

VACUUM IN INDIAN SPACE LEGISLATION

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“Somewhere something incredible is waiting to be known.”

- Carl Sagan

ABSTRACT

Comprehensive Space legislation is India's ultimate need, as India begins to take Its leap into the world market, Space technology cannot be left far behind. India being a developing country can be proudly placed along with the developed countries such as United States and Russia. However for India to grow, it must expand its sectors to private companies and investors to provide better technology or collaboration to move forward in a competitive world market. Countries like Canada, Germany and Ukraine, which have not progressed as much in space technology have a carefully drafted legal framework. Thus it is evident that in order for strengthening the position in the Global space sector India needs a comprehensive law.

Keywords : *Space Law , Treaties and Policies, International Law , Indian Legislation,*

Introduction.

The vast cosmic space is something that everyone is curious and have the thirst to know more and more. The advancement in space exploration inevitably causes a nation to grow. India's space history dates back to the 1960's with the guidance of Vikram Sarabhai who is the founder of the

ISRO along with INCOSPAR. Sarabhai was best known for his ‘leapfrogging’ vision, into which social application of space technology would catapult developing countries out of poverty.¹ The Department of Space (DOS) is a nodal agency for space activities. It functions with an aim to bring the benefits of space technology and application to the benefits of the society as well as to aid national development.² India has always been advanced in the field of space exploration. India launched its first sounding rocket from Thumba in Kerala in 1963, it made a revolution in Indian history. Polar Satellite launch vehicle (PSLV) is the third generation launch Vehicle of India. PSLV emerged as a reliable and versatile workhorse launch vehicle. The vehicle successfully launched two spacecraft “Chandrayaan-1 in 2008 and Mars orbiter spacecraft 2013” and also launched numerous Indian and foreign customer satellites. India further reinforced this trajectory in January 2025 when the Indian Space Research Organisation successfully completed the docking manoeuvre of its twin satellites under the Space Docking Experiment (SpaDeX) mission, making India only the fourth country after the United States, Russia and China to demonstrate autonomous in-space docking capability.³⁴ Even though the nation being a developing country, it stands at par with the achievements of the developed countries in the field of space technology but has not yet reached its full potential. Developed countries like the US has private aerospace manufacturers like SpaceX who has made irreplaceable contributions such as Falcon 9 and Starlink. They are reusable launch vehicles which help in drastically cutting the cost of reaching orbit. The government partnership and aggressive market diversification helped SpaceX to grow into a dominant force in US Space industry. India has taken decisive steps towards liberalisation. This trajectory is reflected in projections that India's share of the global space economy, currently around two per cent of a market expected to expand from roughly USD 596 billion in 2024 to USD 1.8 trillion by 2035, could rise to nearly eight per cent over the next decade, underscoring the scale

¹ Haitian Ma, “Leapfrogging India: Vikram Sarabhai and the developmental promise of geocentric Spaceflight”, *The British Journal For the History of Science*, Volume 58 Special Issue 2, June 2025, available at: <https://www.cambridge.org>, (Last Visited on September 9, 2026.)

² “Draft Space Activities Bill, 2017”, *GK Today*, December 1, 2017, available at: <https://www.gktoday.in>, (Last Visited on September 9, 2026)

³ Press Information Bureau, ‘ISRO Successfully Completes Space Docking of SpaDeX Satellites’ (Department of Space, Government of India, 16 January 2025) <<https://static.pib.gov.in/WriteReadData/specificdocs/documents/2025/jan/doc2025116486201.pdf>> accessed 16 September 2026.

⁴ “PSLV”, Indian Space Research Organisation, Department Of Space, Government Of India, Last updated on July 31, 2026, available at: <https://www.isro.gov.in>, (Last Visited September 9, 2026).

of opportunity that a stable statutory environment could help the country capture.⁵ India already have space policies and regulations that guide commercialization and privatisation, however only a direct statute can remove the ambiguities and uncertainties that arise while dispute resolution in space sector. The Indian Space Policy 2023 explicitly recognises Non Government Entities across the entire space value chain. This shift is reflected in the growing role of private companies. Article VI of the Outer Space Treaty 1967 makes it clear that state bear international responsibility for national activities in outer space whether carried out by governmental or non governmental entities. The provisions further requires that Activities of Non Governmental Entities be subject to “Authorization and continuing supervision” by the appropriate state⁶. It is equally important to not overregulate the industry, Over regulation of space sector may potentially deter investment in the country or may direct such investment into other countries having more flexible regulations.

International Space Law

The 1960s were a landmark decade for space exploration, featuring milestones like the launch of the first weather satellite (1960), the first human in space (Yuri Gagarin, 1961) and the first moon landing (Neil Armstrong, 1969).

