An Overview of International Space Law

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Introduction

Exploration and use of outer space inevitably leads into legal problems, thus making it necessary for a set of laws to be established which particularly address these issues .

Presence of man in space with the help of amazing technology and rapid and astonishing scientific and technical developments requires laws that regulate the effects of these discoveries and exploitations on:

- Sovereignty of states
- Territory of countries
- Collaborations in the use of space
- Use of Earth's orbits
- Human activities on celestial bodies
- Priority of the country which is first in discovering and using space resources over other countries
- Definition and delimitation of outer space
- Numerous legal issues resulting from man's use of space

This leads into a legal discipline in this area which makes it possible for nations to utilize outer space for peaceful purposes.

General Principles Space Law

Since 1957, when outer space was first conquered by the launch of the first manmade satellite, international laws have had the task of keeping up with the fast development of space technologies and set up the basis for a new interdisciplinary knowledge called "Space Law." In fact, space law is a branch of law that involves national and international legislations on outer space activities.

Space law is defined as a set of international laws and regulations which governs the relations of countries with each other and with international organizations, and the relations of people with

organizations engaged in space related activities. It shall be noted that the field of space law is expanding and any definition given for this field would require revisions as time goes by.

This branch of knowledge was formed on the basis of the United Nations Charter. The general principles of space law include the following:

- non-appropriation of outer space by any country
- control of arms and weapons of mass destruction in space
- freedom of exploration of the outer space
- liability for damage caused by space objects
- safety and rescue of spacecraft and astronauts
- prevention of harmful interference with space activities and the environment
- notification and registration of space activities
- scientific investigation and the exploitation of natural resources in outer space
- free access of all nations (without any prejudice) to communication satellites

Also, global space law eliminates legal problems, resolves possible disputes, and expands this knowledge towards stable progress and development in space by preparing international laws and agreements within the United Nations and its legal committees.

United Nations Treaties and Principles on Outer Space

The outcomes of the works done on space law are five conventions. Although, these do not cover every single issue in space law, they are the only formal and reliable references on this subject. In fact, they provide a good and proper basis for more advancements in space law and have had a very significant role in systemizing major space activities up to now.

The following general legal principles can be extracted from the 5 UN Treaties and Principles on Outer Space as the main principles of space law:

- freedom of exploration and use of space and celestial bodies
- non-appropriation of outer space by any country
- exploration and use of space, based on the main principles of international laws and those of the United Nations Charter
- nonmilitary use of space and celestial bodies
- maintaining the launched object in space by the State owning it
- responsibility of all states for their activities in space; this includes the probable damages caused by the launched objects in space
- assistance and cooperation with the astronauts in danger or in need of emergency return
- developing international cooperation in the peaceful exploration and use of outer space, including the moon and other celestial bodies
- avoiding experiments with probable hazardous outcomes

Taking these general principles into account, we will have an overview of each of the five conventions and treaties and their status as of January 1, 2009:

"Outer Space Treaty"

"*Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*" was adopted by the UN General Assembly in 1966. The treaty has been ratified by 99 states and has received 26 signatures. According to this treaty, any objects carrying nuclear or any other kinds of weapons of mass destruction shall not to be placed in orbit around the Earth. It also stresses the fact that the Moon and other celestial bodies shall be used exclusively for peaceful purposes. Moreover, it makes it clear that outer space, including the Moon and other celestial bodies is not subject to national appropriation by any means while stressing the role of astronauts as envoys of mankind.

"Rescue Agreement"

"*Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space*" was adopted by the UN General Assembly in 1967. It has been ratified by 90 states and signed by 24 while 2 states have accepted its rights and obligations. It enforces the obligations of states for assistance in search and rescue and safe and prompt return of astronauts or space objects to representatives of launching authorities.

"Liability Convention"

"*Convention on International Liability for Damage Caused by Space Objects*" was adopted in 1971. This convention holds the launching State liable to pay compensation for any possible damage resulting from space activities by nations. In other words, the States must bear international responsibility for space objects launched within their territories. This convention has been ratified by 87 nations and signed by 23 while 3 states have accepted its rights and obligations.

