



Space Law and Its Position in India

By:

Neel Agarwal

Amity Law School, Noida



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ABSTRACT

'Space law' is the body of law that oversees space-related exercises, including global and home-grown arrangements, laws and guidelines. This paper aims to discuss the origin and the evolution of Space Laws, as a field of International Jurisprudence. It discusses various International Treaties in the field of Space Laws which include- The Outer Space Treaty, Rescue Agreement, Moon Treaty and many such other Multilateral Treaties which form the basis of International Space Laws. This paper also covers India's position to all these treaties and how they have affected the growth of the Space Sector in India. Moreover, it discusses the latest development made in the field of Space Laws at the Municipal Level in India, and what is the Legislatures vision for the future of Space Jurisprudence in the country. In the end, few suggestions are given on ways to boost the Space Sector in India with the need to make the Indian Space Sector future proof. Also, the need for International Space Treaties to be regularly updated is also highlighted keeping in light the

speed of innovation and scientific developments happening across the globe on a daily basis.

INTRODUCTION TO SPACE LAWS

'Space law' is the body of law that oversees space-related exercises, including global and home-grown arrangements, laws and guidelines. Space law incorporates spatial observation, harm credit, weapons use, salvage endeavours, nature preservation, data sharing, new Technology, and morals: Other legitimate fields, for example, authoritative law, stock law, arms control law, protection law, ecological law, criminal law, and business law, are likewise included inside the space law.¹

The origin of 'Space Law' can be traced back to 1919, when worldwide law perceived the influence of each state in the airspace legitimately over their region, and was later settled at the 'Chicago Convention' in 1944. 'Space Policy' (which means global year) was set up by the 'Worldwide Council of Scientific Unions'. The 1957 dispatch of the Soviet Union's first satellite, the Sputnik 1, provoked the US Congress to pass the Space Act, along these lines shaping the National Aeronautics and Space Administration (NASA). Since space investigation required intersection worldwide outskirts, it was right now that 'space law' turned into a free field in customary 'aeronautics law'.

* Neel Agarwal, Student, Amity Law School, Noida,
neelagarwal10@gmail.com

1. "What Is Space Law? Becoming a Space Lawyer"
<https://legalcareerpath.com/space-law/> accessed 29 July, 2022

Since the 'Cold War', the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (the "Outer Space Treaty") and the International Telecommunications Union have served as the constitutional legal framework and set of principles and procedures constituting space law.²

SPACE LAW TREATIES

The 'Committee for the Peaceful Use of Space' is the forum for the development of international space law. The group has concluded five international agreements and five policies on space-related activities.

These accords deal with issues such as non-acquisition of space by any country, arms control, freedom of exploration, liability for damage caused by astronauts, safety and rescue of spacecraft and astronauts, and prevention of harmful interference, space activities and environment, announcement and recording of space activities, scientific investigation and exploitation of natural resources in space and resolution of disputes.

Each treaty emphasizes the need to focus on space, space operations and the benefits that can be derived from space to enhance the well-being of all nations and humanity, with an emphasis on enhancing international cooperation.

2. "After the bar"
https://www.americanbar.org/groups/young_lawyers/publications/after-the-bar/ accessed July 29, 2022

The Five international treaties have been negotiated and drafted in the COPUOS³:

- '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 "SPACE TREATY").
- 'The '1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space' (the "Salvage Agreement").
- 'The '1972 Convention on International Liability for Damage Caused by Space Objects' (the "Obligation Convention").
- 'The '1975 Convention on Registration of Objects Launched into Outer Space' (the "Enrolment Convention").
- 'The '1979 Agreement Governing the Activities of States on the 'Moon' and Other Celestial Bodies' (the 'Moon' Treaty).

OUTER SPACE TREATY⁴

'The Outer SPACE TREATY', officially an agreement on the principles governing the activities of states in the geographic expedition and use of space, including the 'Moon' and other celestial objects, is the basis for 'International

3 Robert.wickramatunga, "United NationsOffice for Outer Space Affairs" (Space Law Treaties and Principles) <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties> accessed 1 April, 2022

4 "The Outer Space Treaty". [United Nations Office for Outer Space Affairs] Available at: <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introouterspacetreaty> accessed 2 April 2022

Space Law'. The treaty was ratified in the 'United States', the 'United Kingdom' and the 'Soviet Union' on 27 January 1967 and came into effect on 10 October 1967. As of June 2020, 110 countries were parties to the treaty, while another 23 countries had signed the treaty but the verification had not been completed. In addition, Taiwan, now recognized by 14 UN member states, ratified the agreement in 1971 before the UN General Assembly voted to transfer China's seat to the 'People's Republic of China' (PRC).

