at large about the impending impact on the ground, some time in July, of what is then left of SKYLAB. Even though the chances that such fragments will indeed cause loss of human life or property are quite remote, the very fact that there is some finite probability of such a thing happening is quite disturbing to the common man. The Pakistan delegation would like to suggest that the Committee may recommend studies aimed at evolving suitable designs, establishing appropriate orbits, incorporating safety devices, say, for changing orbits into higher and safer orbits in the event of emergencies, and a methodology for the better prediction of the decay and re-entry of satellites. Pakistan would co-operate in any international effort to improve the existing network of observing stations in support of this activity.

The aforementioned recommendation of the Pakistan delegation is even more relevant in relation to the satellites equipped with nuclear power sources. In this context one cannot over-emphasize the findings of the Working Group set up this year for the purpose. The Pakistan delegation would like the Working Group to continue to be engaged in this study till such time as it leads to satisfactory working arrangements. It supports the proposal of the Working Group for the implementation of the recommendations of the International Commission on Radiological Protection (ICRP) applicable to populations and the environment in relation to space vehicles utilizing nuclear power sources.

With regard to the work of this Committee as the Preparatory Committee for the second United Nations Conference on the Exploration and Peaceful Uses of Outer Space, the Pakistan delegation commends the fine work done by the Scientific and Technical Sub-Committee in its capacity as the Advisory Committee to the Preparatory Committee. The Pakistan delegation very much hopes that the Conference will contribute to the orderly growth of space activities favourable to the socio-economic advancement of mankind in general and of the inhabitants of the developing countries in particular. As regards the venue of the Conference, Pakistan has, in reply to a questionnaire sent out by the Secretary-General, indicated its support for Vienna, Geneva or Paris. The Pakistan delegation hopes

(Mr. Mehmud, Pakistan)

that a decision on the venue will be reached at the current session of the Committee. As far as the agenda of the Conference is concerned, the Pakistan delegation firmly believes that it should include items of basic concern to the developing countries.

The remote sensing of earth resources by satellites has had a large share in the over-all package of the peaceful applications of space technology realized to date. In some respects the benefits of this technique have been more significant for the developing countries. Pakistan has accorded a high priority to the task of making full use of this technique and has already established facilities for the analysis and interpretation of satellite imagery for earth-resources survey. A scheme for the establishment of a full-fledged remote sensing applications centre at Karachi has recently been approved by the Government of Pakistan. The main feature of that centre would be a digital-computer-assisted image analyser and interpretation equipment costing about US\$1 million. Every effort is being made to ensure that the required number of personnel is trained and the equipment is purchased at the earliest. The new equipment would be specially used for carrying out snow surveys, water-resources surveys, crop identification and inventory studies. Even with the existing equipment, which comprises a density slicer, a colour additive viewer, a Diazo printer, a zoom transferscope, a zoom stereoscope, and so on, the Pakistan Space and Upper Atmosphere Research Committee has already completed a number of very useful studies using LANDSAT data. These studies relate to the morphology of the Indus delta and its adjoining coastal belt of Pakistan, flood-plain mapping and identification of land use and other cultural features. The Pakistan Space Committee has entered into an agreement with the Iranian Remote Sensing Centre to obtain LANDSAT data pertaining to Pakistan, both in the form of computer comparative tapes and imagery, through the Iranian station located at Shahdasht, near Tehran.

(Mr. Mehmud, Pakistan)

The Pakistan delegation feels rather disappointed that the criteria for classification, from the point of view of resolution, of remotely sensed data for dissemination purposes have not yet been arrived at. We very much hope that, in view of the high priority which this application deserves, all the outstanding issues coming in the way of widespread dissemination of remote sensing satellite data will be resolved at the earliest possible time, so that the potential users of the data can establish appropriate analysis and interpretation facilities and start making full use of them.

In an effort to simplify the issue with regard to resolution, the Pakistan delegation would like to support the viewpoint that the remotely sensed primary data received through the LANDSAT series of satellites, or other satellites yielding data of equivalent spatial resolution, should be freely disseminated to the countries desirous of receiving such data.

The Pakistan delegation supports the recommendation of the Sub-Committee calling for further study by the Secretariat of the subject, in particular the new concept of the effective resolution element being developed in the United States and Canada as a spatial figure of merit for all imaging devices, including synthetic aperture radar, to settle the outstanding technical question of the relationship between photographic and scanning-devices resolution.

The Pakistan delegation would like to emphasize also the importance of the co-ordinating role of the United Nations in the area of satellite remote sensing, particularly now when the operational remote sensing satellites are around the corner.

The Committee may also recommend to the General Assembly the initiation of a comprehensive programme aimed at providing technical assistance to the developing countries for the setting up of necessary facilities for the analysis and interpretation of satellite imagery. The Committee may recall that some time back the Economic Commission for Africa recommended the establishment of five regional training centres in Africa: one each in Egypt, Kenya, Nigeria, Upper Volta and Zaire. The Scientific and Technical

(Mr. Mehmud, Pakistan)

Sub-Committee, in its report on its sixteenth session, has called for equitable distribution of the technical assistance which these centres may receive from the United Nations. The Economic and Social Commission for Asia and the Pacific has not so far recommended such training centres in Asia. Pakistan would once again take the opportunity to make the offer that Pakistan's Space Research Committee's Remote Sensing Applications Centre at Karachi would be available to serve as a regional training centre in remote sensing applications.

