INTERNATIONAL LAW & SPACE LAW: COMPARISON WITH LAW OF SEAS

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INTRODUCTION

This paper titled *International law and Space law: Comparison with Law of Seas* will be dealing with outer space activities and its effect on the mankind. Law of Space is comparatively a new field of law and is based on the United Nations treaties. But there are a lot of issues which hasn't been resolved till date in Space law. One of the reasons being that, it is very flexible and there is continuous changing interpretation of the law. Due to the change of venture of space programs from government owned to private sector, there is bound to be challenges always which we need to resolve. As there is development in the technology, there has to be development in the law.

In this paper, the researcher will be firstly looking at the development in the Law of space and the various sources of it such as Outer Space Treaty, custom etc. Secondly, the comparison of The Space law and the Law of Seas, as no state can have sovereignty over the outer space and high seas and there is similarity between both the laws, though the emergence of Space law happened much later, it has imbibed ideas from the Law of Seas. Thirdly, the researcher will be looking at whether the outer space treaty is sufficient in this age of development in technology.

THE INTERFACE BETWEEN INTERNATIONAL LAW AND SPACE LAW

In order to determine the cases before it the International Court of Justice has to look at the sources as provided in the Statute of the ICJ Article 38(1). The Article 38 (1) states,

> *The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply: a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states ; b. international custom, as evidence of a general practice accepted as law; c. the general principles of law recognized by civilized nations ; d. subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law*.[1]

Article 38(1) has been followed by the law of outer space. It is an authoritative and complete source of International Law.[2] There was confusion initially as to whether International Law can be applied to Space Law.[3] The Legal experts from states like Brazil, India and France were unsure of its application.

A general agreement was reached between the countries with the assurance that the activities of the space would be conducted in accordance with the existing International Law. Thereafter, Outer Space Treaty 1967[4] was added with Article III. Thereby, few principles of International Law are extended to the Outer Space Law.

[1] Art. 38(1), Statute of the International Court of Justice.
[2] MALCOM SHAW, INTERNATIONAL LAW,6th edn., 70 (2008).
[3] OPPENHEIM'S INTERNATIONAL LAW, 9th edn., 650-656 (2008).
[4] Art. III, The Outer Space Treaty, (1967).

The Space Law is constituted by various treaties. After the Outer Space Treaty, 1967 came into being The Rescue Agreement, 1968[5] and The Liability Convention, 1972[6] which was adopted by UNCOPOUS.[7]

A casualty occurred in 1967 when Apollo 1 caught fired and 3 US astronauts died before take-off and this led to the bringing into force the Rescue Agreement. Considering a similar situation what should be the provision if a space craft enters another state territory by accident or otherwise. Should it be returned to the state which launched it? According to this agreement, the personnel and the spacecraft should be promptly and safely returned to the respective authorities.

The Liability Convention came into being in September 1972 and it state that if damage is caused by a particular authority or state by landing on a different state's territory, then compensation has to be paid by the authorities of the spacecraft.

It is a principle of interpretation that general law is prevailed by particular law. Thereby, whenever a general law is laid down by an authority, a gap is left for specific circumstance which may arise in the future in that area of law. *Lex Specialis* dominates or prevails over the *Lex Generali*. Examples of *Lex Specialis* are The Outer Space Treaty, The Liability Convention and The Rescue Agreement.

According to the International Cooperation in the Peaceful Uses of Outer Space[8] under the UN General Assembly Resolutions of 1987, all the states can use the techniques developed in the field of medical experiments in space and all the states are urged to maintain international cooperation and prevent arms race in the outer space. States cannot put nuclear weapons in the orbit or any kind of weapons on any celestial body in accordance with Article IV of the Outer Space Treaty.

[5] UNGA Res. 2345 (XXII), (3 December 1968) at 12.
[6] UNGA Res. 2777 (XXVI), (9 October 1973) at 27.
[7] UN Doc. A/RES/1348(XIII), (13 December 1958) at 7.
[8] UN Doc. A/AC.105/1133, (3 December 1987) at 12.

