Space Law Certificate Course

(Free Reading Material)

Does the United States of America, or Russia or the United Kingdom own the moon? Have you ever wondered if there are any laws relating to the space? Today, the global society which is driven by the modern technologies is highly regulated by the use of space. Our daily life activities such as making phone calls, sending emails or doing banking transactions cannot be carried out without the use of satellite technologies. Even when you are on a plane, the GPS governs the air traffic control. Moreover, satellite imaging plays a crucial role in the forecast and management of natural disasters.

Due to its high significance, it becomes very important for us to have knowledge about the sphere of law that goes beyond the Earth's atmosphere, into the space and deliver security to the society.

Further, the term "space" law includes "the rules, principles and standards of international law appearing in the five international treaties and five sets of principles governing outer space which have been developed under the auspices of the United Nations."[1] Moreover, some states have added national legislations relating to space activities to the international instruments.

[1] Space Law, United Nations Office for Outer Space Affairs, *available at:* https://www.unoosa.org/oosa/en/ourwork/spacelaw/index.html (last visited on July 3, 2020).

In making laws for space, the obvious question which arises is "from where does outer space begin?" To this question, there is no unanimous answer. This has been a debate for several years in the United Nations, but no firm answer has been reached so far. One may also ask a question regarding the boundary between the airspace and the outer space. On this issue many states have enacted legislations, like Australia, which has enacted a law proclaiming the boundary between the airspace and the outer space at 100km. But the USA is of the view that this boundary is not necessary.

Nevertheless, the space law addresses a variety of topics, like the earth and space environment preservation, ascertaining the liability for damages caused by the space objects, dispute resolution, use of technologies in space, as well as the international cooperation associated with it.

Definitions

Space law can be described as a set of laws, treaties and agreements that control the outer space. According to the Soviet jurist Evgeny Korovin, space law means the whole set of norms that regulate the legal relationships between the peoples and States in outer space.[2] In the view of M. I. Lazarev, space law is the "whole complex of legal norms regulating, on the basis of the principles of peaceful coexistence, the relationships among different States on the earth in

[2] Gennady Zhukov and Yuri Kolosov, Transl. by B. Belitzky, International Space Law 15 (Statut Publishing House, Moscow, 2nd edn., 2014).

coexistence, the relationships among different States on the earth in connection with the conquest of outer space."[3]

As per the Hungarian legal expert Dr. G. Gal, space law is defined as "a set of legal rules regulating the intra-state and inter-state relations that arise in exploring and using outer space and celestial bodies (space activities), and the legal rules covering the consequences of such activities from the standpoint of the rights of individuals."[4]

However, according to the Soviet jurist Georgy Zadorozhny, the definition of space law "should cover both the place of the activities of states (outer space) and the character of those activities (space activities) irrespective of the place where they are conducted."[5]

Accordingly, we can define space law "as the sum total of the specific rules of international laws regulating the relations of states with one another and with international intergovernmental organizations, and also the mutual relations of such organizations, in connection with their space activities, and establishing the legal order of outer space, the Moon and other celestial bodies in accordance with the principles of general international law."[6]

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[3] *Id.* at 16
[4] *Ibid*
[5] *Ibid*
[6] *Ibid*

Development of Space Law

On 4th October 1957, Russia launched its first man-made satellite Sputnik 1 into the space, which lead to opening of a new world for mankind. During the 20th century, the space law has developed in three stages:

- Phase 1 is from 1910 to 1957 and it relates to the evolution of the notion of space law before Sputnik.
- Phase 2 is from 1957 till 1966 and includes the explanation and adoption of the fundamental applicable laws.
- Phase 3 is of the 21st century that includes the growth of numerous space-related activities and also the legal issues that arouse out of them.

Phase 1- Evolution of the notion of space law before Sputnik

There were a few concepts relating to the space law during the first half of the 20th century. But these notions emerged as the beginning of the issues for bringing a separate law governing space and formulated the bedrock for the principles for the law of space to evolve.

Mostly, these notions were the writings or theses of the jurists of that time. The eminent jurists were the first to assert that the nature of flight including its speed and altitudes above the airspace are distinct from the facets of a spacecraft. Further, outer space flights were beyond the states' control. So,

control of sovereignty should not be on these flights. Thus, these issues required a special law.

Moreover, the issue of States' liabilities relating to the security and safety were also discussed. Further, an evaluation was done as to the effect of human society on increasing space activities. The assessment expounded the need for an upper limit of the national sovereignty. Or else "in the course of a day, [on a rotating globe] every country will lay claim to a large portion of the Universe!"[7]

Thus, these principles sowed the seeds for the growth and the development of the space law.

