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> INTERNATIONAL CO-OPERATION IN THE PEACEFUL USES OF OUTER SPACE Report of the Committee on the Peaceful Uses of Outer Space Rapporteur: Mr. Geraldo de CARVALHO SILOS (Brazil) CONTENTS

| | | | Paragraphs | Page |
|------|-----------------|---|------------|------|
| I. | INTRODUCTION | • | 1 - 11 . | 2 |
| II. | RECOMMENDATIONS | • | 12 - 18 | 4 |
| III. | REGISTRATION | • | 19 | 5 |

ANNEXES

5

1.

- Annex I Opening statement by the Chairman at the 37th meeting of the Committee on 5 October 1965.
- Annex II Statement by the Secretary of the Committee on the work of the Secretariat at the 37th meeting on 5 October 1965.

• .:

-1 -

12

I. INTRODUCTION

Election of the Chairman

1. At a meeting held on 27 May 1965 at United Nations Headquarters, New York, Mr. Kurt Waldheim (Austria) was unanimously elected Chairman of the Committee on the Peaceful Uses of Outer Space, to succeed Mr. Franz Matsch (Austria), who had informed the Committee of his retirement from the foreign service of his country. The verbatim record of the meeting was circulated as document A/AC.105/PV.36.

Meetings of Sub-Committees

2. The fourth session of the Legal Sub-Committee was convened at United Nations Headquarters, New York, on 20 September 1965. The Sub-Committee, under the chairmanship of Mr. Manfred Lachs (Poland) held sixteen meetings and concluded the work of the session on 1 October. The Sub-Committee's report was circulated as document A/AC.105/29.

3. The Scientific and Technical Sub-Committee did not meet in 1965, the Committee having agreed, as stated in the interim report of the Bureau of 21 April 1965 (A/AC.105/27), that the Sub-Committee's fourth session would be held in 1966.

Seventh session of the Committee

4. The Committee held its seventh session at United Nations Headquarters, New York, from 5 to 8 October 1965 under the chairmanship of Mr. Kurt Waldheim (Austria). Mr. Mihail Haseganu (Romania) served as Vice-Chairman and Mr. Geraldo de Carvalho Silos (Brazil) as Rapporteur.

5. The Committee held six meetings, the records of which were circulated as documents A/AC.105/PV.37-42.

6. At its 37th meeting on 5 October, the Committee adopted the following agenda:

- 1. Statement by the Chairman.
- 2. General debate.
- 3. International sounding rocket facilities.
- 4. Reports prepared by the International Telecommunication Union (E/4037/Add.l) and the World Meteorological Organization (A/AC.105/L.19).

- 5. Report of the Legal Sub-Committee on the work of its fourth session (A/AC.105/29).
- 6. Report of the Committee to the General Assembly.

In addition to the documents listed in the agenda the following documents were submitted for the information of the Committee: document A/AC.105/28, information on facilities for education and training in basic subjects related to the peaceful uses of outer space; document A/AC.105/L.17, reproducing paragraphs 37-43 of the second report (E/4026) of the Advisory Committee on the Application of Science and Technology to Development; and document A/AC.105/L.20, reproducing paragraphs 67-72 of the thirty-first report (E/4029) of the Advisory Committee on Co-ordination.

7. The opening statement by the Chairman is reproduced in annex I. A statement on the work of the Secretariat made by the Secretary of the Committee is reproduced in annex II.

8. In the course of the general debate statements were made by the representatives of Argentina, Australia, Canada, Czechoslovakia, France, Hungary, Italy, Japan, Poland, Romania, the Union of Soviet Socialist Republics, the United Arab Republic, the United Kingdom of Great Britain and Northern Ireland and the United States of America. The statements are reproduced in the verbatim records of the 37th, 38th, 39th and 40th meetings.

9. Statements were also made by the representatives of the World Meteorological Organization (WMO), the International Civil Aviation Organization (ICAO) and the Committee on Space Research (COSPAR), who attended the session as observers. The statements are reproduced in the verbatim records of the 38th, 39th and 40th meetings. A statement (A/AC.105/L.21) by the representative of the International Atomic Energy Agency (IAEA) was circulated at the 41st meeting. 10. The Committee considered the remaining items on its agenda at its 40th and 41st meetings. The Committee adcpted its report to the General Assembly at its 42nd meeting, on 8 October.

11. The recommendations and decisions of the Committee are set out below under the appropriate headings.

II. RECOMMENDATIONS

12. The Committee reaffirms the recommendations contained in its report (A/5785) to the nineteenth session of the General Assembly, under the headings of exchange of information, encouragement of international programmes, education and training, international sounding rocket facilities and general.