Though there is prevention of placing in the outer space the nuclear weapons according to these treaties, still there is no prohibition on placing other weapons and it is an era of Cold War, Gen. Assembly Resolution on Prevention of Arms Race in Outer Space came to the conclusion that these weapons (nuclear) was a threat to the society and the mankind and the present laws are not sufficient enough to prevent it. Thereby, the role of USSR and USA is very important. In order to resolve this problem, complete disarmament is required for which powerful nations have to take necessary steps, for this purpose Conference on Disarmament has a major role.[9] But US has always refused to take part in the negotiation at the Conference on Disarmament. For many years now, satellites have been used for purposes of Militarization like pin pointing the bomb etc.

Custom is another important source of international law. In order to be considered as a custom, there has to be *opinion juris* (a belief that it is binding and there is state practice of it), it should have been practised for a certain period of time for it to be crystallized. But we need to keep in mind that our society is ever evolving due to new inventions and technological developments. Even Space Law is evolving and new situation arise every day. It has been agreed by the judges of ICJ that customary law can be formed even in a short span of time.[10]

In the article by Benjamin Langille, he talks about how the Bush Doctrine became law after the terrorist attack on the World Trade Centre on September 11, 2001. Just after a few hours of the attack, the President announced that, *"there would be no distinction made between the terrorists who committed the act and those who harbour them"*. There is evidence that the announcement by the President of Bush Doctrine became an instant custom within few weeks after the attack.[11] The Bush Doctrine was reinforced by the Security Council and UN General Assembly. Prof. Bin Cheng has come up with a new source of International Law and that it 'Instant Customary Law'. He says that in order to be considered as a customary law, long usage

[9] UN Doc. A/RES/51/44, (10 December 1996) at 7.
[10] OPPENHIEM, *supra* note 3, at 6.
[11] Benjamin Langille, *It's "instant custom": How the bush doctrine became law after the terrorist attacks of September 11, 2001*, available at <https://www.bc.edu/content/dam/files/schools/law/lawreviews/journals/bciclr/26_1/07_TXT.htm> Last visited, 30 March 2018.

of it is not required. It has one major ingredient '*Opinio Juris'* which is sufficient for the establishment of it.

Outer Space Laws are called the Soft Law which includes space resolutions, MoUs etc. It is advantageous even though they are not binding. They are flexible in nature and makes provision for significant growth in this sector. Thereby changes can be brought in quickly as and when required.[12] If it was rigid, then bringing in changes would not be easy. We also have to keep in mind that treaty formation is a long and cumbersome process.

A COMPARISON B/W LAW OF OUTER SPACE AND LAW OF SEAS

As the Space law is still in the growing stage, new issues or circumstances can come into being and the present legislation is not sufficient enough to bring an effective resolution. Thereby, there is a need for reshaping these laws.

Freedom of Outer Space and High Sea

There is close analogy between the Law of outer space and Law of Seas. No one state can claim sovereignty over the high seas or the outer space.[13] The high seas are no one's property and no one state can claim them and they are open to all the nations according to Article 2 of the Convention on High Seas.[14] Irrespective of whether a nation is coastal nation or a landlocked nation, it is open to all nations according to Article 87 of UN Convention on Law of Seas.[15] According to Article 1 of Outer Space Treaty, there is freedom of outer space. Any state can freely explore the entities such as moon, planets, asteroids etc. But they have to abide with the International Law principles.[16]

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[12] I.H.PH. DIEDERIKS VERSCHOOR, AN INTRODUCTION TO SPACE LAW, 11 (2008).
[13] E.D. BROWN, THE INTERNATIONAL LAW OF THE SEA, 223 (1994); C.J. COLOMBOS, THE INTERNATIONAL LAW OF SEA, 6th edn., 324 (1967).
[14] RUWANTISSA ABEYRATNE, SPACE SECURITY LAW, 60 (2011).
[15] UNGA Res. 2777 (XXVI), (9 October 1973) at 27.
[16] Art. I, Treaty on Principles Governing the Activities of States in the Exploration and use of Outer Space, Including the Moon and Other Celestial Bodies, UNGA Res. 2222(XXI), (10 October 1967).