The Space Treaty refers to the basic legal framework of international space law. In its principles, state parties prohibit contracts such as placing 'weapons of mass destruction' in Earth orbit, installing them on the 'Moon' or any other celestial object, or placing them in outer space. It restricts the use of the 'Moon' and other celestial objects exclusively for peaceful purposes and explicitly prohibits the use of any weapons for testing, conducting military manoeuvres, or establishing military bases, installations, and forts (Article IV). However, the treaty does not prohibit conventional weapons from being put into orbit, so some of the most destructive attack tactics, such as kinetic bomb blasts, are still permissible. The agreement also provides for space exploration to benefit all countries, and the space is free for all states to explore and use.

This agreement explicitly prohibits any government from claiming a celestial object such as the 'Moon' or a planet. Article II of the treaty states that "outer space, including the 'Moon' and

other celestial objects, shall not be subject to national ownership by sovereignty, use or occupation, or any other means."

Being primarily a weapons control agreement for the 'Peaceful use of Outer Space', it provides adequate yet, vague terms for new space missions such as lunar and asteroid excavation. It is therefore debatable whether the extraction of resources falls into the prohibited language or whether the use involves commercial use and exploitation. Seeking clear guidelines, private US companies have lobbied the US government to legalize space mining in 2015 with the introduction of the U.S. Commercial Space Launch Competitiveness Act. Many Countries including Luxembourg, Japan, China, and India are now introducing similar national legislation to legalize the acquisition of alien resources. This has created some controversy over legal claims over the excavation of celestial objects for profit.

RESCUE AGREEMENT⁵

The arrangement for the recovery of space explorers, the arrival of space travellers and the recovery of articles dispatched into space, additionally alluded to as the Rescue Agreement, is a worldwide treaty illustrating the rights and commitments of the States with respect to the recovery of people in space. The pact was received by a consistent vote of the 'United Nations' 'General Assembly'(Resolution 2345 (XXII)) on 19 December 1967. It came into power on December 3, 1968. Its arrangements expand on

5 *Ibid*

recuperation game plans in Section V of the 1967 Space Agreement. Despite the fact that Section 5 of the Space Agreement contains a greater number of determinations and subtleties than the Rescue Agreement, the Rescue Agreement' actually experiences the chance of an unclear draft and diverse translation.

The UN General Assembly embraced the content of the Rescue Agreement by Resolution 2345 (XXII) on 19 December 1967. This Agreement was opened for signature on 22 April 1968 and came into power on 3 December 1968. The International Space Station, and the 'European' 'Organization for the Exploitation of Meteorological Satellites' have marked their acknowledgment of the rights and commitments allowed by the Agreement.

Any state which is signatory the Rescue Agreement will give all help with safeguarding the team of a rocket that arrived inside the limits of that State for reasons, for example, mishap, trouble, crisis or impromptu landing. In case an incident in a zone past the fringes of any country, any other State Party in a situation to do so will aid the hunt and salvage tasks if fundamental.

SPACE LIABILITY CONVENTION⁶

'The 'Convention on International Liability for Damage Caused by Space Objects', otherwise called the Space Liability Convention, is an

arrangement set up in 1972 that extends the credit laws made in the 1967 Outer 'SPACE TREATY'. In 1978, an atomic blast The 'Soviet' satellite 'Kosmos 954' in the 'Canadian' locale prompted the main requests revered in the Convention. The 'Liability Convention' was concluded and opened on March 29, 1972. It became effective on 1 September 1972. Starting at 1 January 2019, 96 nations have confirmed the 'Liability Convention', 19 have marked however not yet sanctioned four global associations (The European Space Agency, the 'European Organization' for the 'Exploitation of Meteorological Satellites, the Intersputnik International Organization of Space Communications', and the European Telecommunications Satellite Organization) have pronounced their acknowledgment of the rights and commitments accommodated in the Convention. The earth of all space objects presented inside their space. This implies that any individual who opens a rocket, on the off chance that it is presented in Government A, or in Government A, or if State A makes the dispatch happen, State A is exclusively liable for the harm caused to that space object.

◆ **Associated launches**

In the event that two states cooperate to dispatch a space object, those two states are mutually liable for the harm brought about by the item in different manners. This implies that the harmed party may sue for harming one of the two states.

