UNITED NATIONS CONGRESS ON PUBLIC INTERNATIONAL LAW

ON THE OCCASION OF THE FIFTIETH ANNIVERSARY OF THE UNITED NATIONS

13-17 March 1995
United Nations Headquarters, New York

Proceedings of

The Round Table on "Space Law: The Role of the United Nations"

Organized in cooperation with the
International Institute of Space Law

UNITED NATIONS CONGRESS ON PUBLIC INTERNATIONAL LAW

ROUND TABLE "SPACE LAW: THE ROLE OF THE UNITED NATIONS"

OPENING REMARKS[1]

by
N. Jasentuliyana
(Deputy to the Director-General,
United Nations Office at Vienna; and,
Director, Office for Outer Space Affairs)

As the initiator of this Round Table on Space Law, it gives me great pleasure to introduce this morning's discussions. The focus of this United Nations 50th Anniversary Congress is on the codification, progressive development and implementation of public international law, so it is fitting that we highlight the development of international space law by the United Nations, one of its greatest successes in this field.

Unlike other areas, such as the law of the sea and aviation law, where international law-making and co-operation were slow to follow the new dimensions of human activity, the very first steps in the exploration of outer space were soon followed by the development of new norms of international law and co-operation, so as to bring the uses of this new technology in this new frontier within the bounds of international law.

The link between law and technology was quickly bridged by an imaginative and innovative effort at international legislation within the United Nations, which has laid down, through the Committee on the Peaceful Uses of Outer Space, a framework of multilateral treaties and sets of principles for the regulation of space activities. A distinctive body of principles and rules governing the exploration and use of outer space has emerged, sufficient for it to be considered a separate branch of international law, just like air law and maritime law.

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[1] Opening remarks were delivered on behalf of Mr. N. Jasentuliyana by the Moderator of the Round Table.

In recent years, however, this space-law making process has slowed down. The development of various factors have made it a very complex matter. For example, operational areas that now require regulation have become technical in nature. Space technology has proliferated, due, in part, to the realization that space exploitation and use benefit not only a small minority of states, but the entire family of nations. There has been a dramatic shift from the emphasis on the use of space for civilian, as opposed to military, uses that has been caused, in part, by the end of the cold war. There has been a tremendous world-wide increase of private entities using space for their own commercial ends. The developing countries are becoming increasingly involved in the use and exploitation of outer space. The resulting overall effect of having a greater number of nations participating in the law-making process of the United Nations - some of whom have to take cognizance of the large financial stakes of their private entities involved in space activities - often on very technical issues, has led to the process of law-making becoming tedious and time-consuming, with long, drawn-out negotiations and debates.

The time has perhaps come to look for new and innovative ways in space-law making to take into account these factors. For instance, the international community might want to begin to earnestly look at the formulation - with the strong support of scientists and other experts - for subjects of a more technical nature, of easily amendable technical standards and recommended practices for space activities. This will not only allow the law to keep pace with rapidly changing technology, but it will also fill gaps and weaknesses in, and supplement, the existing space law treaties and sets of principles. The United Nations, through COPUOS, could follow the example set by international organizations such as the Montreal-based International Civil Aviation Organization (ICAO) and adopt international standards and practices for topics such as space debris, the outer space and Earth environments, safety of space operations, manned space flight, and space navigation.

This Round Table was set up to take stock of what the United Nations has achieved in the area of the progressive development of international space law, and to examine how it could continue to further international cooperation in this field. I am grateful to Professor Lyall for agreeing to be the Moderator of the Round Table, and to Dr. Galloway, Professor Vlasic, and Minister Telles Ribeiro, to be panelists. I am confident that the Round Table will be a substantial contribution to the Congress on Public International Law, and give some pointers towards future action in the area of space law.

INTRODUCTION

by
Francis Lyall, Moderator
(University of Aberdeen, Scotland)

In this Conference already mention has been made of the development of international law by the United Nations by negotiation, consensus and the adoption by the General Assembly, without vote, of resolutions. Space law has provided the model and the test bed for procedures. It is therefore fitting that we consider space law in a separate Round Table.