International sounding rocket facilities

13. The Committee further reaffirms its recommendation, contained in its report to the nineteenth session of the General Assembly, that United Nations sponsorship be granted to India for the continuing operation of the Thumba Equatorial Rocket Launching Station (TERLS).

Reports prepared by the International Telecommunication Union and the World Meteorological Organization

14. The Committee notes with appreciation the progress reports prepared by the International Telecommunication Union (E/4037) and the World Meteorological Organization (A/AC.105/L.19) and requests the two organizations to furnish further progress reports to the Committee in 1966.

Meeting of the Working Group

15. The Committee recognizes the need for convening, on 18 January 1966, the Working Group established to examine the desirability, organization and objectives of an international conference or meeting to be held in 1967 on the exploration and peaceful uses of outer space, as well as to make recommendations on the question relating to the participation in the said meeting of the appropriate international organizations.

16. The Committee requests its subordinate bodies, if they so desire, to lend any assistance which may be feasible after the Working Group has completed its consideration of the question before it.

A/6042 English Page 5

Report of the Legal Sub-Committee on the work of its fourth session

17. The Legal Sub-Committee continued its consideration of the draft agreements on assistance to and return of astronauts and space craft and on liability for damage caused by objects launched into outer space. It proceeded with the discussion of certain provisions of the draft agreement on assistance and return and further clarification of positions were made. Although there was rapprochement of views on some points, substantial difference of views remained on other points and was recorded. As to the draft agreement on liability, revised drafts were submitted by the United States and Hungary, respectively, during the session. A useful exchange of views took place on a number of issues and agreements of a preliminary character were reached on some of them. An opinion was also expressed that the Sub-Committee should immediately start working out an international agreement containing legal principles governing activities of States in the exploration and use of outer space.

18. The Committee takes note of the report of the Legal Sub-Committee on the work of its fourth session. It expresses the hope that the Sub-Committee will be able in the near future to overcome the existing difficulties and make more progress. The Committee recommends that the Legal Sub-Committee should resume its work in the first part of 1966.

III. REGISTRATION

19. In conformity with the provisions of paragraphs 1 and 2 of General Assembly resolution 1721 B (XVI), the Committee has continued to receive information from launching States concerning objects launched into outer space. Information has been furnished by Italy, the USSR and the United States. The information received since the publication of the Committee's last report has been placed in the public registry maintained by the Secretary-General in accordance with resolution 1721 B (XVI) and has been circulated in documents A/AC.105/INF.83-112.

9

ANNEX I

Opening statement by the Chairman, made at the 37th meeting of the Committee on 5 October 1965

In opening the seventh session of the Committee on the Peaceful Uses of Outer Space, I should like to recall some of the major events and achievements in the exploration of outer space which we have witnessed since the sixth session of this Committee was held in November 1964.

The past year has shown in a most convincing manner that man has achieved remarkable progress in the art of applying the law of the universe governing the revolution of celestial bodies. The improved technique of launching man-made satellites in orbit around our planet, and the exceptional degree of control over space-craft pursuing their lonely path to the moon and through the solar system to other planets, are sufficient proof that man will ultimately be capable of mastering the manifold technical difficulties with which he is confronted in the adverse conditions of outer space.

In this connexion, I should like to congratulate both the United States and the Soviet Union for the outstanding success achieved in the exploration of the planet Mars and the lunar surface. We heard this morning about the most recent Soviet rocket launching to the moon, and I should like to take this opportunity to express to the delegation of the Soviet Union my sincere wishes for the successful outcome of this exciting undertaking.

Most important and fascinating, however, is the fact that the exploration of outer space will not be limited to the electronic registration and collection of data, but that man himself has seized control over the instruments at his disposal and has asserted his place and demonstrated his superiority over the marvellous but soulless machines which project him into outer space.

The year 1965 represents a milestone in this development, and I should like to express my admiration for the genius and courage of all those men who, through their pioneering deeds, have freed man from the bonds of gravity. The spectacular "space walk" of Soviet Air Force officer Leonov and United States Army Major White are a first but decisive step towards the future role of man in outer space.

Indeed, the whole world, both large and small nations, follow the development and progress in the exploration of outer space with increasing interest. Whilst we are legitimately proud of these achievements, everyone of us is also full of

1

hope that the great prospects opening up before mankind as a result of man's entry into outer space will serve the common interest of all nations and will be used for peaceful purposes only.

We must, therefore, endeavour to strengthen this hope through extensive international co-operation, and we must make sure that we adopt in time adequate solutions to the numerous political and legal aspects of the exploration of outer space.

