

United Nations  
**GENERAL  
ASSEMBLY**

THIRTY-SECOND SESSION  
Official Records \*

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FIRST COMMITTEE  
41st meeting  
held on  
Tuesday, 22 November 1977  
at 10.30 a.m.  
New York

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VERBATIM RECORD OF THE 41st MEETING

Chairman: Mr. BOATEN (Ghana)

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77-73243

Distr. GENERAL  
A/C.1/32/PV.41  
23 November 1977

ENGLISH

The meeting was called to order at 10.55 a.m.

AGENDA ITEMS 35 and 36 (continued)

INTERNATIONAL CO-OPERATION IN THE PEACEFUL USES OF OUTER SPACE: REPORT OF THE COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE (A/32/20; A/C.1/32/L.39)  
PREPARATION OF AN INTERNATIONAL CONVENTION ON PRINCIPLES GOVERNING THE USE BY STATES OF ARTIFICIAL EARTH SATELLITES FOR DIRECT TELEVISION BROADCASTING: REPORT OF THE COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE (A/32/20; A/C.1/32/L.39)

Mr. MOGHTADERI (Iran): This year has been one of progress for the Committee on the Peaceful Uses of Outer Space, and it has been a year to celebrate anniversaries of past events.

When we met in Vienna at the kind invitation of the Government of Austria through the representative of Austria, Peter Jankowitsch, we were celebrating two very significant events. First, the twentieth anniversary of the launching of "Sputniks", the historic achievement of the Union of Soviet Socialist Republics, provided us with the realization of how far the world had advanced in two decades. Events which we now view as almost routine were distant dreams for most of the scientific community prior to 1957.

The second anniversary commemorates the 10 years of the entry into force of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. In the 10 years since the Treaty entered into force, that primary evidence of the peaceful intentions of the great majority of States has remained intact and inviolate. Because of this Treaty the developments in the science of space have been undertaken in an environment of competition, but not conflict. We have seen a great proliferation of satellites and assorted space objects, but we have seen them launched for peaceful scientific purposes.

(Mr. Moghtaderi, Iran)

There is yet another special anniversary in which we take special pleasure. For 10 years the Legal Sub-Committee has enjoyed the skilful and dedicated leadership of Mr. Eugeniusz Wyzner of Poland. Much of the substantial success of the Legal Sub-Committee is due to his patience and perseverance.

The work of the Legal Sub-Committee is, of course, contained in the report of the Committee on the Peaceful Uses of Outer Space which we have submitted as the official record of our Committee's activities (A/32/20). There are certain elements of that report which are deserving of special note.

The progress made in the elaboration of principles governing the use by States of artificial satellites for direct television broadcasting is especially significant. This application of the use of space holds great promise for the extension of educational services and other essential elements of visual communication to remote and often almost inaccessible areas of the world. Because of the potential value of direct television broadcasting, an international agreement to govern and facilitate these broadcasts is of paramount importance. The formulation of a draft preamble and a tentative text of the principle of "consultation and agreements between States" indicates genuine progress.

That has been a difficult area, because of the necessity to respect the principle of State sovereignty and non-interference in the internal affairs of States. Prior agreements between the broadcasting and the receiving States ensures proper respect for that principle.

We of Iran anticipate a great potential for this type of programme. The ability to reach outlying and sparsely populated areas will enable an acceleration in our efforts to allow all the people of Iran to enjoy access to the benefits of modern society.

(Mr. Moghtaderi, Iran)

Of equal promise is the science of remote sensing. We have heard repeatedly of the expanding catalogue of possible activities, many of which are being pursued. As the Legal Sub-Committee continues to address the legal implications of surveying the earth's resources by remote sensing satellites, as requested under General Assembly resolution 31/8, we sense the urgency for the formulation and acceptance of principles to govern and facilitate the operations of remote sensing. In a world of limited resources, the ability to catalogue, manage and protect both renewable and non-renewable resources is a valuable tool. It is gratifying to observe the inclusion and encouragement of developing nations in the activities of remote sensing. Their economic viability is often heavily dependent upon the management of natural resources, water, grasslands, timber, animal herds and sea life.