The coming of the Space Age in 1957 was, for most of us, something swift and unexpected. The United Nations, however, swiftly rallied and recognized the importance of this new development. The scientific purposes of the space satellite - first proposed in planning for the International Geophysical Year - were quickly realized to be but a part of the potentialities of space. It became clear that principles and laws were required. Within six weeks of the launch of Sputnik I, the General Assembly included, in its resolution 1148 (XII) of 14 November 1957, the statement that objects sent into outer space should be used for peaceful purposes only. The next Assembly set up the Ad Hoc Committee on the Peaceful Uses of Outer Space by resolution 1348 (XIII) of 13 December 1958, with the permanent Committee following a year later. The rest, as the saying goes, is history.

The United Nations has contributed mightily to the development of space law through its elaboration of relevant principles and the five major space treaties. However, while the United Nations effort in the matter was crucial, establishing the context within which all the later developments have occurred, we should also acknowledge that, in detail, others within the family of United Nations Specialized Agencies have also played an important role. The International Telecommunication Union, for example with its responsibilities for radio, is an essential player in the game. Without clear radio contact, a satellite is but an expensive heap of junk tumbling through space. Again other organizations have contributed. For example, the International Law Association, the International Bar Association have all devoted time and effort to the law of outer space. And I must mention the International Institute of Space Law, affiliated to the International Astronautical Federation, whose annual Colloquia Proceedings are a store of intriguing, and sometimes sensible ideas.

We today, however, are here to celebrate the United Nations' achievement in these matters, with perhaps a sideways glance at some less successful elements. And it is a remarkable history of accomplishment. Remember that the ground-breaking Principles Governing the Activities of States in the Exploration and Use of Outer Space of 1963 were worked out through a period of considerable international tension, and you recognize that the United Nations system working at its best. Its establishment of the Office of Outer Space Affairs, and the continuation of the Committee on the Peaceful Uses of Outer Space demonstrate the United Nations commitment to space. Space has changed our lives. We have international weather watch by satellite. We have the benefits of remote sensing. We have the more questionable benefit of direct broadcasting from space. And we have the immense development of international telecommunications, of swift news and massive interchange of information, of messages individual and official. These have both a history and a future, but always within the framework of law and principles which the United Nations has developed. But let others explore these matters.

SPACE LAW: ROLE OF THE UNITED NATIONS - ORGANIZATION AND MANAGEMENT

by
Eilene Galloway
(Honorary Director, International Institute of Space Law)

A new era in human history began with the orbiting of Sputnik I on October 4, 1957. Outer space was added as a new environment where space science and technology could be used for peace and war. The alternatives were devastation by weapons of mass destruction or the development of peaceful uses for the benefit of all mankind. The United Nations immediately accepted the challenge with leadership that has extended international law into outer space not only as a distinct spatial area but also for significant functional uses. The legal pattern formulated for outer space activities, which has continued to develop during the past 38 years, is an outstanding achievement of the United Nations during its 50-year history.

United Nations organizations and processes were used to bring about a system of permitted and prohibited practices to strengthen conditions essential to maintaining outer space for peaceful uses. International space cooperation was reinforced by the strong political will to avoid disaster and concentrate on improving communications, weather forecasting, remote sensing and a variety of space applications.

Prior to the advent of satellites, the UN had been working on disarmament proposals which were to result in the 1963 Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space, and Under Water. Outer space matters demanded a new organizational structure. On December 13, 1958, the General Assembly adopted the proposal of 20 nations [G.A. Res. 1348(XIII)] to establish the Ad hoc Committee on the Peaceful Uses of Outer Space. The resolution recognized the common interest of mankind in outer space for peaceful purposes and stressed the importance of international cooperation to prevent the extension of national rivalries. Existing organizations with space and space-related functions, both

within and outside the United Nations, were identified, and space legal problems were defined as administrative, procedural and regulatory.

Some major policy decisions emerged: that the United Nations Charter was not confined to the Earth and extended into outer space; that official definitions of airspace and outer space were not required before proceeding with the work; and that an international space agency was not needed, particularly because it would be impracticable to withdraw space-related functions from the International Telecommunication Union and the World Meteorological Organization. The full Committee membership did not participate in the work because of differences of opinion on whether decisions should be made by majority or unanimous voting.