Innocent Passage Right

There is a right to free passage under Article 17 of UNCLOS through territorial waters.[17] Every ship of a foreign state or authority has a right to pass through the territorial waters of another state without any hindrance. This is a part of customary law.[18] The coastal state has an obligation to warn the ship in case there is danger in the water passage of its territory. It has to ensure free and smooth passage of ships and vessels.[19] The passage cannot be termed as innocent if the passage prejudicially affects the interests of the nation passing through the passage. Is there provision for a spacecraft to pass through the aerial territory of other nation? Yes, as it is necessary because a spacecraft requires low and long gliding paths when it enters the atmosphere of earth and they gradually descend and this path can cover the territories of many nations.[20] Thereby, the spacecraft have freedom to pass though the aerial territory of various states without violating their state sovereignty.

Comparison between Astronauts and Seaman

The relation between Astronauts and Seaman is that both the astronauts and the seaman live in a secluded and isolated environment away from the normal life and are dependent upon only the fellow crew members and the passengers for support.[21] The person employed aboard a vessel is called the Seaman and there are conventions to decide the status of Seaman and his rights. But there is no treaty to define the status of astronauts. A broad definition has been given by judges of ICJ; all the persons aboard a spacecraft are to be termed as astronaut.[22] There are privileges conferred on the Astronaut for agreeing to explore a dangerous environment.[23] It is necessary to safe the astronaut according to the Rescue Agreement when a spacecraft lands in a territory. Similarly, whenever a Seaman is ill or sick, he should be taken care by other

[17] Art.17, 1982 United Nations Convention on the Law of the Sea, 1833 UNTS 3 (entered into force on 16 November 1994).
[18] OPPENHIEM, *supra* note 3, at 234.
[19] OPPENHIEM, *supra* note 3, at 6.
[20] OPPENHIEM, *supra* note 3, at 6.
[21] Hamilton, *Astronauts And Seamen- A Legal Comparison*, 10 J. SPACE L. 166, 167 (1982).
[22] MANFRED LACHS, THE LAW OF OUTER SPACE: AN EXPERIENCE IN CONTEMPORARY LAW MAKING, 75 (1972).
[23] Stephen Hobe, *Legal Aspects of Space Tourism*, 86(2) NLR 6, 9 (2007); MARIETTA BENKO, SPACE LAW: CURRENT PROBLEMS AND PERSPECTIVES FOR FUTURE REGULATION, 141 (2005).

members. The treatment expenses of the Seaman and other members who are sick or wounded as to be compensated by the owner of the ship and he shall be liable for any injury or death of the seaman in the course of employment according to the provision of The Ship owners Liability Convention.

What about the criminal charges against an Astronaut or the Seaman? According to Article 27 of UNCLOS, the criminal jurisdiction can be exercised by the coastal state and it can be exercised once the alien or foreign ship leaves its internal water and not before that. There is also a similar provision to prosecute an astronaut under the criminal law. Many eminent and prominent scholars have come to the conclusion that rules of jurisdiction which is applicable to vessels can similarly be applied mutatis mutandis to the spacecrafts.[24] This is deducted from Article 3 of The Outer Space Treaty and International Law can be used in the Law of Space. Under the 'Territoriality Principle' a foreign astronaut can be criminally prosecuted and under the 'Effects Doctrine' a person who has committed wrong in a foreign state can be prosecuted by the state if it is dangerous and harmful to the states territory.[25]

Vertical Sovereignty

There is debate all over about the delineation of state sovereignty and the outer space i.e., the vertical sovereignty. This delineation is important to ensure equal access to the space but this delineation is not easy to achieve. Even though the outer space is free and not under any state's sovereignty, if the states are allowed have sovereignty, then it would be problematic as other states would be precluded from using the space. On the other hand, if it is kept too low, the vertical sovereignty, then there would be an issue of safety of the neighbouring state. There is problem of defining the space when the space starts and when the air ends and hence it has become difficult to define the vertical sovereignty. This is similar to the sea, wherein there is no boundary distinguishing between territorial waters and the high sea. The Law of Sea convention says that the territorial sovereignty is till 12nm but some states such as Ecuador, Liberia etc. have claimed around 120nm but this contention was not accepted by the UN.