(Mr. Moghtaderi, Iran)

In Iran we are proceeding with plans and programmes for the establishment of a centre to receive and process remotely sensed primary data. When this centre near Shahdasht-Karaj is fully operational, it will have the capacity to analyse primary data for use in land-use planning, pollution monitoring and cartography, as well as inventories of resources. The electronic data-processing facility which will be associated with the tracking and receiving station at Shahdasht-Karaj will allow the processing of high-density digital tapes into corrected computer-compatible tapes and into laser-beam-produced images.

It is a source of gratification to this delegation that Dr. Firouz Shahrakhi, Scientific Adviser to the Iranian delegation, has undertaken, on behalf of Mr. Murtzly, Expert on Space Applications, to consult with a number of Governments which anticipate activities in remote-sensing and other satellite-related areas. As Iran advances in this complex science we endorse the principle of making the advantages of satellite remote sensing available to other nations by the sharing of training, participation in conferences and demonstrations.

Regarding the legal implications of remote sensing, the Legal Sub-Committee achieved great progress in formulating six additional draft principles relating to remote sensing. We look forward to the final consensus on the principles governing both the application of satellite remote sensing and the application of direct television broadcasting from satellites.

While we are constant in our concern that the sovereignty of States be fully respected in both applications, we are confident that the members of the Outer Space Committee will proceed with the diligence and circumspection required.

There are many questions which remain in an area of great importance, the draft treaty relating to the moon. In expression of Iran's belief that the moon is the heritage of all mankind, we have stated our support for the principle of the natural resources of the moon belonging to all the world's people. The distribution and utilization of those resources should, therefore, be for the benefit of all mankind.

(Mr. Moghtaderi, Iran)

As we intensify our consideration of the scientific and technical aspects of space, and as we continue our search for consensus on principles governing activities in space, the role of the United Nations is emerging as one of ever-increasing importance.

Ms. BENTON (United States of America): The year 1977 was one of significant accomplishments in the exploration of outer space, and productive work by the United Nations Committee on the Peaceful Uses of Outer Space. The United States has regularly reported major developments in our national and international space programmes to the Outer Space Committee and its sub-committees, and I should like to draw the attention of the General Assembly to some of the highlights of our ongoing and planned space programmes.

We are pleased to report that the Space Transportation System, including the reusable NASA Space Shuttle Orbiter and the Spacelab being developed by the European Space Agency (ESA), is progressing satisfactorily. The first Shuttle Orbiter successfully completed its approach and landing tests in October.

By mid-year 1979, an engineering model of Spacelab, consisting of two laboratory modules and two experiment-carrying pallets, should arrive from Europe. The first flight unit is scheduled to arrive in Florida by the end of September 1979. The Shuttle Orbiter itself will become operational by mid-1980. An early operational flight will launch the first Spacelab in a joint NASA/ESA mission in December 1980. Experimenters from 16 nations have been selected to fly their experiments as contributions to the first Spacelab payload.

In the applications area, I should like to summarize briefly our experimental remote-sensing activities. Data obtained by NASA's Landsat satellites have supported research projects sponsored by agencies in some 50 countries and international organizations. In addition, users from about 100 countries have purchased Landsat data from the EROS Data Center at Sioux Falls, South Dakota.

Landsat ground stations now operate in Canada, Brazil, and Italy, receiving data directly from United States satellites. An additional station is under construction in Iran and others are planned in Argentina,

(Ms. Benton, United States)

Chile, and Sweden. We expect that Japan, Australia, India and others may be joining the Landsat ground station system in the near future.