During this decade, the United Nations negotiated and adopted the Outer Space Treaty the first in a series of international space treaties. Endorsed in 1967 by the then three major spacefaring powers—the United States, the United Kingdom, and the former Soviet Union-the treaty laid the foundation for international space law. In 1967 government signed the Outer Space Treaty. Since then, much has happened as rapid technological advancements have drastically changed space activities⁷

The United Nations Treaties and Principles on Space Law have created a Committee on the Peaceful Uses of Outer Space (COPUOS) which is the only international forum for the

⁵ IANS, ‘India Poised to Expand Its Share in Global Space Economy: Report’ (IANS Live, 8 September 2025) <<https://ianslive.in/india-poised-to-expand-its-share-in-global-space-economy-report--20250908175206>> accessed 16 September 2026.

⁶ Khushi Mokati, “ Private Space Actors And State Responsibility Under International Space Law: Lessons From India’s Emerging Space Sector”, Centre for Research In Air And Space Law, MNLU Mumbai, May 20, available at: <https://www.crasl.in> (Last Visited September 10, 2026)

⁷ “International Space Law Explained”, United Nations, Peace And Security, available at: <https://www.un.org> (Last Visited September 10,2026)

development of international Space Law. Since its inception, the Committee has concluded five international instruments and seven sets of legal principles governing space related activities.⁸

A. International space treaties

1.Outer Space Treaty,1967

‘Treaty on principle governing the activities of states in the exploration and use of outer space, including the moon and other celestial bodies, 1967’

The Outer Space Treaty, is the foundation of international space law which includes articles, this treaty currently has 118 state parties. The state parties to this treaty believing that the exploration and use of outer space should be carried on for the benefit of all peoples irrespectively if the degree of their economic or scientific development and such co-operations will contribute to the development of mutual understanding and to the strengthening of friendly relations between states and peoples.⁹

Article IV of The Outer Space Treaty, 1967 states that, State Parties to the Treaty undertake not to place in orbit around the earth any objects carrying nuclear or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner.¹⁰ According to the treaty State Parties to the treaty shall regard astronauts as envoys of man kind in outer space and shall render them all possible assistance.¹¹

Further Article VI of Treaty specifies the international responsibility for national activities in outer space, including the moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities

⁸ Prof (Dr.) V. Balakista Reddy and Dr. Rahul J. Nikam (eds.), Space Law and Contemporary Issues, Perspectives on Asia-Pacific Region,160, Centre for Air and Space law (CASL) NALSAR University of Law, Hyderabad First Edition, January 1,2012.

⁹ The Outer Space Treaty, 1967.

¹⁰ *Id. art.6*

¹¹ *Id. art5*

are carried out in conformity with the provisions set forth the present Treaty. The activities of non-governmental entities in outer space including moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty. When activities are carried on in the outer space, including the moon and other celestial bodies, by an international organisation, responsibility for compliance with this Treaty shall be borne both by the international organisation and by the States Parties to the Treaty participating in such organization.¹²The Treaty holds State Parties liable for any damages caused to another State Party. In summary, this Treaty proved pivotal in transformation and advancing space exploration.

2. Rescue Agreement, 1968.

‘Agreement on the Rescue of Astronauts, the Return of Astronauts and the return of Objects Launched into Outer Space, 1968’

The Rescue Agreement was considered and negotiated by the Legal Subcommittee from 1962 to 1967. Consensus agreement reached the General Assembly in 1967 and the Agreement entered into force in December 1968. The Agreement, elaborating on elements of articles 5 and 8 of the Outer Space Treaty, provides that States shall take all possible steps to rescue and assist astronauts in distress and promptly return them to the launching State, and that States shall, upon request, provide assistance to launching States in recovering space objects that return to Earth outside the territory of the Launching State¹³. This Treaty seek to give further concrete expression to the rights and obligations contained in the Outer Space Treaty, specifically through the elaboration of agreements regarding liability for damage caused by space objects and the return of astronauts and space vehicles.

3. Liability Convention , 1972.

‘The Convention on International Liability for Damage Caused by Space Objects, 1972’

The Liability convention was considered and negotiated from 1963 to 1972. Elaboration on Article 7 of the Outer Space Treaty, the Liability Convention provides that a launching State shall be absolutely liable to pay compensation for damage due to its faults in space. The Convention also

¹² *Supra* note 7, art. 6

¹³ “Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space” UNOOSA, available at: <https://www.unoosa.org> , (Last Visited September 11, 2026).

provides for procedure for the settlement of claim of damages. The Parties to the treaty taking into consideration that, notwithstanding the precautionary measures to be taken by states and international intergovernmental organizations involved in the launching of space objects, damage may on occasion be caused by such objects, and believing that the establishment of effective rules and procedures will contribute to the strengthening of international cooperation in the exploration and use of outer space for peaceful purposes.¹⁴

4. The Registration Convention, 1976.

‘Convention on Registration of Objects Launched into Outer Space, 1976’