⁶ Available at:

<https://treaties.un.org/doc/Publication/UNTS/Volume%20961/volume-961-I-13810-English.pdf> Accessed 28, March, 2022

◆ Claims between States only

The state must sue under an obligation meeting against a state. The meeting is intended to enhance current and future public laws that give pay to parties harmed by space exercises. Under most public overall sets of laws an individual or partnership can sue someone else or another substance, the obligation ought to be brought uniquely at the state level under the Convention. This implies that if an individual is harmed with a space article and looks for pay under the Convention on Liability, that individual must organize to sue the nation that dispatched the space object that made the harm his nation.

REGISTRATION CONVENTION⁷

The 'Convention on Registration of Objects Launched into Outer Space' (ordinarily known as the 'Registration Convention') was embraced by the 'United Nations' 'General Assembly' in 1974 and came into power in 1976. As of December 2018, it has been affirmed by 69 areas.

The culmination expects states to give the 'United Nations' data on the axis of each divine body. Enrolment for the dispatch of the program was at that point kept up by the 'United Nations' because of a 1962 General Assembly goal.

⁷ 'United Nations Official Document'. United Nations Available at: [https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/3235 \(XXIX\)](https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/3235 (XXIX)) accessed 25 March 2022

The Registration Agreement and four other space law arrangements are administered by the 'United Nations' Committee on the Use of Foreign Peace.

The European Space Agency, the 'European Organization' for the 'Exploitation of Meteorological Satellites', the 'European Telecommunications Satellite Organization', and the 'Intersputnik International Organization for Space Communications' have given an announcement perceiving legitimate rights and commitments

The register is kept up by the 'United Nations' Office for Outer Space Affairs' (UNOOSA) and incorporates:

- Name of launching State
- An appropriate designator of the space object or its registration number
- Date and territory or location of launch
- Basic orbital parameters (Nodal period, Inclination, Apogee and Perigee)
- General function of the space object.

'MOON' TREATY⁸

The agreement governing the activities of the states in the 'Moon' and other celestial bodies, known as the 'Moon' Treaty or the 'Moon' Agreement, is a plural agreement that transfers the jurisdiction of all celestial bodies (including the

⁸ 'Moon Agreement'. (United Nations Office for Outer Space Affairs) Available at: <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/moon-agreement> accessed 17 March 2022

orbits around such bodies) to the participating countries. Therefore, all actions are in accordance with international law, including the 'Charter of the United Nations'.

It has not been approved by any state that engages in or plans to do self-propelled human spaceflight (e.g. the 'United States', most of the member states of the 'European Space Agency', 'Russia' (formerly the 'Soviet Union'), the 'People's Republic of China' and 'Japan') since its creation in 1979. Thus it has nothing to do with international law. As of January 2019, 18 states are parties to the treaty.

The 'Moon' Treaty proposes to establish an "international rule" or "framework of laws" applicable to the 'Moon' and other celestial bodies within the 'Solar System', including orbits or other orbits around them.

The 'Moon' Treaty outlines a number of rules outlined in Article 21. In Article 1, the 'Moon' declares that it must be used to benefit all states and all peoples of the international community. It reiterates that lunar resources are "not subject to national quota by sovereignty, utility or industry, or in any other way." Imposes, and some of them are discussed below:

Weapons testing preclude any military utilization of divine bodies, remembering atomic weapons or army installations for circle. The utilization of military faculty for logical examination or some other tranquil purposes will not be precluded. (Article 3.4)

- Provides the structure for the foundation of a global co-usable system, including proper methods, to oversee dependable abuse of the Moon's regular assets. (Article 11.5)
- Disallows changing the environmental parity of the heavenly bodies and states must make a move to forestall incidental contamination of the climate of divine bodies, including Earth. (Article 7.1)
- Resources Proper and safe utilization of normal lunar assets by all state parties with equivalent sharing of the advantages got from those assets. (Article 11.7)
- Placing Personnel work force or hardware on or beneath the surface doesn't comprise a copyright. (Article 11)
- Party will have the opportunity to utilize logical examination and study and on the 'Moon' with no separation by any gathering. (Article 6) Samples got during research exercises are accepted to be accessible for research in all nations and mainstream researchers. (Article 6.2)
- Any region or domain pronounced to be of uncommon logical intrigue will be assigned as International Scientific Defense. (Article 7.3)
Like any occurrences that jeopardize human life or wellbeing, just as any indications of extra-terrestrial life ought to be accounted for to the 'United Nations' and the public right away. (Article 5.3)
- State parties will ensure that NGOs within their jurisdiction exercise power on the 'Moon' and

engage in activities only under the continued supervision of the appropriate state party. (Article 14)

All parties must inform the 'United Nations' and the public about their activities related to the study and use of the Moon. (Article 5)

Agreement Any State Party to this Agreement may propose amendments to the Agreement. (Article 17)

Compared to the 'Space Agreement', it reaffirms most of the provisions, and adds two new ideas to address the exploitation of natural resources in space: the application of the concept of 'common heritage of mankind' to space operations, and the need for participating nations to formulate a regime that sets out appropriate procedures for orderly mining. Many conferences did not reach a consensus on these two issues.