[24] Mare Nostrum, *A New International Law of Sea*, 86 AJIL, 1139 (1992).
[25] JAMES CRAWFORS, BROWNLIE'S PRINCIPLES OF PUBLIC INTERNATION LAW, 463 (2012).

Thereby, in spite of Law of Seas convention came into being, still the problem persists over varying claims by states.[26] There are various reasons as to why we don't have a codified law on the Outer Space. Since 1975, COPUOS[27] has been considering to define and delimit the outer space. The US thinks that this demarcation should not be done till there is a pressing need for it, there is fear of excessive sovereignty claims, fear that setting the boundary might lead to it being unable to be changed in the future, fear that setting it so high would hamper the space activities and also there is a hope that we can set a much lower boundary than what could be set now in the future. Due to all this concerns, we have not come into conclusion whether we need a codified law on the space or not.

Why India needs a comprehensive Space Law?

The US government has recently in November 2015 passed the US commercial space legislation, SPACE Act[28] in order to facilitate the growth of commercial space industry by encouraging the sectors (private) investment and to create stable and regulatory conditions for other purposes. This Act does not assert exclusive rights or sovereignty or ownership over any celestial body. But some scholars argue that it violates Outer Space Treaty.

Space law experts for many years now have been vigorously discussing about the need of comprehensive space law legislation in India in order to cover various issues and solve problems between different states in the outer space law. This will help India in achieving to be the world space power at the global stage.

Since the launch of the historic Sputnik 1 by Soviet Union, which is the 1st artificial earth satellite, the mankind has been ushered with serious concerns about the taking care of responsibilities and liabilities of various nations in the space world.

Due to the growth of activities in the global space, and in addition of private sector, the Outer Space Treaty is being considered insufficient and inadequate to tackle the upcoming issues in the outer space. This treaty forbids the weapons deployment in the outer space and any kind of

[26] Dean N Reinhardt, *The Vertical Limit of State Sovereignty*, available at : <https://scholar.smu.edu/cgi/viewcontent.cgi?article=1126&context=jalc> Last visited: 30th March 2018.
[27] UN Committee on the Peaceful Uses of Outer Space 1959.
[28] Spurring Private Aerospace Competitiveness and Entrepreneurship Act of 2015.

exploitation of it. But the reality is that many big countries have exploited the outer space to experiment with anti-satellites. Thereby there is a need for a comprehensive legal system to bind all the countries to share a peaceful relationship in the outer space. The UN has been negotiating with its member states to bring about a holistic and comprehensive space treaty to deal with emerging issues in the outer space. But this can become reality only when the so called front ranking nations such as Russia, USA and India etc. play a proactive role in shaping it to be agreed by other members of the UN. From the Indian perspective, in order to boost the scope of ISRO (Indian Space Research Organisation), there is a need for space law. In order to facilitate private sector entry, the government is working towards bringing up a new space law.

The new space law would allow the private companies to take up the business of building satellites and launching vehicles as is the trend in West Europe and North America. Once the space law comes into existence, then the private sector can focus on building satellites etc, ISRO can focus on other important researches in the outer space in order to facilitate the growth of India in this field.

IS THE OUTER SPACE TREATY BECOMING OBSOLETE?

The United Nations General Assembly adopted the Outer Space Treaty on 2th Jan 1967. Ninety nine states have ratified it and twenty five states have signed it till 2008. The relevance of it is that all the nations which feel that they will be exploring the space in the future have signed it. Many issues of the outer space are resolved by this treaty. The nations are allowed to explore the outer space when Article I is read with Article III. Appropriation of outer space is prohibited under Article II and placement of any kind of weapons is prohibited under Article IV. The astronauts who accidently or due to emergency land in a foreign state must be returned to the launching state under Article V. Thereby, the states ae liable internationally for any kind of activities carried out in the outer space. The treaty has not been able to keep pace with the advancing technological developments. It's been so many years since this treaty came into

force and there are no major changes and hence it has resulted into ambiguity between the states.