"Registration Convention"

Adopted in 1975, the "*Convention on Registration of Objects Launched into Outer Space*" focuses on the establishment of national registry by member states for objects launched into outer space. In other words, all launching states are responsible to provide the UN Secretary General with the following information as soon as practicable:

- Name of the launching State;
- An appropriate designator of the space object or its registration number;
- Date and territory or location of launch;
- Basic orbital parameters including nodal period, orbital inclination, object's apogee and perigee;
- General function of the space object.

This convention obliges member states to retain jurisdiction and control over objects while in outer space or on a celestial body. 51 countries have ratified this convention while 4 have signed it and 2 other have accepted its rights and obligations.

"Moon Treaty"

The last UN treaty on outer space so far, the "*Agreement Governing the Activities of States on the Moon and Other Celestial Bodies"* was adopted in 1979. Since then, 13 countries have ratified this treaty while only 4 have signed it. Freedom of scientific exploration on the Moon as the province of all mankind and freedom of exploitation of its natural resources have been stressed in this Treaty.

Legal Questions Put Forth by UN-COPUOS

Human's activities in outer space leads into many legal questions which must be addressed in order to prevent conflicts between countries and organizations involved. In order to avoid this and also to reach a consensus on laws regulating space activities, the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (UN-COPUOS) finalized a questionnaire on possible legal issues with regard to aerospace objects at its thirty-fourth session held in 1995. The purpose of this questionnaire as defined by the Subcommittee is "to seek the preliminary views of States members of the Committee on various issues relating to aerospace objects." All State Members are invited and encouraged to reply to the questions which could provide the basis for further decisions by UN-COPUOS in its meetings.

The questions proposed by the Legal Subcommittee of UN-COPUOS are the following:

Question 1: Can an aerospace object be defined as an object which is capable both of travelling through outer space and using its aerodynamic properties to remain in airspace for a certain period of time?

Question 2: Does the regime applicable to the flight of aerospace objects differ according to whether it is located in airspace or outer space?

Question 3: Are there special procedures for aerospace objects, considering the diversity of their functional characteristics, the aerodynamic properties and space technologies used, and their design features, or should a single or unified regime be developed for such objects?

Question 4: Are aerospace objects while in airspace considered aircraft, and while in outer space spacecraft, with all the legal consequences that follow therefrom, or does either air law or space law prevail during the flight of an aerospace craft, depending on the destination of such a flight?

Question 5: Are the take-off and landing phases specially distinguished in the regime for an aerospace object as involving a different degree of regulation from entry into airspace from outer space orbit and subsequent return to that orbit?

Question 6: Are the norms of national and international air law applicable to an aerospace object of one State while it is in the airspace of another State?

Question 7: Are there precedents with respect to the passage of aerospace objects after reentry into the Earth’s atmosphere and does international customary law exist with respect to such a passage?

Question 8: Are there any national and/or international legal norms with respect to the passage of space objects after re-entry into the Earth's atmosphere?

Question 9: Are the rules concerning the registration of objects launched into outer space applicable to aerospace objects?

Question 10: What are the differences between the legal regimes of airspace and outer space?

Conclusion:

Although each of these treaties and conventions are devoted to particular subjects in the exploration and use of outer space, all of them stress the idea that the outer space and all activities carried out in that realm must be for peaceful purposes and to the benefit of all nations, irrespective of their degree of economic and/or scientific development. This is while particular emphasis has always been placed on developing nations and how they might benefit from space technology. They also bring to light the idea of freedom of exploration and use of outer space and celestial bodies so long as space activities do not contradict international laws and the United Nations Charter, thus prohibiting the appropriation of space by any nation as well as the establishment of military bases in Earth's orbit, the Moon and other celestial bodies. At the same time, the promotion of international cooperation in outer space activities has been given special attention in these legal principles which are designed to resolve possible disputes arising from human's activities in the outer space.

Space law has inevitably become an inseparable part of space technology, needed to regulate all space activities and settle possible disputes that rise as a result of human's exploration and use of outer space. However, it must be noted that although the existing UN treaties and conventions have very well covered many of the legal problems in the space arena, in order to keep up with technology's fast pace, the existing legal framework in space activities must constantly be revised. This requires drafting questionnaires by international entities active in space-related fields which could provide the basis for new conventions particularly addressing some relatively new phenomena – such as the accumulation of space debris around Earth or other matters – that were not of great concern in the late 1960s and 70s when the 5 UN Treaties and Principles on Outer Space were compiled.

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