INTERNATIONAL LEGAL PRINCIPLES AND DECLARATIONS

While the Five Treaty's mentioned above discuss about various legal issues relating to outer space such as non-national space allocation, arms control, freedom of inspection, debt damage caused by space objects, safety and rescue of spacecraft and aerospace, prevention of hazardous disruptions to space and ecosystem services, notification and registration of space operations, scientific investigation and exploitation of space resources and dispute resolution, The 'United Nations' 'General Assembly' adopts five declarations and legal principles that promote the

application of international law, as well as interdepartmental communication. The five declarations and terms are⁹:

- **'Declaration of Legal Principles governing Land Activity in External Assessment and Use' (1963)¹⁰**

All spatial surveys will be conducted in good faith and will be equally open to all countries compliant with international law. No single nation can claim ownership of the outer space or any celestial body. The functions performed in the space provided must be in accordance with international law and the nations performing the specified functions must accept the responsibility of the government agency or non-government agency concerned. The objects included in the space are subordinate to their ethnic group, which includes people. Items, parts, and items acquired outside the national authority will be returned after identification. When a nation introduces something into space, they are responsible for any damage that occurs worldwide.

- **The 'Pledge that Regulates the Earth's Functions on the 'Moon' and Other Celestial Bodies' (1979)**

An arrangement exists to advance space investigation yet in addition to keep the 'Moon'

9 'Space Law Treaties and Principles'. (United Nations Office for Outer Space Affairs) Available at: <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html> Accessed April 2, 2022

10 'Alexander, K., 'UNODA Treaties'. (Disarmament.un.org). Available at: <http://disarmament.un.org/treaties/t/moon> Accessed April 2, 2022

and other divine bodies in an exceptional situation for human legacy, all nations ought to have equivalent rights to lead research on the 'Moon' or other heavenly bodies. 'Weapons of mass destruction' of any sort, including atomic weapons and army installations, have been seriously limited by the deal. A 'Joined Nations' goal additionally expressed that all State Parties could direct their business under the new 'Moon' or some other great association as long as endeavours were made to shield it from defilement. All space activities are needed to be joined to the country and any harm to other hardware gear or offices brought about by another gathering must be completely repaid to that country. Any recognition of a perilous danger, for example, a radio broadcast ought to advise the Secretary-General of the 'Joined Nations' and the global academic network right away.

All postings lasting longer than 60 days should inform the UN Secretary-General and the major scientific community every 30 days of progress. Any samples collected from space should be immediately available to the scientific community. The treaty does not cover meteorites that fall to Earth by natural means. Currently no nation is performing its functions in a space that has ratified this agreement. This may mean that the 'Monthly Agreement' is probably a failed agreement because no two nations have come to sign or have ratified the treaty.

• **'Principles governing the International Use of Artificial Satellite Global Broadcasting for International Television' (1982)¹¹**

Elements of this sort must be acted as per the sovereign privileges of States. The proposed exercises should "advance the free conveyance and trade of data and information in the social and logical fields, aid training, social and monetary, particularly in non-industrial nations, improve the personal satisfaction, everything being equal, and give recreational regard to American political and social respectability". Each United States has similar option to seek after these exercises and should hold its commitments under its locale. Arranging exercises need to talk with the Secretary-General of the 'Joined Nations' for subtleties of exercises.