The permanent Committee on the Peaceful Uses of Outer Space was established by the General Assembly on December 12, 1959 [G.A. Res. 1472(XIV)] with 24 members, now expanded to 61. The practice began of sending reports from the Scientific and Technical Subcommittee to the Legal Subcommittee to consider when drafting space law. Working groups may be used to analyze complex problems. For ease in negotiation, the texts of proposals under consideration designate agreed and disagreed viewpoints until final decisions are made. A compromise reached on voting led to full participation by Committee members. The Committee agreed that its decisions and those of its two subcommittees would be made by consensus, but if voting were required, decisions would be made by majority vote. The consensus process prevails when the Chairman perceives that a subject is ripe for decision and announces "If there is no objection, it is so decided.", a method that has proved successful in formulating five space treaties.

A permanent professional staff was provided by creating the Outer Space Affairs Division (now the Office of Outer Space Affairs, Vienna), and services were also available from the staff of the Office of Legal Affairs. Methods for coordination were developed for relevant United Nations specialized agencies.

Official observers were appointed to represent major international space organizations at the annual sessions of COPUOS and its subcommittees. The role of the Secretary-General was enhanced by treaty provisions requiring exchange of information, and the establishment of a UN registry for the launching of space objects. Additional management methods are international space conferences, seminars and workshops sponsored by host governments.

Agreement on consensus voting led to cooperation in the germination of ideas for space law, taking the form of resolutions adopted by the General Assembly. Noteworthy is the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space [Dec. 13, 1963, G.A. Res. 1962(XVIII)], whose main provisions were destined for inclusion in the "Magna Carta" 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies. Provisions in this treaty were expanded in four successive treaties (1968, 1972, 1975, 1979) to keep pace with advances in space activities and ensure the development of a harmonious body of space law. In addition to treaties, the United Nations adopted resolutions to guide States on the Use of Artificial Earth Satellites for International Direct Television Broadcasting (December 10, 1982, G.A. Res. 37/92), Remote Sensing of the Earth from Outer Space (December 3, 1986, G.A. Res. 41/65), and Principles Relevant to the Use of Nuclear Power Sources in Outer Space (December 14, 1992, G.A. Res. 47/68).

An outline of the ways and means used by the United Nations to develop space law would be incomplete without identifying the political and psychological elements that influenced use of the institutional framework to achieve what has become a viable world regime for conducting space activities:

1. The international nature of space science and technology created the political will for nations to seek agreement on a legal order to ensure peace.

2. The United States and the Soviet Union did not seek to monopolize outer space but strongly favored and promoted international cooperation.

3. Technical imperatives for effective operation of space objects demanded political adjustments which were made because nations were united in sharing the need for improved global communications and weather forecasting. This factor ensures compliance by nations with regulations in UN-formulated treaties.

4. Problems whose difficulty could have caused delay, such as defining outer space or creating an international space agency, were not permitted to hold back action on making the United Nations the focal point for international space cooperation. Foresight in identifying some potential problems resulted in treaty provisions to ward off such developments.

5. UN planning for space law was not confined to exploration but included functional uses of worldwide interest.

6. Space programs, developed as part of the International Geophysical Year (July 1, 1957-December 31, 1958), created a pool of internationally-minded scientists and engineers who provided the factual background for formulating realistic space law.

7. Many states passed national space laws with provisions in harmony with UN legal concepts.

8. The United Nations as the focus for international space activities was recognized by newly-created space organizations as well as those with space-related functions.

9. Consensus decision-making has proved remarkably successful as a process whereby agreement can be reached with patient negotiation and the will to advance toward accord. This method has not resulted in adoption of least common denominators as evident from treaty provisions on complex problems of arms control, sovereignty, and international responsibility. During the years when space law has been taking shape, COPUOS and its subcommittees have benefitted from the outstanding abilities of the distinguished chairmen in conducting sessions aimed at reaching consensus.