The Registration Convention was considered and negotiated by the Legal Subcommittee from 1962. It was adopted by the general assembly 1974. The Registration Convention expanded the scope of the United Nations Register of Objects Launched into Outer Space that has been established by resolution 1721B (XVI) of December 1961 and addressed issues relating to States Parties responsibilities concerning their space objects. Article II of the Treaty states that, when a space object is launched into earth orbit or beyond, the launching States shall register the space object by means of an entry in an appropriate registry which it shall maintain. Each launching State shall inform the Secretary-General of the United Nations of the establishment of such a registry¹⁵

5. Moon Agreement, 1984.

‘Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 1984’

The Agreement is also known as Moon Agreement. It elaborates many provisions of Outer Space Treaty as applied to the moon and other celestial bodies, by the Legal Subcommittee from 1972 to 1979 and it was adopted by the General Assembly in 1979 in resolution 34/68. The Agreement providing that those bodies should be used exclusively for the peaceful purpose, that their environment should not be disrupted and in addition to that the Agreement provides that the moon

¹⁴ “Convention on International Liability for Damage caused by Space Objects”, United Nations Office for Outer Space Affairs, available at: <https://www.unoosa.org> , (Last Visited September 11).

¹⁵ “Convention on Registration of Objects launched into outer space registration, Registration convention.”, UNOOSA, available at: <https://www.unoosa.org> , (Last Visited September 11).

and its natural resources are common heritage of mankind and that an international regime should be established to govern the exploitation of such resources.¹⁶

It is notable that India has ratified four of these five foundational United Nations space treaties, namely the Outer Space Treaty, the Rescue Agreement, the Liability Convention and the Registration Convention, but has only signed, without ratifying, the Moon Agreement of 1979. This selective and incomplete adherence to the international treaty framework further illustrates why a domestic statute is needed to consolidate India's international commitments into an enforceable national law.¹⁷

B. International space legal principles and declarations

These agreements are negotiated from 1958 to 1996, addressed a range of technical issues, from television broadcasting to space debris mitigation and nuclear power in space.

1. The Declaration of Legal Principles 1964.

‘Declaration of Legal Principle Governing the Activities of States in the Exploration and Use of Outer Space (XVIII), 1962’

The declaration of legal principles established foundational guidelines for space exploration. Its principal premises to confirm the freedom of space exploration for all countries, international responsibility for space activities, and the importance of international cooperation.¹⁸

2. Broadcast principle 1982.

‘Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting’

This principles provides guidelines for countries using Satellites for direct international broadcasting, addressing potential political, economic and cultural implications. Under this principle activities in the field of international direct television broadcasting by satellite should be

¹⁶ “Agreement governing the activities of states on the Moon and other celestial bodies”, Moon Agreement, UNOOSA, available at: <https://www.unoosa.org> , (Last Visited September 10, 2026)

¹⁷ Vision IAS, ‘Sweden Becomes 38th Country to Join Artemis Accords’ (Vision IAS Current Affairs, 19 April 2024) <<https://visionias.in/current-affairs/news-today/2024-04-19/international-relations/sweden-becomes-38th-country-to-join-artemis-accords-artemis-accord>> accessed 16 September 2026.

¹⁸ Supra note 5

carried out in a manner compatible with the sovereign rights of States, including the principle of non-intervention, as well as with the right of everyone to seek, receive and impart information and ideas as enshrined in the relevant United Nations instruments.¹⁹

3. Remote Sensing Principles, 1986

In the area of international law, remote sensing has been traditionally understood as sensing of the Earth's surface from space by making use of the properties of electromagnetic waves emitted, reflected, or diffracted by the sensed objects, for improving natural resources management, land use, and the protection of the environment. This principles provides guidance on remote sensing²⁰.

4. The Nuclear Power Source Principles, 1992

Recognizing both the hazardous nature of nuclear power sources as well as their necessity in particular cases, in 1978 the General Assembly endorsed recommendations for the Scientific and Technical Subcommittee of the Committee on the Peaceful Use of Outer Space to formally consider the technical aspects of and safety measures relating to the use of nuclear power sources in outer space. These considerations resulted in the adoption of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space (NPS Principle) by the General Assembly in 1992. Under the Principles, Member States are required to inform the Secretary-General regarding safety assessments carried out prior to launch of nuclear-powered space objects for dissemination to other States and the general public.²¹

5. The Benefits Declaration, 1996

'Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account Needs of Developing Countries'

International cooperation in the exploration and use of outer space for peaceful purposes shall be conducted in accordance with the provisions of international law. It shall be carried out for the

¹⁹ "Principles governing the use by states of Artificial and Satellites for International Direct Television Broadcasting (UN)", Lewik s.r.o, 2021, available at: <https://www.lewik.org> (Last Visited on September 11,2026)

²⁰ Frans G. Vonderdunk, "United Nations Principle on Remote Sensing and the User", Research Gate, January 2002, available at: <https://www.researchgate.net> , (Last Visited on September 11,2026)

²¹ "Nuclear Power Sources", UNOOSA, available at: <https://www.unoosa.org> (Last Visited on September 12,2026)

benefit and in the interest of all States, irrespective of their degree of economic, social or scientific and technological development, and shall be the province of all mankind. Particular account should be taken of the needs of developing countries.²²

6. The Space Debris Mitigation Guidelines, 2007

It sets international standards for minimizing space debris by regulating spacecraft design, operation and disposal.²³

7. The Safety Framework for Nuclear Power Source Applications, 2009²⁴

It provides international best practices for the safe use of nuclear power in space missions, covering all mission phases from launch to disposal.