• **'Principles Concerning the Distance of the Earth from Outer Space' (1986)¹²**

Fifteen terms are set out under this section. The basic understanding comes from the following definitions provided by the 'United Nations' Office for Outer Space Affairs:

(a) The term "distant sensation" means the sensation of the surface of the earth from space by means of radio waves generated, reflected or:

11 '*Space Benefits Declaration*'. [United Nations Office for Outer Space Affairs] Available at: <https://www.unoosa.org/oosa/en/ourwork/spacelaw/principles/space-benefits-declaration.html> Accessed April 2, 2022

12 '*Space Benefits Declaration*'. [United Nations Office for Outer Space Affairs] Available at: <https://www.unoosa.org/oosa/en/ourwork/spacelaw/principles/space-benefits-declaration.html> accessed 3 April 2022

separated by sensors, for the purpose of improving natural resource management, land use and environmental protection;

(b) The term "core data" means that raw data obtained by remote sensors held by a celestial object and transmitted or transmitted to: from space by telematic wire in the form of electronic signals, by film, magnetic tape or other means;

(c) The term "data used" means products derived from the processing of key data, which are required to make such data usable;

(d) The term "analytical data" means data from the definition of processed data, data inputs and information from other sources;

(e) The term "remote sensing functions" means the operation of remote sensor space systems, basic data collection and storage channels, and functions in: processing, interpreting and disseminating used data.

• **‘Principles relating to the use of nuclear energy in an external environment’ (1992)**

"The nations presenting nuclear material on board will try to protect individuals, humans, and the biosphere from radiation hazards. The construction and use of nuclear weapons on board will ensure, with great confidence that hazards, in practical or accidental situations, are kept below acceptable standards."

• **‘Declaration of International Cooperation in the Examination and Use of a Non-Profit Area and the Desire of All Nations, Taking Special**

Needs of the Needs of Developing Countries’ (1996)¹³

"States are free to determine all aspects of their international cooperation in the assessment and use of external space in an equitable and acceptable manner." The interests and interests of developing countries and countries with available territorial systems based on international cooperation with the best possible location. International cooperation should be done in ways that are considered most effective and appropriate for the countries concerned, among them, among others, governments and non-government; all countries, most countries, regions or two countries; International cooperation between countries in development at all levels. "

INDIA’S POSITION ON INTERNATIONAL SPACE LAWS

It should be noted that India has signed all of these conventions and agreements forming the core of foreign policy. India has also been involved in and expanding and supporting various international forums such as the 'United Nations' ‘Committee on Foreign Peace’ (UNCOPUOS), the ‘International Council of Scientific Unions’ (ICSU), and the ‘International Astronautical Federation’ (IAF) etc. in shaping globalization and policy. Although India is a member of all

13 ‘Matignon, L. ‘*The definition of Space Law - Space Legal Issues on Space Law*’. (Space Legal Issues).

Available at: <https://www.spacelegalissues.com/space-law-the-definition-of-space-law/> accessed 2 April, 2022

these treaties it does not have comprehensive space laws related to space.¹⁴

SPACE JURISPRUDENCE IN INDIA

India is consistently exploring the area in a more peaceful manner with a view to encourage more public investments in the sector. If India is to promote public investment in the sector and enhance the space sectors capabilities, it must have the law outlined in the books, with a vision for the day to day operations of the Space Sector being aided by public investments, and ISRO being free to devote its time and resources in further visionary endeavours. The current plans are to adopt the industrial zones near the area port in Sriharikota as a further city. With 100 per cent foreign direct investment planned by the government, it seems to be following the massive waves that could call the imagination of voters, businesses, investors and researchers alike. So, keeping in view such things, it becomes imperative that India develop Municipal Space Laws of its own to keep up with the ever evolving field of Space Laws, and consequently, under the guidance and leadership of the Department of Space and the Indian Space Research Organisation ('ISRO'), the Government of India has introduced a number of Bills and Programmes for the Space Law Sector. These include:

SPACE ACTIVITIES BILL, 2017¹⁵

14 'India's Draft Space Law: Opening Up The Final Frontier?' (Transport – India). Available at: <https://www.mondaq.com/india/aviation/761766/india39s-draft-space-law-opening-up-the-final-frontier> accessed 2 April 2022

The Space Activities Bill¹⁶ applies to all of India, including, among other things, citizens who do any work in space other than India. A person may perform 'commercial space work' (defined as an income-generating activity or profit) in accordance with a license issued by the 'Central Government'. The issued license can only be transferred with the written consent of the 'Central Government' and may be revoked, suspended or terminated if possible, inter alia, breach of conditions, public health interest, monarchy, protection of India or if the license damages India's interests. With due regard to industry sensitivity, licensing is inevitable. However, care must be taken to prevent excessive control that could prevent the entry of the private sector.