A SURVEY OF THE SPACE LAW TREATIES AND PRINCIPLES DEVELOPED THROUGH THE UNITED NATIONS

by
Ivan A. Vlasic
(Faculty of Law, McGill University)

Space law, the newest branch of international law, has the unique distinction of being almost entirely created through the organs of the United Nations. The center of this codificatory activity has been the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space (COPUOS). All five multilateral treaties (as well as the three major U.N. General Assembly resolutions) regulating various space uses were negotiated and drafted in that Subcommittee. It merits special emphasis that all these agreements apply to both civilian and state (military) spacecraft.

By far the most important among the five space law agreements is the Outer Space Treaty of 1967. It enunciates all the fundamental principles governing the uses of the space environment. Outer space is free for exploration and use by all states (Art. I); there shall be free access to all areas of celestial bodies (Art. I); outer space is not subject to national appropriation by claim of sovereignty, by means of occupation or by any other means (Art. II); international law and the Charter of the United Nations apply to activities of states in outer space (Art. III); states shall not place nuclear weapons and other weapons of mass destruction (chemical, biological and radiological) anywhere in outer space (Art. IV); the establishment of military installations, the testing of any kind of weapons and the conduct of military maneuvers on celestial bodies is prohibited (Art. V); states bear international responsibility for national activities in outer space whether carried out by governmental or private entities (Art. VI); and states must conduct their activities in space in a manner that will prevent environmental contamination and harmful interference with the lawful activities of other states (Art. IX).

The essence of the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space is contained in its preamble which quotes the Outer Space Treaty's call on states to render "all possible assistance to astronauts in the event of accident, distress or emergency landing" and to promptly and safely return them to the launching authority (also Art.4). Astronauts are designated "envoys of mankind" and are accorded immunity equal to that of ambassadors. The duty to return them is unconditional. In contrast, the return of objects is not automatic: the state on whose territory a foreign space object is found may make conditional its return upon receiving satisfactory identifying data from the launching authority, as well as compensation for the expenses incurred in the recovery and return of the object [Art. 5(3)(5)].

The Convention on International Liability for Damage Caused by Space Objects elaborates Art. 7 of the Outer Space Treaty. The Convention has adopted a dual system of liability: for damage caused by a space object on the surface of the Earth or to aircraft in flight, the launching state is "absolutely liable" (Art. II); however, if the damage is caused in the airspace or outer space to a spacecraft or persons on board such a spacecraft by a space object of another state, liability will be based on fault (Art. III). The Convention defines "damage" as "loss of life, personal injury or the impairment of health; or loss of or damage to property" [Art.I(a)]. The launching state can be exonerated from absolute liability only if it can be established that the damage has resulted from the gross negligence or from an act or omission done with intent to cause damage on the part of the claimant state [Art. VI(1)]. No limit is placed on a launching state's liability - the claimant state must be restored to the condition that would have existed if the damage had not occurred (Art. XII). This Convention is the first multilateral treaty that has imposed the regime of absolute liability directly on states.

The question of spacecraft registration was the object of much interest from the very beginning of the space age resulting eventually in the Convention on Registration of Objects Launched into Outer Space of 1975. The Convention provides for dual registration of "space objects" - national and international. Each launching state is obliged to maintain a national registry of space objects launched into Earth orbit and beyond [Art. II(1)]. The U.N. Secretary-General is responsible for maintaining a register in which information specified by Art. IV and furnished by the launching states is recorded [Art. III(1)].

The raison d'être of the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies can be found in its preamble which refers to "the benefits which may be derived from the exploitation of the natural resources of the Moon and other celestial bodies". The spectacular development of space technology achieved by a handful of states, repeated landings on the Moon by astronauts and unmanned devices and the silence of the Outer Space Treaty concerning the legal regime of natural resources on celestial bodies prompted a number of states to seek a treaty which would secure an equitable sharing of those resources. Article 11 of the Agreement attempts to respond to these aspirations by declaring the Moon and its natural resources as the "common heritage of mankind", the first time this now well-established concept of international law appeared in a multilateral treaty. While states are free to appropriate sample of lunar mineral resources [Art. 6(2),] "[n]either the surface nor the subsurface of the Moon... or natural resources in place" may become property of any state [Art. 11(3)].