India's Space Regulatory architecture.

India's legal framework in its space sector is policy driven rather than statute driven. India does not have a comprehensive legislation of its own despite being ranked as one among the top 5 major space agencies. A proper legislation is needed to ensure that there arises no ambiguity and there exists legal clarity in managing the liabilities that arise while developing sustainable operations in the space sector. As for now Indian space sector is governed by policies, guidelines, sector specific laws and regulations.

A. Constitutional provisions

- a. Outer space legislation in India falls under the exclusive domain of the parliament through entry 97 of List 1 (The Union List) of schedule 7 read with Article 246 of the Constitution. The term outer space is not explicitly listed in the seventh schedule and therefore it comes under the residuary power of the Parliament.
- b. Article 73 defines the extent of the executive power of the Indian Union. In the sphere of space exploration and regulation, it grants the central government two vital powers. They are ;

²² "Resolution Adopted by the General Assembly", UNOOSA, available at <https://www.unoosa.org> (last Visited September 12)

²³ Supra note 20

²⁴ *Id.*

Legislative Alignment: which extends the executive authority to all matters where the parliament has power to enact laws (such as defence, foreign affairs and space technology) and

Treaty Enforcement: which empowers the government to exercise rights, authority, and jurisdiction derived from international treaties or agreement.²⁵

- c. Article 51(c) is the constitutional anchor for India's international peace obligations. This Article empowers the state to 'foster respect for international law and treaty' and 'encourage settlement of international disputes by arbitration'.²⁶ The failure to legislate under Article 51 read with Article 253 has created a liability vacuum where India remains internationally responsible for private failures without domestic resources as in the case of *Devas Multimedia Pvt Ltd v Antrix Corporation Ltd (2022)*²⁷ which exposed that without a robust space Act, India faces billions of liability internationally with no domestic legal shield. The scale of this exposure is illustrated by the fact that Antrix was, at different stages of the dispute, held liable under an ICC arbitral award of about USD 562.2 million and a separate United States enforcement claim exceeding USD 1.2 billion, figures that illustrate how the absence of a domestic statute leaves the government to manage space related commercial risk through litigation rather than settled law.²⁸
- d. Article 253 empowers the parliament to formulate laws implementing international treaties, agreements and conventions to which India is a party³. Which would remain as the basis for a future space act to implement UN Space Treaties. The non implementation of international space treaties through domestic legislation under Article 253 remains a lacuna.²⁹

B. Executive Authorities.

²⁵ "Extent of Executive Power of the Union: Article 73", Constitution of India.net, available at : <https://constitutionofindia.net> (last visited September 10)

²⁶ "Space laws in India: An exigency?", Vox Legis, available at: <https://voxlegis.co.in> (last Visited September 10)

²⁷ *Devas Multimedia Pvt. Ltd. v. Antrix Corporation Ltd.*, (2022) 11 SCR 291 (Supreme Court of India, 17 January 2022).

²⁸ Manupatra, 'Delhi HC Sets Aside Arbitral Award Requiring Antrix to Pay Over 560 Million USD to Devas Multimedia' (Manupatra Roundup, 30 August 2022)

<<https://updates.manupatra.com/roundup/tagsearch.aspx?tag=Antrix>> accessed 16 September 2026.

²⁹ Sandeepa Bhat B, "Space law in Indian context 2019", SSRN eLibrary, available at: <https://papers.ssrn.com> (Last Visited September 10, 2026)

To spearhead the space research activities, Indian National Committee For Space Research (INCOSPAR) was set up in 1962 under the Department of Atomic energy.

Subsequently Indian Space Research Organisation (ISRO) was established in August 1969, in place of INCOSPAR . The Government of India constituted the Space commission and established Department Of Space (DOS) in June 1972 and brought ISRO under DOS in September 1972 ³⁰

The DOS has the primary objective of promoting development and application of space science and technology assist in all- round development of the nation. The Space Commission formulates the policies and oversees the implementation of the Indian Space programme to promote the development and application of space science and technology for the economic benefits of the country³¹. DOS implements these programmes mainly through Indian Space Research Organisation (ISRO).

The ISRO operates through a network of major research centres, autonomous bodies and specialised units across India.

