

## “Need of Space Law and its Development”

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### **Abstract**

Space is an unorthodox topic when we talk in context of law. Though it might sound not so conventional but space and law goes hand in hand as human have started expedition to space. The nexus between space and law is a preventive measure to stop anyone to use space in a wrongful way and to colonize it. Throughout the history humans are seen to colonize anything and everything, so these laws prevent nations to colonize space and take the benefits alone instead they have to share the benefits received from space with the whole of mankind. The United Nations has provided the guideline on how the countries should use space and what are their restrictions. Many countries made their laws related to space following the guidelines and many are yet to make. The need of space law is must if the nation has a space organization to have free decisions.

### **Introduction**

Space Law can be described that branch of law which deals with space related activities in a country. The topic of Space Law arose in the early 1900s when the topic of the ownership of radio waves was in conflict. Then Space Law got emphases in the 1950s and the 1960s when the US and the USSR were in the space race. This space race made them come together with other nations to the United Nations for debates that space travel should have laws or guideline governing the activities of the nations related to space. The results of the debates were the constitution of a committee named as the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS). The UNCOPUOS had two sub committees the Technical committee and a legal committee. This committee has been the main source from where the debates and ideas of international agreements on outer space are formulated. The treaties are all guided by the UNCOPUOS.

### **History of space law- how it evolved.**

The concept of space law originated in the early 20<sup>th</sup> century by Belgian Lawyer, Emile Laude. The main reason why Laude wrote about Space law is because he thought there will be a conflict between states regarding the ownership and the use of Radio waves. The term Space Law was first time used in Laude's paper in 1910. 16 years later in the Moscow Air law conference the question of international public air law was asked by V.A. Zarzar, who was a senior official of the Soviet Aviation Ministry.

After the thoughts presented by the above two individuals, it was noted that the work environment of airspace and outer space are different, and it is understood by the altitude.

The difference in altitude and operational condition of between airspace and outer space stated how we need different set of laws for outer space.

Right after this concept of space law was derived, the Czech Republic and USSR government started taking interest in the space law. In the 1940s the English government and the US government took interest in the concept of space law. The first doctoral dissertation on legal aspects of space flight was submitted and approved in George August University in Göttingen, Germany by Welf Heinrich, Prince of Hanover. The dissertation was entitled as “Air Law and Space” it said the area beyond the atmosphere will be considered free territory on the basis of legal construction and policy and laws of nature.

Then it was found that the existing air and maritime laws were imperfect for space but the elements of both the laws could be useful to regulate space law. In the 1950s the time arose where the world was struggling with radio frequency management, so after this conflict in the April 1956 the topic of “International Air Law” was discussed by the American Society of International Law. An IAC ( International Astronautical Congress) session held in Rome in 1956 from where the creation of the international institute of space law took place. Then came the first space flight in 1957 the Sputnik I. Sputnik I stimulated rapid, widespread and various commentaries. Right after the Sputnik I in 1958 the National Aeronautics and Space Act of 1958 was enacted by the 85<sup>th</sup> Congress of the United States.<sup>1</sup>

### **Role of United Nations in Space Laws**

The post Sputnik period was a crucial period for space law. The decade of 1960s saw lot of people who took interest in space law and there was a process which could have codified the space law. During this period the Soviet Union and the United States were in a race to reach the space first, as we know that race to space was highly supported by politician of both the countries. Kennedy’s Moon speech became famous overnight. Both the powers were on the same page when they agreed that the United Nations possibly can draw up international policies regarding the spaceflight activities.

Substantial successes in drafting of the United Nations’ Committee on the Peaceful Uses of outer space (COPUOS) was seen after both the Space Powers ( USSR and US) insisted on drawing up policies on international spaceflights.

The UN Secretariat supported space related activities, it came to be known as the Office of Outer Space Affairs (OOSA) in the Secretariat in 1992.

The United Nations General Assembly in 1963 accepted the Declaration of Legal Principles Governing the Activities of States in the Explorations and Use of Outer Space. COPUOS elaborated the five treaties and the elements of the declaration. The COPUOS continued to work on the declaration between 1960s to 1970s, the time frame between which man first

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<sup>1</sup> Nandasiri Jasentuliyana, “A CONCISE HISTORY OF SPACE LAW”, IAC-10.E7.1.1, viewed 15 Feb 2020, < <https://www.iislweb.org/website/docs/2010keynote.pdf> >

went to space and conquered the moon. These activities by USSR and US encouraged more countries to join the race of space activities, as more countries joined the space race, the size of COPUOS also grew. As the size of COPUOS grew the UN started taking it seriously and obtaining consensus of the formal treaties became difficult. As the size of space technology grew many organizations entered the space race.<sup>2</sup>

### **Dawn of Space law**

Almost Fifty-three years ago, the United States, the United Kingdom and the USSR(Soviet Union) signed a treaty that became the backbone of International Space Law. The treaty was a United Nations approved agreement which was named the *Outer Space Treaty*, 104 nations became parties to the document since its inception in 1967. Since the beginning the treaty ensured the harmonious exploration of space. The treaty mentions the framework of how the nations are supposed to behave in Earth's atmosphere and beyond the atmosphere.