The term 'person' is widely defined and may include non-residents who may apply for commercial space business licenses in India. It may be noted that 100% of foreign direct investment is permitted in the satellite sector in accordance with the industry guidelines determined by the Department of Atonement or 'ISRO'. The term 'space work' even includes the use of a space device that has led to professional

15 Aswathi Pacha 'The Hindu Explains: What is the Space Activities Bill, 2017?'

Available at: <https://www.thehindu.com/sci-tech/science/the-hindu-explains-what-is-the-space-activities-bill-2017/article20680984.ece> accessed 27 March 2022

16 Aditya Pareek and Megha Pardhi., 'India Needs a Comprehensive Space Policy.' Available at: <https://www.hindustantimes.com/opinion/india-needs-a-comprehensive-space-strategy-101644571361711>. accessed 28 March 2022

concerns. That every app that uses satellite-based service or a link such as GPS devices will need a license.

The eligibility for licensing will be determined by the "Central Government" under its legislative power. Many authorities such as Australia have identified the financial and technical means of the applicant. 'ISRO' has done the same in its RFPs inviting the involvement of the private sector, and it is expected that similar policies will be enacted under the rules. Appropriate and timely approaches should encourage innovation, especially from the outset, without compromising on technology.

The obligation to link space disasters is an important aspect of the Bill. The Outer 'SPACE TREATY' provides that states "may be liable to the rest of the world for any harm to another State or its natural and legal persons, if such harm is caused by their space objects". Similarly, Liability Convention places a burden on the provinces of the space objects presented in their area, regardless of who presented them.

Accordingly, the 'Space Activities Bill'¹⁷ provides that a licensee shall be liable to the 'Central Government' for any 'claims' brought by the State in respect of any damage or loss arising from commercial space operations or aeronautic material covered under the license. However, the amount of debt will be determined by the 'Central Government'.

¹⁷ *ibid*

Openness, especially with regard to high debt, can be an important factor for independent players who want to enter the industry. The 'National Nuclear Non-Proliferation Duty Act', 2010, sets an example of how money is paid by a person in the workplace and the same benefits that can be applied in relation to environmental-related disasters. Authorities such as 'China' and 'Australia' define the purchase of insurance by licensees to repay that debt and the same applies to the Bill, where a license issued will set out the insurance the licensee is required to obtain. Like the 'United States', India may consider adopting a multi-storey and integrated credit structure across the value chain showing thousands of items in the space sector, as well as an analysis of potential damage in each category, to ensure equity debt is attached.

A state of mind intellectual property is essential for us to innovate. Bill provides that the establishment of any form of 'intellectual property rights' (IPR) will be protected in accordance with the law while serving 'the primary purpose of protecting the national interest'. Such a title, which means to protect the national interest, may put the IPR at risk in the State's action and may raise concerns about foreign parties. In addition, proprietary ownership of all IPRs developed, manufactured or created on a spacecraft is considered to have been granted by the 'Central Government'.

This is similar to 'United States' law, where the title of a space object is found in the State – but

'NASA' has a comprehensive exemption policy, which only maintains a free, non-exclusive, state-of-the-art use license and the right to intervene if the contractor does not improve. The Bill should similarly provide for the process of obtaining licenses (instead of patents) or provide compensation to an independent party for that IPR.

Other provisions of the Bill also raise some concerns. The term "Central Government" has not been defined and that is why the mandate to administer the Bill and the sector is unclear. Other provisions also have the potential to offend such as allowing the 'Federal Government' to seek such information from a 'personal affairs' license holder as the 'Federal Government' requires, or allows the 'Central Government' to take copies of the documents from the licensee. The Bill also introduces new opportunities such as space exploration and tourism.

The latest anti-satellite missile test (ASAT) has once again lit up space in India. The Bill is a direct step especially in view of India's commitment under international agreements. However, transparency in terms of licensing, eligibility, credit and IPR will provide much-needed incentives for private sector growth in the sector.

THE INDIAN SATELLITE COMMUNICATION POLICY (SATCOM)¹⁸

The 'Division of Space', in organization with the 'Branch of Telecommunications' and the 'Division of Science and Technology', built up the 'Satellite Communications Policy' in 1997 ('SATCOM' Policy) 1. Through the 'SATCOM' Policy, the administration meant to build up the satellite broadcast communications industry in 'India' and accordingly, the accentuation of the approach was on (a) the advancement of 'satellite correspondences', the presentation of car and the landmine business in India; (b) making foundation worked through the 'Indian National Satellite System' ('INSAT') open to a huge aspect of the economy; (c) advance private area interest in India's aeronautic trade; (d) pulling in unfamiliar interest in the satellite interchanges area. 'SATCOM' Policy Framework additionally set up a guide to approve 'INSAT' to rent non-administrative associations, permitting Indian gatherings to offer types of assistance, for example, Indian satellite TV uphold, approving Indian specialists to inform and enrol satellite and organization working frameworks from India.