The autonomous bodies and institutions under the administrative control of the Department Of Space includes Indian Institute Of Space Technology (IIST), National Atmospheric Research Laboratory (NARL), North Eastern Space Applications Centre (NESAC), Physical Research Laboratory (PRL).

Some of the major Research and Development centres and units of ISRO include Vikram Sarabhai Space Centre (VSSC), IN- SPACE, New Space India Limited(NSIL), Human Space Flight Centre (HSFC) , National Remote Sensing Centre (NRSC) , The Antrix Corporation etc.³²

These bodies help India in moving forward in the space sector through technological advancements, commercialization etc.

For example IN- SPACE is a single windowed , independent, nodal agency that functions as an autonomous agency in the Department Of Space . The agency acts as an interface between ISRO and Non Government Entities (NGEs) and assesses how to utilise India's

³⁰ "Genesis", ISRO, available at: <https://www.isro.gov.in> , (Last Visited September 10,2026)

³¹ "Department of Space And ISRO HQ", ISRO, available at: <https://www.isro.gov.in> , (last Visited September 10)

³² *Id.*

Space resources better and increase space based activities³³. The organisation in consultation with ISRO works towards meeting the demands of the private Entities.

The scale of this facilitation role has grown steadily: by August 2026, IN-SPACe had granted 113 authorisations to 52 Non-Government Entities across the space value chain, out of more than 440 space technology start-ups registered with the Government's Start-up India portal, reflecting the rapid expansion of private participation that a dedicated statute would need to accommodate.³⁴

New Space India Limited (NSIL) is another unit of ISRO , It's the commercial arm of ISRO with the primary responsibility of enabling Indian industries to take up high technology space related activities and is also responsible for promotion and commercial exploitation of the products and services emanating from the Indian Space Programme.³⁵

C. Policies Adopted

a. INDIAN SPACE POLICY 2023.

The Indian Space Policy 2023 has been formulated as a dynamic framework to help implement the reform visions approved by cabinet in space domain by opening doors for enhanced participation of NGEs with an aim to provide them a level playing field. It's Vision is to augment space capabilities; enable, encourage and develop a flourishing commercial presence in space ; use space as a driver of technology development and derived benefits in allied areas ; pursue international relations, and create an ecosystem for effective implementation of space application among all stakeholders; for the nations socio economic development and security, protection of environment and lives, pursuing peaceful exploration of outer space, stimulation of public awareness and scientific quest.³⁶ As per the policy Non Government Entities shall be allowed to undertake end- to- end activities like offer communication satellites , establish and operate launch infrastructure, provide services for safe operation and maintenance in space etc.. in the space sector subject to the guidelines and regulations as prescribed by IN - SPACE . The Space policy 2023

³³ *Id.* IN-SPACE.

³⁴ IANS, 'India's Space Sector Sees 440 Startups, 18 Get IN-SPACe Authorisations: Govt' (IANS Live, 13 August 2026) <<https://ianslive.in/indias-space-sector-sees-440-startups-18-get-in-space-authorisations-govt-20260813152739>> accessed 16 September 2026.

³⁵ "NSIL", ISRO, available at: <https://www.isro.gov.in> (last Visited September 11)

³⁶ "Indian Space Policy -2023", available at: <https://www.isro.gov.in> , (Last Visited September 12).

suggests that the work to be done shall be divided and restructured and assigned among the four departments. The policy mandates that ;

1. The Indian Space Research Organisation. (ISRO) – The policy directs ISRO to transition away from regular routine operational and manufacturing activities like building regular , launch services, Satellite fabrication , and commercial production. Now it's Focus is mainly on Research and Development of Advanced Technologies , Next Generation launch Vehicles , Human Spaceflight (Ganganyaan) and other deep space missions and planetary exploration ³⁷
2. IN – SPACE : The Single Window Designated to Supervise space activities of both NGEs and Government Entities. Any private actor seeking to build Satellites, operate ground stations, launch vehicles , or disseminate remote sensing data must obtain IN – SPACE authorisation. It's the only door for private sector to enter the space race³⁸.
3. New Space India Limited (NSIL) : The Commercial Wing. It is the commercial public sector undertaking, under DOS which is tasked with commercialising space Technologies and platform on a demand driven basis and operating launch vehicles and infrastructure.³⁹
4. Department Of Space (DOS) : The DOS retains overall policy oversight, distributes the DOS budget, handles international cooperation, and administers dispute resolution.

The Indian Space Policy 2023 should be distinguished from several adjacent instruments. It is not the same as Space Activities Bill , a draft legislation that circulated in 2017 that would create statutory licensing and liability rules; the 2023 policy is administrative and cannot by itself impose binding penalties or confer legal rights which is why a dedicated statute remains awaited. ⁴⁰

b. SATCOM POLICY 1997

³⁷ Supra note 26

³⁸ Supra note 27, (Last Visited September 12)

³⁹ Id.