As in the past, the Pakistan delegation would again like to highlight the importance of strengthening the United Nations Space Applications Programme through an increase in the funds provided for the purpose. With regard to the co-ordination of the space activities within the United Nations agencies, the Pakistan delegation feels that the important work in this area is likely to suffer on account of the dissolution of the Sub-Committee on Outer Space Matters of the Administrative Committee on Co-ordination. Absence of an effective United Nations organization to ensure the necessary co-ordination may prove undesirable.

The Pakistan delegation lends its support to the present efforts in the Legal Sub-Committee to complete work on the draft text of an international convention on principles governing the use by States of artificial earth satellites for direct television broadcasting. In the opinion of this delegation, the international convention should include suitable clauses for ensuring adequate consultations and agreement between States launching such satellites and States where the signals from these satellites could be received.

The work relating to the definition and/or the delimitation of outer space has not progressed much, partly because of the complexity of the problems, even though the matter is directly relevant to the applicability of the 1967 outer space Treaty. With the claims of sovereignty over the relevant segments of the geostationary orbit by the developing countries situated in the equatorial belt, it has become even more important to resolve this outstanding question at an early date. The Pakistan delegation hopes that tangible progress will be made on this question during the current session of the Committee.

(Mr. Mehmud, Pakistan)

During the sixteenth session of the Scientific and Technical Sub-Committee, the delegations of the United States, the Soviet Union and France made arrangements for audio-visual presentations on the progress already achieved and future developments in space transportation systems in their respective countries. The systems covered were the United States space shuttle, the Soviet manned SOYUZ and automated progress modules and the French-European Space Agency SPACELAB and Ariane launcher. We hope that this Committee also will have the benefit of similar audio-visual presentations. The Pakistan delegation fully supports all measures for the further dissemination of information and technical details on space transportation systems being developed by various countries.

A draft treaty relating to the moon and other celestial bodies was proposed by the Austrian delegation at the seventeenth session of the Legal Sub-Committee, but no significant progress could be made during the consideration of this draft at the twenty-first session of the Committee. The matter has been pending for the past six years, and it is very much hoped that the current session of the Committee will be able to make headway in this direction.

The Pakistan delegation would like to repeat its earlier position that there is a strong need for the creation of an international space agency on the same pattern as that of the International Atomic Energy Agency. The international space agency should have an adequate mandate and adequate funds to act as the focal point for regulating the activities of Member States engaged in space research and technology, particularly with a view to ensuring that the facilities and capabilities thus acquired in the process are restricted to peaceful applications alone and to the prevention of an increase in the military use of outer space. The international space agency should also be authorized to arrange the launching of satellites for the Member States for exploration and use of outer space in support of peaceful activity. It is pointed out that at present there is no international machinery for applying any pressure or curbs on Member States to confine their activities to the peaceful domain alone. The United Nations Outer

(Mr. Mehmud, Pakistan)

Space Committee obviously suffers from an inadequacy of mandate and funds to discharge the aforementioned function. It is to be hoped that the current drawbacks in the United Nations international effort in promoting the peaceful uses of outer space will be mitigated, if not altogether eliminated, through the establishment of the international space agency.

The Pakistan delegation has briefly touched upon some of the agenda items before the Committee in order to set forth its viewpoint on those items. We should like to contribute further when the various agenda items are taken up for detailed discussion.

Mr. DE LA PEDRAJA (Mexico) (interpretation from Spanish): First of all, I should like to express my delegation's pleasure, Mr. Chairman, at seeing you guiding our work in such a competent way. I should like to ask for clarification on the documentation. I should like you to ask the Secretariat when the Legal Sub-Committee's report will be ready in Spanish. My delegation listened with interest to the report made by the Secretary, but I believe that for my delegation and other Spanish-speaking delegations it will be difficult to participate in the debate on item 4 if we do not have the relevant documentation.

The CHAIRMAN: I call on the Secretary of the Committee to reply to that point.

Mr. ROBINSON (Secretary of the Committee): Unfortunately, we are not able to answer the specific question as to when the Spanish translation of the Legal Sub-Committee's report will be ready. The entire United Nations documentation service is working under a great deal of pressure and it was because of that that we requested that the English version which was ready be issued at the time it was. The other languages will come as soon as possible. We will check once again with Documents Control and if we get a reply we will make that reply available to the Committee.

The CHAIRMAN: In apologizing to the representative of Mexico because the working document he requires is not yet ready, I must say that I am sure that the Secretariat will make a concerted effort to provide this important documentation during the time we debate this issue so that representatives can refer to the documents in their working languages.

If no other delegation wishes to speak under item 3 or to raise any points of procedure or clarification before adjourning this morning's meeting I should like to ascertain whether there are any delegations which will be able to speak on agenda item 4, "Applications of space science and technology and activities in outer space", subitems (a) to (g), this afternoon. If I do not receive an indication from delegations that speakers will be ready to address this subject we have two possibilities: the regrettable cancellation of the afternoon meeting; or the possibility of Mr. Yash Pal's starting work with his working group this afternoon.

Mr. PAL (India): Mr. Chairman, could I request your indulgence? We will need a little time first to get together with each other informally before we can have a fruitful meeting. I should be very grateful if we were not called upon to meet formally as a working group either today or tomorrow. Afterwards, we will be ready.

The CHAIRMAN: Because delegations are not yet ready to speak, I propose then that we use this afternoon for informal consultations. I know that a great many delegations wish to meet informally and to discuss matters of common interest. I would urge delegations, however, not to make this a regular procedure, but to use subsequent meeting times efficiently, and, recalling the spirit of the appeal made to us by the Secretary of the Committee at the outset of our meeting, to use every available minute of our time. We have a rather lengthy and complex agenda and we certainly do not wish to come under pressure of time.

The meeting rose at 12.40 p.m.