Attempts to regulate by treaty direct television broadcasting by satellite, remote sensing of the Earth from space and the use of nuclear power sources on board space objects have not been successful. Instead, three sets of guiding principles have been drafted by COPUOS and adopted as resolutions of the U.N. General Assembly. The 1982 Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting reflect the

conflict between two irreconcilable views: one holding that there should be an uninhibited free flow of information of all kinds regardless of national frontiers; and the other, seeking to enshrine the principle of control of program content transmitted from abroad. International direct television broadcasting by satellite should be carried out in a manner compatible with "the sovereign rights of States" and with the "rights of everyone to seek, receive and impart information and ideas". The Principles also require that a state planing to initiate such broadcasting should consult receiving state(s).

The 1986 Principles Relating to Remote Sensing of the Earth from Outer Space were long delayed due to conflict between the proponents of the "free flow of information" and the proponents of the extension of territorial sovereignty to information about natural resources. The most important principle XII provides that when one state acquires data about the territory of another, the sensed state should have access to the data on a non-discriminatory basis and on reasonable cost terms.

The impact on Canadian territory of the Soviet nuclear-powered satellite - Cosmos 954 - in January 1978, gave rise to demands by a number of countries for the strict regulation of nuclear devices launched into outer space. In 1992, the Principles Relevant to the Use of Nuclear Power Sources in Outer Space were adopted. These Principles recognize that the use of nuclear power sources may be essential for some space missions, but systems using such power sources should be designed with redundancy and so as not to go critical before reaching the operating orbit. In case of a malfunction leading to re-entry, the launching state should inform other states and provide assistance to eliminate any harmful effects.

Although not binding, these resolutions especially when read in conjunction with the Outer Space Treaty, carry considerable moral force and at the very

least, in case of a dispute, place the burden of proof on the state accused of acting in violation of the Principles.

SPACE LAW: PROSPECTS FOR THE FUTURE

by
Edgard Telles Ribeiro
(Minister Plenipotentiary,
Permanent Mission of Brazil to the United Nations)

It gives me great pleasure to appear before you today at this Round Table, to examine how the United Nations can continue to contribute to the progressive development of international space law. Although I am privileged to be the Rapporteur of the Committee on the Peaceful Uses of Outer Space (COPUOS), and to represent my Government at Legal Subcommittee meetings, I shall approach this discussion from the view point of my personal opinion on the matter of the future prospects of space law.

One factor that has played a large part in COPUOS' success in the elaboration of the treaties and legal principles is the procedure of consensus, by which the Committee and its subsidiary bodies operate. Another factor is the close interaction that exists between its two subsidiary bodies: the Scientific and Technical Subcommittee and the Legal Subcommittee. In a field as affected and influenced by technology as space, technology and law cannot exist in isolation from each other. The procedure followed by the Committee allows member States to consider, debate and negotiate the technical and political aspects of space law. This not only brings policy issues to the forefront, but also leads to extremely useful exchange of ideas between lawyers, scientists and diplomats, permitting each side to fully understand all the issues involved.

Such interchange of views was of particular importance during the drafting of the Nuclear Power Sources Principles adopted by the General Assembly in 1992. The Principles were to be reopened for revision in 1994, but there was consensus in the Subcommittee and the Committee that the Principles, as they now stand,

adequately govern existing technology in this field, and hence do not need revision at the present stage.

The two other items of substance under active consideration by the Legal Subcommittee concern the definition of outer space and the geostationary orbit, and outer space benefits. Discussion on the topic of the definition of outer space have remained stagnant in the Legal Subcommittee for many years now, with gradual progress being made on the debate on the geostationary orbit.

In the future, the question of the definition of outer space may need to be resolved, if the so-called aerospace plane is developed. Since the two areas have different legal regimes, the international community will have to decide what legal rules apply to the hybrid craft.