When the treaty came into being, taking people to the outer space was not a commercial activity unlike now. Nowadays, tourists are taken to ISS after receiving a huge amount of money from them. But the problem here is that the treaty does not refer to tourists. It is not clear as to whether the tourists could be included under Article V of the treaty as 'Astronauts'. Only when the tourists are treated as tourists will they come under the ambit of Article V and they can be protected and returned to the space vehicle launching state during emergency or accidental landing in a foreign state. There are varied opinions on the definition of 'Astronaut'. Some people say that all persons aboard the space vehicle must be treated as astronauts which include tourists, passengers, scientists etc.[29] Whereas, on the other hand, people say that only those persons who are involved in operating the space vehicle was be considered as Astronauts.[30] Several questions are associated with the concept of space tourism; however few years down the line, this could become a reality which would be familiar to all. Several space tourism ventures are developing with time, slower, but they are.[31] A question that needs to be answered here is whether the concept of space tourism will be categorised under aviation or space, as there are considerable difference between the Air law and the space law. While aviation is based on complete sovereignty of the state, space law is not based on the same. Since the legal regime governing aviation is itself detailed and explanatory, it would be rational to categorise space tourism as falling within Air Law.

What is meant by 'weapons of mass destruction' is very ambiguous which is mentioned in Article IV of the Treaty. The accepted definition of this word is that it includes chemical, lethal, radioactive, biological and atomic weapons which have the capability of killing many people.[32] Confusion arises has to weather anti-satellite weapons can be included here which are designed

[29] LACHS, *supra* note 22, at 75.
[30] Anel Ferreira-Snyman, *Legal Challenges Relating to the Commercial Use of Outer Space, with Specific Reference to Space Tourism*, 17 POTCHEFSTROOM ELEC. L.J. 1, 21 (2014).
[31] Tanja Masson Zwaan, *Space law in the 21st century*, in CURRENT DEVELOPMENTS IN AIR AND SPACE LAW, 208 (Singh R, et al, ed., 2012).

[32] PAUL LARSEN, SPACE LAW : A TREATISE, 515 (2009).

to destroy other states satellites, especially those of enemies. Confusion also exists as to what is meant by 'space debris' under Article IV of the treaty. Space debris are essentially the non-functional objects created by the humans in the orbit around the earth.[33] They include defunct satellites and collision fragments which may pose significant risk as even a small marble could be sufficient to destroy a satellite.[34] The objects in the space needs to be protected from these debris. Currently the possibility of protecting the spacecraft is low due to the difficulty in tracking these minute objects, which poses a higher risk of the satellites meeting with accidents. In terms of liability in these types of accidents, under the outer space treaty and the liability convention, the launching state is liable for damage caused due to its space object.[35] However the difficulty in such cases would be defining the term "space object" and associating a state with the said object. There might be several objects of these kind which may not associated with any state, such objects would be undesirable.

CONCLUSION

In this paper the researcher has tried to answer 3 questions: What is Law of Space and where is it derived from; the relationship between Space Law and Law of Seas; whether the present law is capable of dealing with challenges which we are facing today.

The international law principles apply to the Law of Space. We have treaties relating to the jurisdiction of the spacecraft, liability of the states, rescue and return of the astronauts. We also have the customary international law as one of the important sources of Law of Spaces to form 'instant custom'. The opinion of legal experts and 'soft law' helps in filling the legal vacuum which develops due to changing circumstances. In case we are left with no law on a particular issue, we can always take recourse to the Law of Seas which has been in existence much before the Law of Space and it has similarity with the Space Law such as privileges given to the Astronauts and Seaman, right of innocent passengers has in both the Law of Space and Law of

[33] ZWAAN, *supra* note 28, at 205.
[34] ZWAAN, *supra* note 28, at 205.
[35] ZWAAN, *supra* note 28, at 206.

Seas the people are in an isolated place away from the normal life only with few crew members and fellow passengers.

We come to the conclusion after analysis of the present laws and the problems faced in the Law of Space, that the present laws are insufficient to address the developments in this sector.

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