As 'SATCOM's strategy didn't indicate how this approach could be actualized, the Department of Space Affairs, in 2000, created strategies, rules

18 'A policy framework for satellite communication in India (ISRO)' Available at: <https://www.isro.gov.in/sites/default/files/article-files/indias-space-policy-0/satcom-policy.pdf> accessed 31 March 2022

and methodology for executing 'SATCOM's arrangement system. The practices and rules gave by the 'Branch of Atmosphere' centre around the utilization and improvement of the INSAT organization, particular treatment for Indian satellites, and power distribution of Indian satellites by private market players and so on¹⁹

In any case, 'SATCOM' strategy and ensuing rules, after their underlying blooming, neglected to uncover private investment because of the absence of straightforwardness and government obstruction including the 'Indian Space Research Organization' ('ISRO'). The lead writer of this Booklet has emphatically spoken to numerous worldwide and satellite organizations and knows that these organizations battled to reach and enter the Indian space industry however were less effective. Just a couple of utilizations to set up Indian satellite frameworks are incorporated with 'ISRO' with a couple of special cases. Therefore, India's space industry keeps on being overseen, controlled and completely used by the Government. Indeed, even satellite correspondence to date is administered by the SATCOM Policy and Procedures and Guidelines established in 2000.

Recommendations by the National Digital Communication Policy, 2018

There have been numerous conversations in the past to overhaul the current SATCOM Policy by

¹⁹ 'Procedures for SatCom Policy Implementation' (ISRO) Available at: <https://www.isro.gov.in/update/08-aug-2014/procedures-satcom-policy-implementation> accessed 30 March 2022

the 'Branch of Atmosphere' to stay up with crises and accordingly, 'Advanced Communication Policy', 2018 (NDCP 2018) has concurred that it will long require the area to audit 21-year (21) 'SATCOM' Policy. NDCP 2018 properly proposed various estimates where satellite correspondence innovation could be fortified in India. A portion of the proposals incorporate:

1. Review of satellite communications regulation: NDCP 2018 has agreed that licensing and regulatory conditions that limit the use of 'satellite communications', such as speed restrictions, band allocation etc. They need to be updated, VSAT conformity necessitate need to be simplified to ensure faster exit and the range of permitted services needs to be expanded to effectively use high-end satellite systems using the appropriate licensing method.
2. Increase in satellite telecommunications technology in India: Review of 'SATCOM's telecommunications services policy to create a dynamic, neutral and technologically competitive and competitive state, taking into account international development and the socio-economic needs of the country; to make available new spectrum bands for satellite communication services, to explore bandwidth requirements for the various bands used for satellite communication in consultation with stakeholders.
3. Establish an environmentally friendly satellite communications system: 'SATCOM' policy also needs to focus on simplifying the distribution and distribution management system, approvals and

permits related to satellite communications systems, promoting localization and building satellite-related infrastructure through appropriate policies and kingship.

4. 5G and IoT-led needs: Government should also address the growing need to revitalize existing SATCOM Policy with the advent of 5G and Internet of Things connections.

5. Attract foreign investment in the telecommunications sector: NDCP 2018 emphasized the importance of promoting private sector investment in the Indian space industry and attracting foreign investment in the sector (up to 100%, but subject to 'Department of Space' and 'ISRO' approval) for inclusion satellite communications in India.

Recent Reforms

Despite the above recommendations, SATCOM policy remained unchanged. COVID 19 and the financial crisis however have prompted the Indian Government to introduce changes to the US \$ 360 billion space market (where India's contribution is limited to only 3%). On June 24, 2020, the Ministry of Lands announced the establishment of a new governing body, called the Indian National Space Promotion and Authorization Centre (IN-SPACe). IN-SPACe aims to provide a level playing field for private companies using Indian space infrastructure and to promote and direct the private sector in space operations through incentive policies and a friendly regulatory environment.

In a recent interview, 'ISRO' Chairman, Mr 'K Sivan' also explained the proposed role and powers of 'IN-SPACE' and confirmed that 'IN-SPACE' will be established as a fourth independent entity under 'ISRO' and will not affect 'ISRO' performance. 'IN-SPACE' will function as an independent body and will not be influenced by 'ISRO' and will not affect 'ISRO' activity. In addition, the decision to provide testing services or 'ISRO' programs to private companies will be made by IN-SPACE in consultation with 'ISRO' and once this decision has been made it will be binding on 'ISRO' and other stakeholders.