As for outer space benefits, a subject of particular importance to North-South cooperation, the discussions so far have been particularly encouraging. As you know, Article I of the Outer Space Treaty of 1967 is the foundation on which is built the draft set of "principles regarding international cooperation in the exploration and utilization of outer space for peaceful purposes", a proposal co-sponsored by twelve states, including Brazil, before the Legal Subcommittee of COPUOS. A wide gap exists in scientific development and access to space science and technology between developed and developing nations. Space technology tends primarily to benefit a small group of states. The co-sponsors of the draft set of principles think that this gap can be narrowed by the development and applications of legal principles relating to international cooperation regarding space activities. The developed countries, on the other hand, are concerned that if international space cooperation is formalized by a set of possibly legally binding principles, this not only would interfere with their right to decide on when, with whom, and how, they could engage in such cooperation, but also that this could adversely affect matters such as the transfer of technology.

Where do we go from now?

Space debris poses an increasing hazard to the exploration and utilization of space. After many years of discussions in COPUOS and the Scientific and Technical Subcommittee, space debris was formally placed on the agenda of the 31st session of the Scientific and Technical Subcommittee in 1994. Several member States have recommended that the topic of space debris should also be placed on the agenda of the Legal Subcommittee, but others opposed this idea, feeling the discussion would be premature.

It is unlikely, considering the debate in the Scientific and Technical Subcommittee, that the Legal Subcommittee would be asked to begin to draft international regulations to deal with this issue for some time to come. But there is an urgent need for some kind of immediate action to be taken, especially to ensure the reduction in the growth of space debris.

The commercialization of outer space is another important topic. The legal implications of such issues as intellectual property rights, international commercial launch services, the liability aspects of such services, insurance of space launches, technology transfer and product liability insurance could, in the future, be subject to regulation.

In the area of manned space flights, the international community has come to realize that international co-operation is vital. Recent developments with regard to International Space Stations, and the MIR space station, are cases in point. More ambitious projects, such as flights of exploration to, and settlement on, the Moon and Mars are in the pipeline. Present regulatory aspects with regard to manned space flight may therefore not be completely adequate. This is a theme which could also be investigated by COPUOS.

Lastly, the question of amending the Moon Agreement. It is not likely that the near future will see the exploitation of the resources of the Moon and other celestial bodies become a reality. However, in the future, the international community may wish to modify the provisions of Article XI on "the common heritage of mankind" and the "international regime". These controversial provisions have kept the major space powers from ratifying the Agreement.

SUMMARY OF DISCUSSION

A. Noll (ITU), having noted that in 1995 the International Telecommunication Union (ITU) was celebrating its 130th anniversary, described the role of the Union in the field of human space activities. As a member of the UN family of organizations responsible for the international regulation of telecommunications, the ITU, since the inception of those activities, made an important contribution in this regard. The contribution included the creation, as well as constant development and refinement, of the international regulatory mechanisms necessary for the advancement of those activities. This was thus done not in the context of the law of outer space, but rather in the framework of the international telecommunication law, which was complementary to the former and was an indispensable prerequisite for any successful human space activities in outer space. The ITU allocated the necessary bands in the radio frequency spectrum for space objects and provided the adequate international management of that part of the spectrum.

The most recent landmark in the ITU work relating to outer space was the World Administrative Radio Conference on the Use of the Geostationary Satellite Orbit and the Planning of the Space Services Utilizing It, the two sessions of which were held in 1985 and 1988. The results of the two sessions were well-known and mainly contained in Appendices 30 and 30A of the Radio Regulations which were a part of the Union's codification of international telecommunication

law and supplemented the provisions of the Constitution and Convention of the ITU.

In October-November 1995 a World Radiocommunication Conference (WRC-95) was to be held. Pursuant to the ITU Council's resolution 1065, this Conference was called upon to undertake a substantial revision of the Radio Regulations with a view to simplify them and to prepare another Conference, WRC-97, which would consider the question of revising the above-mentioned Appendices. Both Conferences should be closely followed by all concerned, as they would have implications for the telecommunication regulatory issues related to space activities.