The Outer Space Treaty's real name is the "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies" This treaty lists the principle of what nations can and cannot do in space and on other worlds. For example, nations can't call an asteroid or any other celestial body to be theirs own. The treaty was created at the very beginning of the space travel, so the treaty is to an extent flexible, as well as limited, but still this treaty has acted as the foundation of space law. Every nation of the world has to follow this treaty in their space expedition as all space activities falls under this treaty. The treaty was mainly created to use the space fairly. The main objective of the treaty was to protect the space from space grabs, like the land grab which happened in Antarctica in the beginning of the 1900s.<sup>3</sup>

### **The Space Law Treaties and Principles by the United Nations**

The United Nations Office for Outer Space Affairs has concluded five international treaties and five set of principles related to space activities

These treaties and principles deals with the issues like non- appropriation of outer space by any country, the freedom of space exploration, prevention of any harmful interference with space activities and the environment, scientific investigation and exploitation of natural resources in the outer space, control of arms in outer space, liability of damage caused by any space object and the settlement of any space related disputes.

The Five treaties are as follows:-

- The "Outer Space Treaty"
- The "Rescue Agreement"

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<sup>2</sup> Nandasiri Jasentuliyana, "A CONCISE HISTORY OF SPACE LAW", IAC-10.E7.1.1, viewed 20 Feb 2020, < <https://www.iislweb.org/website/docs/2010keynote.pdf> >

<sup>3</sup> Loren Grush , THE VERGE " How an international Treaty signed 50 years ago became the backbone for space law" viewed 21<sup>st</sup> Feb 2020 < <https://www.theverge.com/2017/1/27/14398492/outer-space-treaty-50-anniversary-exploration-guidelines> >

- The “Liability Convention”
- The “Registration Convention”
- The “Moon Agreement”<sup>4</sup>

**The “Outer Space Treaty”-** The “Outer Space Treaty” or “Treaty on Principle Governing the activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies” provided the basic framework on international space law. The framework includes the principles like; i) The exploration of the outer space should be beneficial for the entire mankind and it should help all the countries. ii) The space exploration should be free of exploration by all the nations of the world iii) The outer space cannot be colonized or sovereignty cannot be claimed. iv) The nations must not put any nuclear weapons or any weapons of mass destruction on any part of space or on any celestial body or on any space station. v) The celestial bodies including moon will be used for peaceful purpose. vi) The astronauts will be the representative of the mankind and their own country’s vii) States to take the responsibility of any expedition. viii) The state has to be liable for any damage caused by their space object and to stay away from any kind of space contamination.<sup>5</sup>

**The “Rescue Agreement”-** The rescue agreement emphasizes on Article 5 and 8 of the outer space act the rescue agreement states that all the nation should rescue and assist the astronaut in distress and help them to return to earth in every possible way. The rescue agreement also talks about the recovering of the spacecrafts.

**The “Liability Convention”-** The liability conventions deals with Article 7 of the Outer space treaty. It says that that the state which is launching the spacecraft will be liable to pay for the damages caused by the Spacecraft or space object of that state. The damage maybe in space or in earth the liability has to be taken by the state form where the Spacecrafts origins.

**The “Registration Convention”-** To help the Rescue Agreement and Liability Agreement work properly the UN Secretary-General requested to register and give full information to all the states about the space craft launched by a state so that it can be identified, whenever needed.

**The “Moon Agreement”-** The moon agreement says that the moon or any celestial body should be used for peaceful use and for the betterment of the mankind. The agreement also says that the locations used by any of the nation should be informed to the United Nations, and they will also mention the reason for using that location. The agreement also states that the natural resources from the moon or the celestial body are the common heritage of the human kind and if any resources are useable in the future it should be for everyone and not only a single nation.

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<sup>4</sup> United Nations Office for Outer Space Affairs, Space Law Treaties and Principles, viewed 22<sup>nd</sup> Feb 2020 < <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html> >

<sup>5</sup> United Nations Office for Outer Space Affairs, Treaty on Principle Governing the activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, viewed 22<sup>nd</sup> Feb 2020 < <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introouterspacetreaty.html> >

The Five Principles laid down by the UNOOSA are as following.