Since the Landsat satellites now in orbit are nearing the end of their operational lifetimes, NASA plans to launch the third Landsat satellite, Landsat C, in February 1978. Funding has been approved for a fourth Landsat satellite in the early 1980s. These new satellites should assure continuous availability of remote-sensing data.

The first remote-sensing satellite dedicated to oceanographic studies, Seasat-A, is scheduled to be launched by NASA in May 1978. Seasat will gather data on changes in ocean topography due to tides, currents, gravitational variations, et cetera; the extent and movement of sea ice; ocean dynamics; and weather.

Our applications programme also includes ongoing experiments using communications satellites. The Applied Technology Satellite series of satellites continues to demonstrate new and different kinds of communications services. These include television broadcasting to small receivers and mobile communications to ships, aircraft and vehicles, and hand-held equipment. Experiments are also being conducted in the communications area in a joint project with Canada using the Communications Technology Satellite.

We are making good progress towards the testing and demonstration of a search and rescue satellite system for the location and assistance of distressed aircraft and ships. The project has been planned with Canada, and the Soviet Union has agreed to participate. A proposal has also been received from France to join in this project. Wide international use of such a search and rescue system could be anticipated after the initial experimental phase.

We are especially pleased to report three important new international co-operative space agreements which were reached in recent weeks.

Officials in the Federal Republic of Germany have entered into an agreement with NASA to take an important part in a Jupiter Orbiter Probe mission, scheduled for early 1982. This mission is designed to conduct the most detailed scientific investigation yet of Jupiter, its environment and its moons, including the first direct measurements of the planet's atmosphere.

Moreover, NASA and the Netherlands Agency for Aerospace Programmes have entered into an agreement for a co-operative Infrared Astronomical Satellite project. The United Kingdom also will participate in this programme. Scheduled for launching in 1981, this mission will conduct the first astronomical survey of the entire sky at infrared wavelengths undetectable by earth-based telescopes because of the obscuring effects of the atmosphere.

Finally, the European Space Agency has signed an agreement with NASA for substantial contributions to and participation in an extended Space Telescope programme. In 1983 a 2.4-metre space telescope will be carried into earth orbit by NASA's Space Shuttle and will be used to study the universe with much higher resolution than has ever been possible before. With the new Space Telescope, astronomers should be able to observe some 350 times more volume of space than can be seen now with the largest ground-based telescope.

During 1977, the Viking mission to Mars entered a phase that will permit scientific observations through an entire Martian year of 25 months, thereby observing important seasonal changes. Viking 1 orbiter cameras took detailed pictures of Mars's tiny moon, Phobos, from a distance of 48 kilometres.



(Ms. Benton, United States)

A high-energy astrophysics research programme began in 1977 with the launching of an observatory, the High Energy Astronomical Observatory-1, to perform a detailed X-ray survey of the celestial sphere. This is the first of a series of three planned spacecraft to do high-energy studies.

NASA also launched two Voyager spacecraft this past summer for an extensive survey of the outer planets. Over a ten-year period they may visit as many as 15 major celestial bodies, including Jupiter, Saturn, several moons of both planets and possibly Uranus. The great distances across which radio signals between the earth and Voyagers must travel and the long lifetime of the mission require that the spacecraft be able to care for themselves and perform long, detailed and complex scientific surveys without continual commanding from the ground.

The International Sun Earth Explorers, consisting of a so-called "mother-daughter" double spacecraft on a single rocket, were launched in October in a co-operative programme between NASA and the European Space Agency. The project's objective is to gain a better understanding of how the sun interacts with the earth's near space environment. Circling the earth for three years or more, the instrument-laden spacecraft are expected to provide detailed data on how solar wind particles behave in the boundaries between earth space and interplanetary space.

I should now like to comment briefly on the work of the Outer Space Committee and its Sub-Committees during 1977.