⁴⁰ Supra note 27

India's Satellite Communication Policy (SATCOM policy) frequently referred to as legacy policy of 1997 is the first policy formulated by India to open up the space and broadcasting sector. The policy is primarily shaped and regulated by key government bodies and key decision makers in the telecommunication , science and technology and space sector. Union Minister of Communication Jyotiraditya M. Scindia addresses the SATCOM technology as “ the threshold of a revolution – a revolution born in the sky , carried by satellites, but destined to transform lives on the ground”⁴¹. One of the fundamental aim that the policy framework for Satellite Communication seeks to achieve in more use and furthering the development of capabilities built in India in the area of satellites, launch vehicles and ground equipment design and sustaining these capabilities. Making available the infrastructure built through INSAT to a larger segment of the economy and population is another corner stone of the policy ⁴². The Indian National Satellite (INSAT) System is one of the largest domestic communication Satellite systems in Asia Pacific region with nine operational communication satellites placed in Geo–stationary orbit. Established in 1983 with the commissioning of INSAT -1B A, it initiated a major revolution in India's communication sector and sustained the same later. The Amendment made in the year 2000 of the 1997 policy Norms, Guidelines and Procedures 2000 (NGP -2000) Allowed private Entities to operate and have their own Satellite with the clearance from DOS.⁴³ These policies mark the inception of advancements in communication satellites and space sector. The SATCOM 1997 policy has been superseded by new policies like Indian Space Policyholder 2023, although elements of its foundational framework remain active there arises a shift in the regulatory framework away from the restrictive position to more open, demand driven and private sector enabled model.

The lack of statutory regulation that helps distinguish SATCOM from Telecom has caused issues in this sector as there is no proper allocation policy which lead to the regulatory and policy dispute between Reliance Jio v Elon Musk's Starlink, with Bharti Airtel initially siding with Starlink in favour of administrative allocation as it does not ensure a level playing field . Satellite spectrum is not typically allocated by auction, but is instead allocated by the administration, But Mr. Ambani's

⁴¹ Samrat / Allen / Murali , “Union Minister of Communication Jyotiraditya M. Scindia inaugurates SATCOM Summit at IMC 2025”, Ministry of Communications, October 8,2025,available at: <https://www.pib.gov.in> , (Last Visited 13th September).

⁴² “A policy framework for Satellite- communication in India”, Indian Space Association, available at: <https://ispa.space> , (Last Visited 13th September).

⁴³ *Id.*

Reliance says that an auction is necessary to ensure fair competition, given the lack of clear legal provisions in India on how Satellite broadband services can be offered directly to people ⁴⁴The satellite spectrum allocation battle is not just a telecom dispute but is also an evident remark on India's space legal vacuum where policies have to govern and compete with a 20 Billion Dollar market without a Parliamentary statute. This dispute has since moved toward resolution: in September 2026 the Digital Communications Commission approved the bulk of the Telecom Regulatory Authority of India's recommendations for administrative allocation of satellite spectrum, prescribing a usage charge of four to five per cent of adjusted gross revenue for an initial five year term, thereby settling the allocation methodology even though the underlying legal vacuum in space specific legislation remains unaddressed.⁴⁵

c. REMOTE SENSING DATA POLICY 2011

National Remote Sensing Centre is one of the primary centres of Indian Space Research Organisation (ISRO) , Department Of Space (DOS). NRSC has the mandate for establishment of ground stations for receiving Satellite data, generation of data products, dissemination to the users , development of techniques for remote sensing application including disaster management support, geospatial service for good governance and capacity building for professionals, faculty and students.⁴⁶ The 2011 policy replaced the 2001 policy by opening up the remote sensing sector through removal of restrictions to facilitate more users to get high resolution data for developmental activities. The National Remote Sensing Centre will be vested with the authority to acquire and disseminate all Satellite remote sensing data in India both from Indian and Foreign Satellites for the purpose of development activities. It controls how Satellite imagery is acquired, shared and managed.

This liberalisation in remote sensing data has since been complemented by the wider opening of the geospatial sector, through the February 2021 Guidelines for Acquiring and Producing Geospatial Data and the National Geospatial Policy notified in December 2022, both of which

⁴⁴ Soutik Biswas, "Musk v. Ambani : Billionaires battle over India's Satellite internet", BBC, October 22,2024, available at: <https://www.bbc.com> , (Last Visited September 14).

⁴⁵ The Wire, 'DoT Approves TRAI's Proposal for Satellite Broadband Services in India' (The Wire, September 2026) <<https://m.thewire.in/article/tech/dot-approves-trais-proposal-for-satellite-broadband-services-in-india>> accessed 16 September 2026.