The most recent WARC, held at Malaga-Torremolinos, Spain, in 1992, discussed a question of global mobile personal communications systems (GMPCS) which used non-geostationary satellites. For those systems, the conference allocated specific bands, in particular in the 1610-1626,5/2483,5-2500 frequency MHz bands. Those systems were also referred to as "Big Leos" (Low Earth Orbiting Satellites Systems) typically consisting of between 12 to 66 satellites in various sub-geostationary orbital positions and intended to provide real time voice and date coverage over large portions of the globe. In addition, there were also so-called "Little Leos" operating below 1 GHz and typically using smaller number of satellites and providing a variety of data services, and store-and-service messages. The "Little Leos" were likely to be in service before the "Big Leos", and they required urgent domestic and international regulatory and coordination action. Various aspects of this issue were dealt with in a GMPCS Report, available from the ITU at request. The emergence of such systems would no doubt lead to regulatory initiatives at future World Radiocommunication Conferences of the ITU, and thus to future ITU contributions to the development of international cooperation in the field of human space activities.

K. Zemanek (Austria), commenting on the presentations of E. Galloway and I. Vlasic, said that in the early years of the UN Committee on the Peaceful Uses of Outer Space (COPUOS) the relations between the two subcommittees of the Committee - Scientific and Technical, and Legal - were not very harmonious because they were influenced by various political factors. In particular, documents elaborated by the Legal Subcommittee were not "directly" based on the work of the Scientific and Technical Subcommittee. Similarly, the decisions to assign new tasks to lawyers in the Legal Subcommittee were taken not in the Scientific and Technical Subcommittee, but rather in COPUOS who made recommendations to that effect for subsequent approval by the General Assembly.

As for the concept of the common heritage of mankind in application to the Moon and its natural resources, it was introduced for the first time in the debate in the Legal Subcommittee at one of its sessions held in Geneva. In that year, some of the outer space lawyers from Group of 77 countries who in the past participated in the Subcommittee's work in New York could not make it to Geneva and, therefore, were substituted, by their Governments, with lawyers participating in the Law of the Sea Conference. At that time the common heritage of mankind concept was already well-known in the law of the sea. It is interesting that, although this concept came to the outer space law from the law of the sea, space lawyers were nevertheless the first to succeed in incorporating it in a specific treaty - 1979 Agreement Governing the Activities of States on the Moon and other Celestial Bodies.

Commenting on the presentation by N. Jasentuliyana, K. Zemanek expressed the view that, while the elaboration and adoption of international standards and practices by analogy with ICAO for tackling such outer space problems as, for example, space debris, may be a viable option, adoption of such standards and practices should be preceded, as it was done in ICAO, by the conclusion of an appropriate intergovernmental agreement on the subject envisioning adoption of standards and practices in question.

V. Tuvayanond (Thailand), having referred to lacunae in the law of outer space, described the unfair situation in which many developing countries found themselves as to the access to the geostationary orbit (GSO). Currently no guaranteed access to this valuable natural resource existed for many developing countries which had no technical capabilities to launch their own satellites to the orbit. Procedures for registration of orbital slots on the GSO had been conceived in a very vague manner. The criteria of the priority of readiness to launch such satellites to the GSO, which was being used on the "first-come, first-served" basis, puts those States in a disadvantageous position. There were already forty satellites on the GSO above Asia, and fourteen more were to be launched in the near future. Therefore, one of the tasks before the international space law was to correct the situation and to protect the legitimate rights of developing countries to the use if the GSO.

In reply, **F. Lyall (United Kingdom)** said that, while WARC-ORB 85-88 was an important step in the direction of modifying the current "first-come, first-served" system of the use of the geostationary orbit, still a lot is to be done in order to guarantee an equitable access of all States, in particular the developing countries, to this valuable natural resource.

R.St.J. Macdonald (Canada) referred to the common heritage of mankind concept and inquired about the current status of the idea of establishing an international space authority or organization.

In reply, **E. Galloway (United States)** said that at present the proposal to establish an international space agency was not actively considered either in COPUOS or in other UN fora. One of the main reasons for this is perhaps the fact that historically quite a few specific areas of space activities are already successfully dealt with by existing international organizations (e.g., ITU, WMO). In this situation it would be probably rather difficult for States to work out the terms of reference for an international space agency.