I would, therefore, appeal to the members of this Committee, and in particular to the major space Powers, that this Committee should reassert and strengthen its role and strive in a spirit of compromise to achieve as wide an agreement as possible, in order to enable the Committee to carry out without further delay the mandate entrusted to it.

Distinguished members of the Committee, during the sixth session, which was held from 26 October to 6 November 1964, you have adopted a report addressed to the nineteenth session of the General Assembly, but which, due to circumstances well known to all of us, will now be submitted to the twentieth session of the General Assembly.

This report contains a number of encouraging and constructive elements on the exchange of information, on education and training, and recommends in particular the encouragement of international programmes and the granting of United Nations sponsorship to India for the continuing operation of the Thumba International Equatorial Sounding Rocket Facility. If the recommendations of the Committee, contained in its report, document A/5785, are - as we all hope - endorsed by the General Assembly, we will have opened the gates to increased international co-operation in the scientific and technical field of outer space research. The successful operation of the Thumba space centre in India has already demonstrated that a pooling of the efforts of a number of countries is not only beneficial to the advance of science, but also a significant symbol of effective international collaboration. The Committee should, therefore, lend its continued support to international projects which might be brought to its attention.

As the Scientific and Technical Sub-Committee has not met since June 1964, the only item of a scientific and technical aspect on our agenda is the consideration of the progress reports of the International Telecommunication Union and the World Meteorological Organization. These reports give us an interesting picture of the extent to which artificial satellites are already used in the broad

field of telecommunications and meteorological observations. These fields, which represent a direct and most convincing example of the tremendous possibilities of the peaceful uses of outer space, will already in the near future play an important role in the economic life of many countries.

In this connexion, I should like to draw the attention of the members of this Committee to pages 21 and 22 of the report of the International Telecommunication Union giving a description of the communication satellite "Molnia I", which was launched by the Soviet Union in April 1965. I should further like to refer to the advancement of atmospheric sciences and their application in the light of developments in outer space, as outlined in the report of the World Meteorological Organization, where it is indicated that the World Meteorological Centres in Moscow and Washington are now in full operation and that other centres are likely to be established in Australia and in the tropical zones of the globe.

The World Meteorological Organization, relying for the time being mainly on the TIROS operational satellite system of the United States, as described in annex D of the report, is thus advancing successfully towards the concept of the "World Weather Watch", which holds great promise not only for technically advanced countries, but also to a large extent for the agricultural economy of the developing countries, in particular those located in the tropical areas.

In addition to the aforementioned reports, the members of the Committee have received document A/AC.105/28, which was prepared by the Secretariat and which contains Information on Facilities for Education and Training in Basic Subjects related to the Peaceful Uses of Outer Space. The Secretariat has also circulated, at the request of the officers of the Committee and for the information of its members, excerpts from the second report of the Advisory Committee on the Application of Science and Technology to Development (E/4026), and of the thirty-first report of the Administrative Committee on Co-ordination (E/4029). These excerpts are contained in documents A/AC.105/L.17 and A/AC.105/L.20.

In connexion with these and other questions which might be of interest to the members of the Committee, I would like to suggest that the Secretary of the Committee, Mr. Abdel-Ghani, be given an opportunity of addressing the members of the Committee at its present meeting.

I would now comment briefly on the work of the fourth session of the Legal Sub-Committee, which was held in New York from 20 September to 1 October 1965.

The Chair regrets that the Legal Sub-Committee, despite the efforts of its members, and especially of its able Chairman, Professor Lachs, was not in a position to reach agreement on the draft convention on assistance to and return of astronauts and space vehicles. With regard to the draft convention on liability for damage caused by objects launched into outer space, one has to take into account the legal complexity of the matter, and it is therefore only fair to state that the Sub-Committee did useful work in clarifying the positions involved and narrowing the gaps with regard to a number of important principles.

Moreover, in its draft report the Legal Sub-Committee recommends that the two draft agreements before it should be considered further at its next session. May I, therefore, in thanking Professor Lachs for his untiring efforts and his skillful guidance in this important field of action, express the hope that the Legal Sub-Committee will, at its next session, be in a position to overcome the remaining obstacles so that it may successfully carry out the mandate contained in General Assembly resolution 1963 (XVIII).

As you are all aware, the Committee, at its last session, in November 1964, set up a working group, composed of all the members of this Committee, to examine the desirability, organization and objectives of an international conference or meeting, to be held in 1967, on the **exploration** and peaceful uses of outer space, as well as to make recommendations on the question of participation in the said meeting of the appropriate international organization. It was agreed that the working group should report to the Committee at its next session.