With the above changes it is expected that private companies will now have the opportunity to make their own satellite systems / rockets and use the 'ISRO' launch site with the output cost compared to the previous role of supplying only rocket and satellite components to 'ISRO'.

In addition, 'New Space India Limited' (NSIL), a public sector enterprise established on March 6, 2019 under the aegis of the 'Department of Space Affairs', will also seek to redirect space operations from a 'purchased' model', thus ensuring the full utilization of space assets.

It is expected that these new changes will allow 'ISRO' to focus more on research and development activities, new technologies, travel missions and human aviation programs.

**'INDIAN NATIONAL SPACE PROMOTION
AND AUTHORIZATION
CENTRE' ('IN-SPACE')²⁰**

The 'Government of India' authorized the establishment in June 2020 of a new body to ensure greater independent participation in Indian space operations, he described the decision as "historic" and 'Indian Space Research Organization' ('ISRO') Chairman 'K Sivan' said that we are part of an easily accessible to all.

The new 'Indian National Promotion and Authorization Centre' ('IN-SPACE'), which will be operational in six months, assesses the needs and requirements of independent actors, including educational and research institutions, and examines ways to meet these needs. 'ISRO'. The current 'ISRO' infrastructure, geophysical and space resources, 'scientific and technical resources' and data are planned to be made accessible to the stricken citizenry so that they can do their space related work.

The new arm of the 'Meteorological Department', 'IN-SPACE', will have its own chairman and board and will regulate and promote the development of standard satellites, rockets and commercial delivery services through the Indian industry and experiments.

'IN-SPACE', or 'Indian Space Promotion and Authorization Centre', has been named as the

world's fastest growing spacecraft to ensure equality in the role of the Indian sphere. Dr 'Sivan' said it would work independently and in accordance with 'ISRO' "without taking anything from it".

The agency was approved by the 'Union Cabinet' on Wednesday and inaugurated by 'External Affairs Minister' 'Jitendra Singh' in 'Delhi'.²¹

CONCLUSION

International Space Laws have evolved a lot since the first-time man launched an object in Space. Now they cover almost every dimension of Space to help in better governance and allow for more opportunities for the public to invest in Space related expeditions and projects. While the 'Outer' 'SPACE TREATY' has formed the basis of Outer Space Jurisprudence, Space Law is still an immensely evolving field with new frontiers opening up at a steady pace. With the advent of Information Technology, Outer Space has become ever so approachable and this accessibility calls for more legal oversight to avoid any wrongdoings and to ensure that all activities are done in an orderly fashion. The International Space Treaties need to be regularly amended to keep up with the speed of innovation and ensure that no country has the opportunity to exploit old and redundant laws for its advantage in a way causing disadvantage to other nations.

²⁰ 'IN-SPACE Structure' (ISRO)' Available at: <https://www.ISRO.gov.in/indian-national-space-promotion-and-authorization-center-space/space-structure> accessed 28 March 2022

²¹ Amitabh Sinha 'IN-SPACE explained: what it means to the future of space exploration'. Available at: <https://indianexpress.com/article/explained/in-space-india-space-missions-private-participation-isro-6476532/> Accessed April 28,2022

Indian Space Laws are yet to evolve to keep up with the changing times. Although in the past couple of years India has made major leaps in the field of Outer Space through Science and Technology, the Legal Aspect of Outer Space in India is yet to catch up with the practical aspect.

The decision of major countries like the 'United States of America' to allow private players has given an insight on how to give a boost to the Space Sector, and the Indian Legislature needs to take inspiration from such moves and find indigenous ways to bolster the Space Sector and make it future proof and ensure India doesn't lag behind in the Space Development Race.

This may be done by giving more autonomy and access to resources to the Space Program Regulator of India i.e. the Department of Space. Moreover, private organisations should be given the opportunity to conduct their own Research and Development in this field. This will give a two-fold advantage to the Space Sector, as firstly, the ease with which the private sector can tap resources and technology will enhance and speed up innovation, and secondly, the profit making goal of the private sector will also pave the way for low cost yet highly effective innovations. Although this has been the case with the space missions carried out by the Indian Space Research Organisation, however that was done for want of financial resources and not with a profit-making strategy.

It is a long and tedious journey for India to reach the level of developed countries when it comes to

'Space Laws', requiring a lot of political will and a passion for Science. However, the seed of these have been sown and the winds of change have started blowing for India.