⁴⁶ "Indian Remote Sensing Data Policy", 2011, ICIMOD, available at: <https://www.lib.icimod.org> ,(Last Visited September 14).

removed prior approval and security clearance requirements for Indian entities and were projected to help the domestic geospatial economy cross Rs 63,000 crore by 2025, showing how allied policy reform has kept pace with the space sector even in the continued absence of an overarching statute.⁴⁷

d. FOREIGN DIRECT INVESTMENT 2024.

The Indian Space Policy 2023 was notified as an overarching, composite and dynamic framework to implement the vision for unlocking India's potential in Space Sector through enhanced private participation. In line with the vision and strategy under the Indian Space Policy 2023, The Union Cabinet has eased the FDI policy on Space Sector by prescribing liberalisation of The FDI . Under the amended FDI Policy 100% FDI is allowed in space sector, the entry route varies from 49% for launch vehicles and creation of spaceports etc.. and 74% for Satellite- Manufacturing and Operation , Satellite data products etc.. to a 100% for manufacturing the components of a satellite. Beyond these percentages in the aforesaid sector, the activities would be as under the government route. This liberalisation has already begun to translate into measurable private capital formation, with Indian private space companies reported to have attracted approximately USD 618.5 million in cumulative investment by mid-2026, a signal that investors are responding to policy signals even as they continue to await the certainty that only a parliamentary statute can provide.⁴⁸⁴⁹

These policies and amendments help in increasing private sector participation which would the help generate employment, introduce new and advanced technology and help Indian companies compete with the global value chains. The policy also helps India to manufacture the products and facilities within the country thereby engaging in the 'Make In India' initiative of the government. The involvement of private sector in the industry would accelerate India's position in the modern space race. India's status as a global space superpower can only be secure with proper statutory regulation that move beyond executive policies.

⁴⁷ Drishti IAS, 'National Geospatial Policy 2022' (Drishti IAS Current Affairs, 6 January 2023) <https://www.drishtias.com/daily-updates/daily-news-analysis/national-geospatial-policy-2022/print_manually> accessed 16 September 2026.

⁴⁸ Indian Masterminds, 'India's Space Startup Revolution: Private Investment Crosses \$618.5 Million, 400+ Startups Active' (Indian Masterminds, 25 July 2026) <<https://indianmasterminds.com/news/government/india-private-space-sector-investment-618-million-219075/>> accessed 16 September 2026.

⁴⁹ "Cabinet approves amendment in Foreign Direct Investment (FDI) policy on Space Sector", Ministry of Commerce and Industry, February 21, 2024 , available at: <https://www.pib.gov.in> , (Last visited September 16).

D. The Space Activities Bill

India's Space Activities Bill 2017 was an initiative to provide for a dedicated space legislation for India. The draft bill was a welcome start in building a legally binding framework for a strong and prosperous future of space industry. The bill was meant to provide a thrust to private participation. However overregulation of the draft discouraged the private participation and foreign investments. The bill lapsed because it was never formally passed in the Parliament and by 2020 government introduced structural space reforms and policies to encourage private participation in 2023. In May 2025, Pawan Goenka, Chairman of IN-SPACE, confirmed that a new draft of the Space Activities Bill has been finalised and the 2025 version would replace the 2017 draft. The redrafted bill is currently undergoing inter – ministerial consultations. The redrafted policies is the result of amalgamation of countless years of research and incorporation of feedback from over 400 private space companies that have entered the sector since 2019. As of the most recent reporting available, the redrafted bill had completed internal review within the Department of Space and was slated to move to public consultation, with the legislation intended to underpin the expansion of India's space economy from an estimated USD 8.4 billion to USD 44 billion by 2033, indicating that the process remains active even though no fixed timeline for its introduction in Parliament has been announced.^{50 51}

As for now India still awaits for a comprehensive legislation that could accelerate India's to positioning in the global space race.

NEED FOR A COMPREHENSIVE SPACE LEGISLATION.

India has always been advanced in the field of space exploration. India's success are often measured through missions, launches and technological Paradigm shift. When space technology has begun to grow rapidly and with the rise of possibilities and scope of research, in the field of Space growing each day India requires a sound law system to establish its base for further

⁵⁰ AMSShardul, 'Update: Annual India NewSpace Roundup 2025' (AMSShardul, January 2026) <<https://www.amsshardul.com/wp-content/uploads/2026/01/Update-Annual-India-NewSpace-Roundup-2025.pdf>> accessed 16 September 2026.