We wish to commend and endorse the work of the Outer Space Committee, as well as that of the Scientific and Technical and the Legal Sub-Committees, as reflected in their respective reports. The Sub-Committees have done particularly valuable work this year in carrying out their mandates from the parent Committee and from the General Assembly. I do not intend to discuss here all the issues covered in these reports, as our views are on record in the debates which led to their adoption. However, we should like to make a few remarks in regard to the principal topics discussed.

The Legal Sub-Committee has continued consideration of several complex and difficult issues. Negotiation of a draft treaty dealing with the moon and other celestial bodies has continued in earnest. An important question

(Ms. Benton, United States)

in that regard concerns the exploration and exploitation of the natural resources of such bodies. We believe that efforts towards resolving this question should be continued in 1978.

The elaboration of principles guiding the direct broadcasting of television by satellite has evoked considerable interest. In this connexion, I should like to note that, while we share in general a positive evaluation of the work on direct television broadcast satellites that is under way in the Legal Sub-Committee, we think it would be wrong to underestimate the difficulties which must be resolved in order to reach agreement on a mutually acceptable and comprehensive set of guidelines for this new technology. It is well known that many States wish to include in the guidelines a principle that would require prior consent before broadcasting begins. Others have joined with the United States in opposing any such requirement as incompatible with the fundamental concept of free and unfettered exchange of information and ideas between countries, peoples and individuals. Still others have proposed formulations of a possible principle that would seek to bridge the gap between these two positions. The gap is wide, and it will require the earnest efforts of all members of the Outer Space Committee to overcome it. The process of exploring and understanding the complex matters involved in this subject should be continued in the Legal Sub-Committee.

Remote sensing of the natural environment of the earth from space is proving to be one of the most beneficial practical applications of space technology. In addition to its usefulness in the location and management of natural resources, cartographic applications and land use planning, remote sensing holds promise in the fields of environmental monitoring and in disaster prediction and research. The United States has been exploring a full range of these applications and is particularly pleased to note the increasing interest of many countries in deriving benefits from this technology. We look forward to a productive discussion in the Outer Space Committee of the application of remote sensing to the detection and monitoring of pollution.

(Ms. Benton, United States)

The era of space-based remote sensing of the earth's natural environment began in 1972 with the launching of the first of the United States Landsat satellites. As I have noted earlier, more than five years' success has been realized in this experimental programme, involving two satellites now in orbit, a third to be launched early next year and a fourth at present being engineered. In view of the benefits already derived from Landsat and the great interest in the subject on the part of the international community, some form of operational remote sensing undoubtedly will be established in the future. It will be very important for the Outer Space Committee to continue its detailed consideration of technical and organizational aspects of remote sensing to encourage obtaining the greatest possible benefits from this technology. The Legal Sub-Committee should continue its development of draft principles guiding remote sensing activities taking due account of the wide range of potential configurations involving Governments and non-governmental entities.

A number of countries have expressed an interest in holding a United Nations conference on outer space matters oriented towards development needs. The United States is particularly aware of the value of science and technology to development and strongly supports the planned 1979 United Nations Conference on Science and Technology for Development. Countries will have an opportunity at that Conference to focus on the aspects of science and technology they feel are most important for their development. Thus, the Conference should provide countries an opportunity to consider all areas of science and technology and in that way assist them in reaching decisions on the best allocation and use of their financial, material and human resources. A special United Nations space conference could be designed on the basis of needs shown by the 1979 Conference.

Before closing, I should like to express our appreciation to Mr. Perek and his associates in the Outer Space Division of the United Nations Secretariat. We all know that their continuous efforts behind the scenes are indispensable to the successful work of the Outer Space Committee and its sub-committees.

(Ms. Benton, United States)

Finally we wish to express our sincere thanks to Mr. Jankowitsch, Chairman of the Outer Space Committee, and to the Austrian delegation for their dedication to the goals and the work of our Committee. We look forward to our continuing productive association with them and with these Committees in the years ahead.