- The “Declaration of Legal Principles”
- The “Broadcasting Principles”
- The “Remote Sensing Principles”
- The “Nuclear Power Sources Principles”
- The “Benefits Declaration”<sup>6</sup>

### **Role of private companies in space.**

Today many private companies are looking specifically at human space exploration. The major stakeholders in privatization of human space travel are SpaceX, Blue Origin and Virgin Galactic. The main objective of these space organizations is to reduce the cost of space travel by using reusable spacecrafts and make space travel accessible to people who are not trained to be in space. These companies want to make space travel common for normal people. They want to make space vacation common for people who are not astronaut. Virgin Galactic wants to start their space vacation mission form next year. As the problem that we are facing right now is that companies are becoming more and more ambitious about space travel. Now they are not satisfied only with satellite launch into space they want to go beyond that. SpaceX is planning a project to create settlement plans in Mars. Moon Express is planning to send private spacecraft to moon, Bigelow Aerospace plans to make a private space station in the orbit. At the present moment there in no framework which allows the national governments to oversee these organizations and make sure that they adhere to the articles of the UN Space treaties. The companies demand for more flexibility in the treaties which were made 50 years ago. The private growth of space industry hurts the exiting treaties as they have the idea which are against many of the guidelines provided by the United Nations. Today we see not only US, Russia, India, China and European Space agency with ambitious plans but smaller countries have plans to explore space only because of privatization.

### **Need of Space legislation in India**

In India, space comes under the context of science, technology or defense, which literally restricts the concept of space in the country. India is growing is the space race and is starting to dominate big space organizations with projects like the Chandrayaan I & II and the Mangalyaan and many more projects now what India needs is their own set of law regarding the Space expedition, which are backed by the treaties by the UN. An Act related to space will help the government to deal with any legal issues related to space and space crafts without concerning the Science and Technology or Defense sector. India should have law governing the ISRO, the space research organization in India in the similar way how the National Aeronautics and Space Act, 1958 governs the space organization NASA in the

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<sup>6</sup> United Nations Office for Outer Space Affairs, Space Law Treaties and Principles, viewed 22<sup>nd</sup> Feb 2020 < <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html> >

United States. After the NASA Act was created in the US, the country made new laws regarding space crafts, satellites and other space related matters as the country evolved in space. Like the United States, India should also make their own laws related to space so that the space travel in the country becomes less restricted. ISRO is at its peak currently so it needs the laws to function in the best way without any unwanted intervention from the government. Though ISRO has achieved a lot in last two decade by reaching the red planets in the cheapest possible way, discovering water on the surface of moon and planning for its first manned mission in 2021, the Gaganyaan , the organization will run perfectly with an Act regulating it, this will help to lessen the intervention by governments and industries. The proposed bill says that it will dismantle Government monopoly on space and encourage private sectors to invest in the projects by ISRO but without any intervention. The bill was drafted on 2017 and is named as *Space Activities Bill, 2017* it is still to be passed by the parliament to become an Act.

### **Conclusion**

Space is the new interest for mankind. After conquering all the 7 continent, oceans and airspace now mankind is on the way to conquer outer space. Though this process of conquering started in the 1950s and 1960s but in the last decade the idea of conquering space has grown. Now the space organizations are interested to go beyond our natural satellite, the moon. The space organizations mainly want to go beyond the moon for two reasons, firstly they want to make mankind an interplanetary species, as the space is decreasing in Earth with this increasing population, and some scientist also predicts that the environment in the planet will not support life in 600 years, so the space organizations are looking for another planet possibly Mars where they can test the settlement of humans for the foreseen future. Secondly the space organizations are looking for possible planets to use its natural resources, as we know the earthlings have used lot of natural resources and its predicted that all the natural resource of the planet will be drained out by a century or two. The space organizations and the government of many nations are trying to get to the extraterrestrial natural resources because of this shortage of natural resources in earth, the organizations are possibly looking at Titan the largest natural satellite of Saturn. Then there are new private companies which are making space an industry, companies like SpaceX and Virgin Galactic who are planning to make space a spot of vacation and use reusable flights which will help in saving millions of dollars. Today all of the above situations are guided under the UN guidelines as given by the *United Nations Office for Outer Space Affairs (UNOOSA)* in their Outer space treaty. But the problem which arises is that the Space is only protected by the five treaties and guidelines provided by the UNOOSA, only few countries like the Unites States have made laws for space. These lacks in laws made on the topic space create conflicts between the government of the nations and the respective space organizations. Thus, the nations should make laws under the guidance of United Nations guidelines which makes the space organization a free body, away from any government intervention. As said by the higher officials of ISRO a separate Space Act in the country will help the country to work freely in

the field of space with less restrictions. To conclude I would like to say that in today's world the use of space is not just fulfilling the ambitions of a nation but also a necessity for the future of the mankind, so legislation for such an important topic is an urgency and should be adopted by all the nations around the globe.