Phase 2- Post Sputnik era: Explanation and adoption of the fundamental applicable laws

The emergence of the law of space started with the introduction of the notion of disarmament negotiations in the United Nations, in 1957. With the success of the Sputnik 1 satellite of the Soviet Union in 1957 and the Explorer 1 satellite of the U.S. in 1958, both the U.S.S.R. and the U.S. started taking interest in the growth and development of international policies relating to the space.

Further, a permanent Outer Space Committee was formulated in the year 1959, whose objective was the maintaining the U.N. charter and other

[7] Arthur. C. Clarke, "The Challenge of the Spaceship" VI Journal of the British Inter- planetary Society 66 (1946).

international space law. This paved the way for the peaceful exploration of the space.

Furthermore, the Nuclear Test Ban Treaty and an Outer Space Committee Resolution for the prohibition of testing nuclear weapons in space were adopted in 1963. Later, due to the declaration by the UN General Assembly, a free international interest in the space development was recognized. It also set rules for assigning each nation individually accountable for its international law transgressions and the destructions caused by it.

An Outer Space Treaty was signed in 1967 by 63 members in the U.N. This Treaty reaffirmed all the previous measures for the international space conduct. Further, certain military activities were also banned by it. This agreement proved to be very significant in the development of the international law of the space.

Phase 3- The growth of numerous space-related activities and the legal issues in the 21st Century

The emergence of the space age has opened the gates for huge prospects in the economic and social development of human beings. However, due to privatization, globalization and commercialization, pressure and disagreement were created by various countries regarding the interpretation and implementation of the Treaty.

Moreover, various legal problems have emerged due to the growth in the arena of space. Problems relating to the Commercial activities like the space tourism and the space flights need laws. The increasing problem of the space debris was becoming rampant and various environmental issues were multiplying. Further, questions on intellectual property and piracy needed to be addressed. It was felt that the Outer Space Treaty of 1967 was insufficient to deal with these emerging concerns.

All these shortcomings required substantial change in the then-existing laws. Therefore, a systematic upgradation was undertaken by the global leaders.

Sources

International space law is considered as a branch of general international law. The emergence of any new branch of international law is by "the conclusion of international treaties and the establishment of international customs."[8] The sources of space law are:

- International Treaties related to the Space Law-
- The Outer Space Treaty of 1967,
- The Rescue Agreement of 1968,
- The Liability Convention of 1972,

[8] *Supra* note 3 at 17.

- The Registration Convention of 1975,
- The Moon Treaty of 1979.

- Customary Principles-
  - The Right to Orbit Subjacent Territory without Prior Authorization or Permission.
- International Telecommunication Law
- Militarization of Outer Space

Demarcation of Outer Space

There is an important distinction between the legal status of airspace and outer space. The states have exclusive jurisdiction with respect to their airspace, while on the outer space, there cannot be any exercise of sovereignty and territorial jurisdiction. According to Kish J., "the aerospace boundary between airspace and outer space constitutes the delimitation of international airspace and outer space."[9]

However, there is no certain, uniform and precise legal boundary between the Earth's atmosphere and the outer space. Attempts to clarify this delimitation

[9] Vikrant Pachnanda, *Space law* 2 (Bloomsbury, New Delhi, 2019).

have only been carried out by scholars. Since there was no uniform international definition, various standard limit designations came into the picture:

i. The Kármán line is an endeavour to divide the Earth's atmosphere and the space. It was established by the Fédération Aéronautique Internationale. It is an imaginary line which is 100 kilometres (62 miles) above the mean sea level.
ii. People who travel above an altitude of 50 miles are called astronauts in the United States.
iii. Eight equatorial states have asserted their sovereignty above their territories upto the geostationary orbit which is at 22,300 miles from the Earth's surface.
iv. As per Article 12 of the Chicago Convention of 1944, "the air space zone is below 50 km, near space zone is 50-120 km and the outer space zone is beyond 120 km."[10]

[10] *Id.*, at 3

Uses of Space Technology

The growth and development of the space industry is the result of the application of the space technology. The first satellite was sent to study the space environment and assisted in the critical knowledge and the abilities for the advancement of the satellite telecommunications, weather forecasting and global positioning. Some of its uses are as follows:

- Use of space technology in the observation of earth for weather predictions and climate monitoring,
- Observation of earth's resources,
- Increase in Space-based Positioning, Navigation, and Timing (PNT) services,
- Increase in economic opportunities by expanding the commercial space and the non-space sectors,
- Inspiration for STEAM (science, technology, engineering, art, and math) education,
- International space cooperation by countering the geopolitical tensions,
- Space spinoffs for earth in various fields,
- Diverse everyday life activities such as solar panels, water purification system, implantable heart monitors, computing systems, global search and rescue system, etc.