Mr. SMID (Czechoslovakia): The Czechoslovak Socialist Republic has from the very beginning of the space era actively encouraged broad international co-operation in the peaceful exploration and use of outer space because for Czechoslovakia that is an extension of a consistent struggle for peace and peaceful co-operation among States with different social systems. That position of principle was reiterated by the delegation of Czechoslovakia at the twentieth session of the United Nations Committee on the Peaceful Uses of Outer Space, held in Vienna, which undoubtedly will go down in the history of that Committee's activities as a new stage in co-operation among States in the field of peaceful research and uses of outer space.

Having acquainted itself with the report of the Committee to the thirty-second session of the United Nations General Assembly, my delegation holds the view that the report objectively reflects the current state of the deliberations, both in the Committee and in its Scientific and Technical Sub-Committee and its Legal Sub-Committee.

One of the most important results of the Committee's twentieth session, in the view of my delegation, is the draft resolution submitted on the occasion of the tenth anniversary of the 1967 Treaty on the peaceful uses of outer space because the outer space Treaty must by right be regarded as the primary source of international outer space law and has become an expression of fruitful co-operation among representatives of different legal systems.

The adoption of the above-mentioned resolution will also be an expression of the fruitful international co-operation in the Committee during the 20 years of its activities in the scientific and technical as well as in the legal fields. The results achieved by the Committee's work show clearly that it is playing a leading role in the scientific and technical fields and in the legal regulation of the activities of States in outer space research and that it is a centre of international co-operation in the peaceful research and use of outer space.

The creative and businesslike atmosphere in the Committee depends upon the over-all international climate, the ever-expanding international détente and the positive co-operation between the Soviet Union and the United States, as attested by the agreement of 18 May 1977 between those two great space Powers on co-operation in the research and use of outer space.

(Mr. Smid, Czechoslovakia)

My delegation is of the view that the moon Treaty, the text of which is ready, in substance should be finalized and adopted in the shortest possible time since it represents an international instrument of utmost importance. To finalize it but a small step is required, provided there is sufficient endeavour and goodwill on the part of all interested countries. The problem which remains to be solved is the regulation of the questions pertaining to the legal status of the moon's natural resources. The Czechoslovak delegation supports the view of the Soviet Union that for the time being the questions of the legal status of these resources could be mentioned, for example in an optional protocol to the Treaty and, after a certain lapse of time, depending on the progress achieved in the exploration of the moon and its resources, the provisions of that protocol could be re-examined with a view to completing and complementing them and elaborating generally binding principles. Consideration of the moon Treaty should remain a priority task in the work of the Legal Sub-Committee in the next year and, in the meantime, a more thorough examination should be undertaken of the possibilities of a compromise solution, for instance along the lines of the Soviet proposal.

Czechoslovakia holds the position that the Legal Sub-Committee should speedily approach the elaboration of a complete text of principles on direct broadcasts. The nine principles worked out before the sixteenth session of the Legal Sub-Committee, together with the texts of the principle on consultations and agreements among States and the draft preamble from the sixteenth session, could constitute a well-rounded proposal for the thirty-second session of the General Assembly, provided the Legal Sub-Committee succeeds in making certain formulations more precise.

The results achieved by the Legal Sub-Committee on the question of remote sensing of the earth from space are also satisfactory. My delegation believes, however, that the relatively considerable progress of the work on principles to govern remote sensing of the earth from space does not necessarily represent a solution of the basic problems, which include the regulation of the legal régime for the dissemination and reporting of the results of remote sensing,

(Mr. Smid, Czechoslovakia)

as well as the question of the consent by States to have their territories photographed. With regard to remote sensing, Czechoslovakia is of the opinion that, in view of the existence of several remote sensing systems, there is an apparent need for the co-ordinating role of the United Nations in remote sensing, which applies also to the current pre-operational phase as a preparation for the operational phase.