In this connexion, I should like to draw the attention of the Committee to my letter of 20 July 1965, by which I informed all members of the Committee that there appeared to be agreement among the members that the working group should meet between 7 and 10 September 1965. In a subsequent letter, dated 3 September 1965, I informed the members of the Committee that it had proved impossible to hold the meeting of the working group, as previously suggested, between 7 and 10 September 1965.

In the meantime, I have been conducting, with the assistance of the officers of this Committee, extensive consultations with all members of the Committee, with the aim of finding a new date for the working group. While there seems to be general agreement that the working group should meet as soon as possible, a great number of members of the Committee have expressed concern that the heavy agenda of

ä 3

the twentieth session of the General Assembly would prevent them from carrying out, in the careful and detailed manner which the question deserves, the complex mandate given to the working group. In view of these circumstances, the Chair has no better solution to offer than that he continue his efforts in order to reach a consensus on the date of the meeting of the working group.

In conclusion, I should like to recall the agreement reached at the first session of this Committee in March 1962 - an agreement observed at subsequent sessions - that it will be the aim of all members of the Committee to conduct the Committee's work in such a way that it will be able to reach agreement in its work without need for voting. I trust that the members of the Committee will agree to pursue this aim at our present session.

ANNEX II

Statement on the work of the Secretariat by the Secretary of the Cormittee, made at the 37th meeting on 5 Cotober 1965

Since the adoption of the Committee's report to the nineteenth session of the General Assembly, the Secretariat has been able to make reasonable progress in carrying out the functions entrusted to it by the Committee. In a brief statement of this kind, I will touch upon the more important points of interest to the Committee.

First, under the heading of "Exchange of information", the Committee will recall that in its report (A/5785) to the nineteenth session of the General Assembly, paragraph 34 I called for the preparation and up-dating of reviews on national and international co-operative space activities, on activities and resources of the United Nations, the specialized agencies, and other competent international organizations and bodies relating to the peaceful uses of outer space, on bibliographies and abstracting services, and, finally, on education and training.

Work on these reviews is proceeding satisfactorily. With the continued co-operation of Member States, as well as of the specialized agencies and various interested and regional organizations, we anticipate no difficulty in producing the reviews in time for the requested deadline in 1966. In conformity with paragraph 13 B l of the Committee's report, Member States will shortly be requested to furnish the Secretary-General with information on new developments and achievements for inclusion in the review of national and international co-operative space activities, which is due to be presented to the Scientific and Technical Sub-Committee at its forthcoming session next year. The Secretariat intends to issue a new edition of the review (A/AC.105/26) which was published a few months ago under the title "Space Activities and Resources: Review of United Nations, International and National Programmes".

I might also mention the steps taken to implement the Committee's request, in paragraph 13 D l, for a report on existing material aimed at ensuring popular understanding of the purposes and potentialities of space activities, and the means by which new material, if needed, might be prepared and made available. As a first

step, we have undertaken a survey of existing material, to which, so far, over forty countries and organizations have contributed bibliographic information or suggestions. The survey will provide a basis for the Secretary-General's recommendations to the Scientific and Technical Sub-Committee.

In a related recommendation, in paragraph 13 D 2, the Committee requested the Secretary-General to discuss with COSPAR the status of COSPAR's preparation of technical manuals and consider how the publication and distribution of this technical literature might be encouraged. COSPAR has prepared two manuals, one on the optical tracking of satellites and the other on the establishment of a rocket-launching facility. These are two topics of particular interest to the developing countries and others embarking on small-scale space programmes. COSPAR has already put forward the manual on optical tracking of satellites; it was prefaced by Dr. Martyn, Chairman of the Scientific and Technical Sub-Committee. The Secretariat was able to provide financial assistance to COSPAR for the publication and distribution of the two manuals.

In this regard it gives the Secretariat pleasure to state that we are in constant contact with COSPAR, and during its last session in Buenos Aires I had the valuable opportunity of discussing with the President of COSPAR, Professor Roy, and with many of his collaborators, several of the questions of common interest to the Committee and COSPAR.

Still under the heading of information, I may mention the calendar of space conferences which the Secretariat is now issuing on an experimental basis and also the steady development of the Outer Space Affairs Group Library. The most recent calendar was circulated to delegations last month, and soon they will receive a list of the Library's holdings of material on space research and technology. With regard to registration, the space Powers continue to furnish the Secretary-General with information regarding their launchings and the information has been placed in the public registry maintained by the Secretary-General and has been widely circulated to Member States and circles concerned with the matter.