On the same subject, **E. Telles Ribeiro (Brazil)** said that outer space activities were global in nature and, pursuant to Article I of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, the exploration and use of outer space should be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development. In view of that, quite a few States in the past supported the idea of establishing an international space agency which would, inter alia, guarantee the implementation of the above provision. However, it proved to be difficult to agree on replacing the existing international machinery for cooperation in outer space with a new universal organization. Therefore, currently the attempts were being made to enhance that cooperation by other means.

In addition, **F. Lyall (United Kingdom)** expressed the view that if, in the future, the international community were to agree to establish an international space organization, the International Seabed Authority may perhaps serve as a model for that purpose.

A. Moore (United States) inquired whether there were plans to renegotiate the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, the possibility for which action was provided in its Article 18.

In reply, **E. Galloway (United States)** said that the question of the review of the Moon Agreement in accordance with its Article 18 was discussed at the thirty-seventh session of COPUOS in 1994. As a result of this discussion, the Committee recommended that the General Assembly, at its forty-ninth session, in considering whether to revise the Agreement, "should take no further action at that time".

On the same subject, **A. Terekhov (Russian Federation)** said that, pursuant to Article 18 of the Moon Agreement, the question of the review of that instrument was included in the agenda of the forty-ninth session of the General Assembly in order to consider, in the light of its past application, whether the Agreement requires revision. The Assembly, having considered that question, limited itself to just noting, in paragraph 42 of its resolution 49/34 of 9 December 1994, the above COPUOS recommendation that "no action" should be taken.

F. Cede (Austria) recalled that COPUOS, in addition to the five treaties, had elaborated three declarations of legal principles which were subsequently adopted by the General Assembly.

Principles Governing the Use by States of Artificial Earth satellites for International Direct Television Broadcasting were adopted by the Assembly in 1982 by voting. It was noteworthy that those Principles had not acquired an important role in outer space law, and currently they were not referred to very often.

The 1986 Principles Relating to Remote Sensing of the Earth from Outer Space were approved without a vote. After the adoption, this document was used by States as general guidelines for the activities in the area of remote sensing.

Principles Relevant to the Use of Nuclear Power Sources (NPS) in Outer Space, which were adopted by the Assembly in 1992 also by consensus, contained detailed scientific and technical guidelines aimed at the safe use of nuclear power sources onboard space objects. Those Principles envisage their review and possible revision, the question currently examined in COPUOS. It would be interesting to analyze the success, or lack of it, of the NPS Principles in view of the future results of that review.

Y. Kolosov (Russian Federation) supported the idea of elaborating an agreement regulating various questions of manned space flights. Recently a group of space lawyers from Germany, the Russian Federation and the United States

prepared a draft Convention on Manned Space Flights. That work was done within the framework of the International Institute of Space Law of the International Astronautical Federation. The draft constituted a good starting point for commencing the consideration of this important legal issue in COPUOS and, for this purpose, should be communicated to the Legal Subcommittee of COPUOS.

The outer space law was becoming more and more closely related to the environmental law. The increasing impact of outer space activities upon the environment and the use of outer space technology for monitoring environmental processes on the Earth made it necessary for lawyers to take a closer look upon various environmental issues of human activities in outer space. The space debris issue was perhaps the most urgent problem requiring attention. There were little doubt that soon environmental issues would find its way into the agenda of the Legal Subcommittee of COPUOS.

In connection with the question of "soft law" of outer space, it should be recalled that over quite a few recent years General Assembly resolutions on the peaceful uses of outer space repeatedly contained a number of the same provisions. Taking into account that those resolutions were adopted almost with no exceptions without a vote, it would be interesting and useful if COPUOS could examine a question as to whether those provisions may be viewed as emerging new customary rules of the international space law.

F. Lyall (United Kingdom), concluding the Round Table, thanked all the participants. It was a matter of regret that more time could not have been set aside for the topic. However, clearly much had been already achieved in space law, particularly through the United Nations. For the future, there was still work to be done. The feasibility and possible content of "standards and recommended practices" in the ICAO model deserved further study. The observance and implementation of the various Outer Space Principles required bolstering. And the content of "common benefit" would continue to provide ground for argument

and, hopefully, eventual amicable agreement. The consensus process of the development of space law was an excellent model for others to adopt.

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