On the question of a possible United Nations conference on outer space, my delegation holds the position that the task force, the establishment of which has been recommended to the Scientific and Technical Sub-Committee, should consider the purpose and desirability of holding such a conference. In this respect my delegation agrees with the formulation contained in the preliminary report.

The participation of Czechoslovak scientists in outer space research within the INTERCOSMOS programme of socialist countries has a long-standing tradition. Czechoslovakia participated in all flight projects undertaken so far within the INTERCOSMOS programme by having a share in the preparation of the scientific or telemetric devices involved and in the processing of the information gathered by the satellites.

(Mr. Smid, Czechoslovakia)

In 1976 Czechoslovakia participated in the programme of the INTERCOSMOS 15 technological satellite and the INTERCOSMOS 16 sun-orbiting satellite. Czechoslovakia has traditionally specialized in such scientific fields as the study of the solar spectrum, radiobiology, biomedicine and, recently, also the remote sensing of the earth from space. Furthermore, in 1976 Czechoslovakia took part in the programme of the PROGNOZ 5 satellite and the VERTIKAL 4 high altitude rocket. Czechoslovakia co-operates in the construction of some of the INTERCOSMOS laser radars, one of which is operating in the Arab Republic of Egypt and another at a station in La Paz, Bolivia, while a third has been installed in India.

The possibilities provided to Czechoslovak scientists by the Soviet Union within the INTERCOSMOS project and on the basis of a multilateral inter-Governmental agreement concluded among the States participants in INTERCOSMOS, enable Czechoslovak research institutions to make use of up-to-date methods in outer space research, specifically in astronomy, geophysics, experimental physics, geodesy and meteorology and, to a certain extent, also in biology and medicine.

Within the INTERCOSMOS programme the first Czechoslovak astronauts are preparing at the Gagarin Astronautical Centre in the USSR to take part in space projects during the course of the programme.

In the 20 years of its existence the United Nations Committee on the Peaceful Uses of Outer Space has undoubtedly accomplished a great deal of work and several important questions are on the point of being solved. But a number of new questions arising along with scientific and technological progress are awaiting solution. By way of an example, one could mention a series of problems related to the study and protection of the environment and the preparation for the utilization of solar energy. That preparation requires the timely solution of a number of questions dealing, for instance, with orbital locations of satellites equipped with large light collectors and their possible interference with other types of satellites also using the geostationary orbit. We should not forget the need to find a solution to the various timely problems of space technology. There are a number of subjects concerned with the physics of the sun-earth relationship, the study of which is feasible only by means of space technology, particularly the impact of that relationship on meteorology and climate, certain biological



(Mr. Smid, Czechoslovakia)

processes, the propagation of radio signals and, generally, a number of processes in the magnetosphere and ionosphere, as well as in the lower strata of the earth's atmosphere or directly on the surface of the earth. These are very complicated problems soluble only by broad co-operation not only among countries but also among international organizations.

In recent years national scientific institutions engaged in intensive scientific research of the peaceful uses of outer space have been undertaking experiments related to the receiving and sending of signals in an effort to detect signs of the existence of extraterrestrial civilizations. Experiments on the establishment of radio contacts with extraterrestrial civilizations are being conducted, for instance, by scientific institutions in the USSR - the Radio-physical Institute at Gorki and the Astrophysical Observatory in Byurkan; in the United States - the National Aeronautics and Space Administration (NASA), the Radio-astronautical Observatory at Green Bank and others; and in Canada - the Radio-astronomical Centre in Algonquin Park, as well as by scientific institutions in some other countries, as shown in the informative study of the Secretariat in document A/AC.105/206. The question of extraterrestrial civilizations is studied, for instance, by the International Academy of Astronautics (IAA) Communication with Extraterrestrial Intelligence (CETI) Committee, on which Czechoslovakia is represented by Professor Pešek who is a specialist of world-wide renown on the subject. The question of extraterrestrial civilizations is the subject of work by many scientists studying outer space.