Before concluding this part, I wish to mention that the two informal papers prepared and circulated by the Outer Space Affairs Group to members of the Committee - the monthly survey of space events and the bimonthly digest of space studies - have been well received by many Committee members, with comments and suggestions, and this encourages us to continue to try to improve this project.

Turning to the question of encouragement of international programmes, the Secretariat has, in conformity with the Committee's recommendations of 1964, begun preliminary consultations on navigation satellites with the two specialized agencies concerned, the Inter-Governmental Maritime Consultative Organization and the International Civil Aviation Organization. At the same time, the competent authorities of some of the countries represented in this Committee have conducted studies on the question, and we think that it is appropriate - if there is no objection - to contact these authorities and acquire the available information on their studies. The assembled background material and the acquired information will be put before the Scientific and Technical Sub-Committee when it takes up the matter.

In the field of education and training, the Secretariat has continued to compile material from governmental and other reliable sources. A document (A/AC.105/28) was issued recently reproducing the information furnished to date by Member States regarding facilities for education and training, including the availability of scholarships and fellowships. Further documents of this nature will be issued on a continuing basis, as requested by the Committee. In addition we shall provide, as requested by the Committee, the Scientific and Technical Sub-Committee at its next session with ample information on the subject of facilities for education and training in basic subjects related to the peaceful uses of outer space. The report to be presented to the Sub-Committee will attempt to provide the Sub-Committee with a complete picture of training opportunities, including those available through the specialized agencies.

Dealing with the work of the Secretariat in this field, I think it is necessary to bring to the attention of the Committee that the Administrative Committee on Co-ordination has attached farticular importance to the question of education and training in the space field. In its meeting early last summer, under the chairmanship of the Secretary-General and with the participation of the heads of specialized agencies, the Committee stated the following in paragraph 72 of its report, extracts of which have been circulated in document A/AC.105/L.20:

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> "The question of training is one of the most important facing the United Nations family in the space field and is of direct, practical concern to many countries, particularly in areas such as communications where space technology is already being applied on an increasing scale. What is envisaged by ACC is a relatively modest programme designed to support and, where appropriate, supplement existing programmes. If resources permitted, funds might, for example, be provided to assist in the provision of fellowships, travel to seminars, the organization of training courses, etc. It was noted that the Outer Space Committee had called for assistance to increase the value of TERLS, the internationally sponsored sounding rocket launching site in India, as a training centre. In this connexion, it was noted that the establishment of meteorological sounding rocket programmes, which require only very simple launching facilities, could provide a good way for countries to enter the space field."

In accordance with the above-mentioned statement, the Outer Space Affairs Group submitted to the specialized agencies concerned a plan for a twofold but modest programme as it was envisaged by ACC. On one hand, it is proposed to establish a joint fellowship fund under the aegis of the Outer Space Committee to assist scientists and technicians from the developing countries to obtain a broad education and training in the space field. On the other hand, it is proposed that a pilot training summer course be organized for the benefit of trainees from one of the regions aspiring to take part in space technology. These suggestions are now under consideration by the specialized agencies concerned, and it is gratifying that they have met with a favourable response from the World Meteorological Organization.

However, it is necessary to state here that, in making these suggestions, care has been taken to base them on the principle that training activities under the auspices of the Outer Space Committee should be so designed as to avoid duplication of programmes at present being carried out on a bilateral basis or by individual agencies or international institutes. In this regard, we benefited to a great extent from the discussions we had with several competent people, especially in COSPAR, and its Working Group I, which is concerned with the question of education and training.

In conclusion, I wish to state that in our work we have benefited greatly from consultations with our colleagues in the specialized agencies, through the meeting of the Inter-Agency Working Group on outer space matters, which comprises representatives of the United Nations Secretariat and the specialized agencies

concerned, as well as through the constant contact with their liaison officers in the Headquarters.

I should like also to place on record an appreciation of the co-operation we have received from COSFAR, with which we established a close and effective working relationship, and also with other international and regional organizations concerned with outer space matters. In its recent meeting in Athens, last month I found the International Astronautical Federation ready to co-operate with the United Nations Secretariat in areas of common interest to the Committee and the Federation, especially in the field of popular understanding of space matters.

Last but not least, under the enlightened guidance of you, Mr. Chairman, and the guidance of the distinguished Vice-Chairman and Rapporteur of the Committee, and with the assistance of the members of the Committee, and that of the eminent scientists who compose the Scientific and Technical Sub-Committee, my colleagues and myself find that their part, modest as it is, in promoting international co-operation in the peaceful uses of outer space a pleasant and rewarding job.