The question arises whether the time is ripe for the United Nations to exert efforts towards a future regulation of this problem within the framework of the Organization with a view to ensuring that the signals or other messages are, in a certain way, representative of humanity should they be intercepted by an extraterrestrial civilization. In the near future we see broad possibilities for the activities of our Committee in this field. Our comments on this subject were contained in the statements delivered by Czechoslovak representatives at the fourteenth session of the Scientific and Technical Sub-Committee and at the twentieth session of the Committee on the Peaceful Uses of Outer Space. It might be of use, in our opinion, to establish, through the intermediary of the Secretariat,

(Mr. Smid, Czechoslovakia)

contacts with organizations that have already been dealing with this question. The Committee should include in its agenda a study of the available information and the results achieved and also include this question in the programme of its future activities.

Mr. IMAM (Kuwait): The debate on this item this year has special significance as it takes place on the twentieth anniversary of man's first venture into outer space and the tenth anniversary of the entry into force of the Treaty on the Peaceful Uses of Outer Space. My delegation would like to take this opportunity to pay tribute to one of the most important contributors to space technology, Mr. Wernher von Braun, who died recently. A lot has been achieved during the past two decades, which is reflected in the growing interest among United Nations Members in the work of the Committee on the Peaceful Uses of Outer Space.

(Mr. ~~Mr.~~, Kuwait)

Continuing developments in space technology require parallel developments in the law of outer space. In this sphere, however, the law has been dragging its feet behind the rapid advances in space technology. The work of the Committee on the Peaceful Uses of Outer Space has been rather slow, particularly owing to the consensus rule. This rule is valuable in the early stages of deliberations since it facilitates the discussion of concepts in greater depth and ensures that all viewpoints are taken into consideration. However, at a later stage in the Committee's work the consensus rule leads to repetitions and stereotyped arguments which ultimately culminate in a stalemate.

A case in point is the work on the drafting of a treaty relating to the moon. The disagreement over the legal status of the natural resources of the moon still persists. My delegation believes that the treaty should apply not only to the moon but to other celestial bodies as well. Some seem sceptical as to whether lunar or planetary material could ever yield economic profit in view of the expense of inter-planetary travel. However, the reluctance of industrially advanced States to accept the concept of the common heritage of mankind is in itself tangible proof that lunar and planetary material will yield economic profit. It is pertinent to note that article III of the outer-space Treaty already promulgates the principle of the non-appropriation of outer space and the celestial bodies. My delegation would like to reiterate its position that the draft treaty on the moon must unequivocally declare that the moon and other celestial bodies and their natural resources are the common heritage of mankind, a principle that has already been agreed upon with respect to the international sea-bed area and its resources. This concept of the common heritage of mankind implies that such natural resources cannot be commercially exploited except in accordance with an agreed international régime. This concept, which has so far prevented a water-space race may equally spare us the evils of an air-space race.

Another question that has been pending for some time in the Committee on the Peaceful Uses of Outer Space relates to the use by States of artificial satellites for direct television broadcasting. My delegation supports the general principle, enunciated by many delegations from developing countries, that television broadcasts aimed at a foreign country should not be permitted

(Mr. Imam, Kuwait)

except with the specific consent of that country. Such an approach is consistent with the principle of the sovereignty of States and the principle of non-intervention in the internal affairs of other States. It also upholds the established right of States to regulate their communications systems and to decide upon the type of broadcasting services required by them.

Some controversy has arisen with regard to the question of data obtained through the remote sensing of the earth by satellites. My delegation believes that meteorological and environmental data obtained through remote-sensing activities should be made freely available. On the other hand, data concerning a State's natural resources should not be disseminated without the consent of the sensed State. At the same time we look forward with expectation to the conclusion of the special study that is being conducted by the Secretariat on the appropriate bases for the classification of data. We are not in any sense opposed to remote-sensing activities carried out in the interests of pure scientific research, which should be completely free and have no obstacles placed in its path. There is, however, no escape from the fact that remote sensing is at present the exclusive preserve of a few States which through their control of the remote-sensing systems have access to data and information the unregulated use of which can be detrimental to other States.

The benefits to be obtained from activities in outer space become more apparent each day. Most of the developing countries have so far had no access to space technology. At the moment, the United Nations Space Applications Programme is the main channel for providing assistance and bringing about a greater awareness of the potential of remote sensing. We should make sure that the benefits of remote sensing are shared by all countries. The establishment of an international agency to take care of remote sensing may be the most effective means of involving the developing countries in remote-sensing activities.

Remote sensing of the earth by satellite can be used as a practical tool for the assessment and management of a State's physical resources. Through it, a State can identify its arable land and explore new potentials for land cultivation and for its land being damaged by erosion. Remote sensing can be used as a shield to protect against pollution which threatens the sea's living resources. Remote sensing has already proved effective in weather information

(Mr. Imam, Kuwait)

systems and as a means of mitigating the rigours of natural disasters. It would seem that there is no limit to the practical applications of space techniques and that this new technology is capable of altering the lives of all the peoples of the earth.

Remote sensing may also have negative aspects implicit in the abuse of data pertaining to the sensed State. No one can contest the right of the sensed State to receive all data gathered over its territory. We also subscribe to the principle that such data should not be made available to third parties without the consent of the sensed State.

I shall now turn to the question of the definition and delimitation of outer space and outer-space activities. This topic has not received sufficient attention in the past because many have thought it premature. The urgency of the matter was, however, revealed recently when eight equatorial States claimed sovereign rights over the space above their territory up to an altitude of 35,000 kilometres. In this context my delegation would like to express its appreciation for the background document prepared by the Secretariat (A/AC.105/C.2/7/Add.1), which gives an excellent digest of existing approaches to the problem.

The need to formulate a definition arises primarily in connexion with the sphere of application of space law. The sphere of application of the instruments of space law has not been defined. It is certainly necessary to establish a dividing line between space law and air law. While national sovereignty is the primary concept in air law, the absence of national appropriation and equality of opportunity in space exploration are the main themes in space law.

My delegation believes that the definition and delimitation of outer space should take place in stages. In the first stage it would be necessary to specify all elements pertaining to the definition and delimitation of outer space. These would include the technical aspects. This might start from the premise that there are two or more zones. The two zones could be the atmosphere and outer space governed by the respective legal régimes. There might be a third

(Mr. Imam, Kuwait)

zone, which could serve as a transition between the two zones, which would have a special régime of its own. Linked with that would be the question of demarcation and the reasoning behind it, and whether it should be based on the maximum altitude of aircraft, the lowest perigree of an orbiting satellite and similar technical considerations which are by their very nature ephemeral and can be overtaken by advances in technology. An arbitrary dividing line or lines may also be suggested.

Another element would include demarcation based upon the earth's gravitational effects. In this context one could discuss the question of geostationary orbit and the assertion of sovereign rights in outer space. Another element that might be broached is the question of innocent passage through air space and whether it could be reconciled with the sovereignty of the State or States concerned.

Once these and other elements are embodied in the form of a questionnaire and circulated to Governments for their remarks, suggestions and observations, a large fund of information will be obtained concerning these issues as well as the political and other implications of the question of the definition and delimitation of outer space. The replies of Governments could then be submitted to the Committee on the Peaceful Uses of Outer Space for final consideration.

In conclusion, my delegation could agree to the establishment of a small task force or an ad hoc working group of Member States to consider all factors involved in the specific objectives, organizational aspects and financial implications of a projected United Nations conference on outer-space matters.

The CHAIRMAN: I would remind representatives that the deadline for the closure of the list of speakers in the general debate is 5 p.m. today. I would urge representatives who wish to speak to inscribe their names before then.

The meeting rose at 11.50 a.m.