⁵¹ Anonna Dutt, "To fuel \$44- billion space push, Centre finalises Space Bill to boost private sector, Give IN-SPACE statutory powers", The Indian Express, May 25, 2025, available at: <https://Indianexpress.com>, (Last Visited September 16)

operations especially with regards to commercialization⁵². For decades, Indian Space law experts have long pushed for a robust national space legislation to address the larger issues surrounding exploration of the final frontier and strengthen its place as an emerging global space power. The 1967 UN outer Space Treaty is being considered “inadequate and deficient” in so far as addressing a range of issues including the weaponization of outer space is concerned. The treaty ratified by 118 States Parties as of 2025, though not by all countries of the world is perhaps the first ever comprehensive legal system aimed at regulating the global space activities. India is also a party to this treaty, as well as other key international agreements including the 1968 Rescue Agreement and the 1972 Liability Convention. These treaties set guidelines for how space can be used by the countries of the world. While India has legislation for some space related activities, such as remote sensing and satellites communications it still lack domestic legislation for outer space activities. A comprehensive space law framework needs to account for and encourage, commercial space activities, promote innovation, protect national interests in space, provide routes for licensing and dispute settlement, and uphold international treaties⁵³. Indian Space sector is undergoing shift from a Government monopolized space system to commercialization and private participation, which brings necessity for a legal innovation to address emerging challenges⁵⁴. India’s rapidly expanding space sector faces prominent challenges due to lack of dedicated space law. A primary concern is Regulatory ambiguity in licensing procedure which affects the project timelines. Not having a proper dispute resolution mechanism may lead to uncertainties that inevitably cause obstruction of justice. The increasing amount of Space Debris poses a threat to ongoing and future space mission, India has itself acknowledged the seriousness of this concern through the Indian Space Research Organisation's Debris Free Space Missions initiative, announced in April 2024, under which all Indian space actors, governmental and non-governmental, are expected to achieve debris free missions by 2030 through measures such as controlled re-entry and post mission disposal of spent rocket stages, an initiative that presently rests on institutional commitment rather than binding

⁵² Biswanath Gupta, “The Forerunners of Space law in India”, Sage Journals, Volume 13 Issue 1, April 16,2025, (Last Visited September 14)

⁵³ *Id.*

⁵⁴ Maulik Sharma, “India’s Space Challenge: Updating Laws for In- Orbit Services and Debris Clean up”, International Journal of Law Management and Humanities, Volume 8, Issue 4, Page 742-758, July 16,2025, available at: <https://ijlmh.com> , (Last Visited September 14)

legal obligation.⁵⁵, Without supportive legal frameworks innovation in space related technologies faces obstacles. The private Entities may hesitate to invest without clear legal frameworks safeguarding their interest and also lack of clarity on data processing and distribution regulations can pose challenges. A comprehensive space law has the potential to provide a stable and reliable legal environment for both public and private Entities engaged in space activities and also facilitate global collaboration by aligning India's legal framework with international standards, enhancing the nations standing in the global space community.⁵⁶

India plans to implement many new space technology in the coming decades, and is bound to rise as a significant competitor in the world market with regard to Space technology and innovation as well as pioneer in Research and Development .Therefore, It is evident that the need for a space law to administer the growing activities relating to space technology is indispensable⁵⁷. In the absence of an effective legal framework, India's ability to navigate through complex legal challenges and treaty complications will be severely hampered. A dedicated space law defining liabilities, rights, duties and obligations of both government and private players is therefore indispensable. To transmute India from a spacefaring nation into a global space leader India need national space law.

CONCLUSION.

Now India's space exploration is advancing. Indian Space history began in 1960's with Vikram Sarabhai's vision of social application in space technology, in order to catapult developing countries out of poverty. The development in space technology benefits society as well as aid to national development. The rapid transition encourages the commercial ecosystem to demand a robust Legal framework to replace the soft policy guidelines. India's space sector stands at the threshold of a new era, driven by Government-led reforms and a vibrant private ecosystem. The Indian Space Policy 2023, liberalised FDI norms, and dedicated funding initiatives have opened the entire space value chains potential players. These reforms have fostered a dynamic ecosystem marked by growing Start-ups, indigenous innovation, and expanding commercial activities. Even

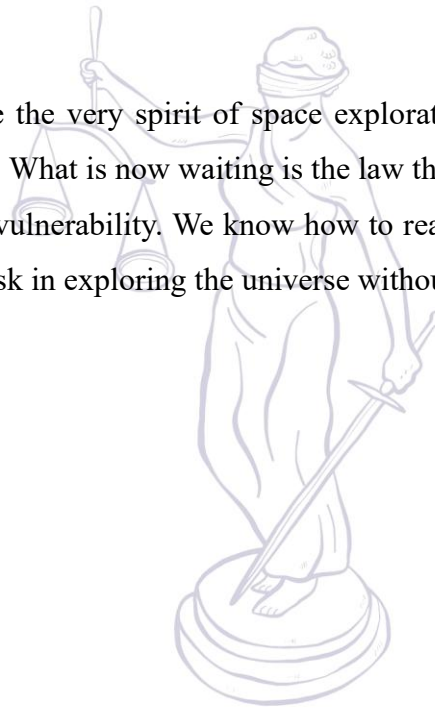
⁵⁵ Press Information Bureau, 'India's Intent on Debris-Free Space Missions – Explained' (Indian Space Research Organisation, 19 April 2024) <https://www.isro.gov.in/Debris_Free_Space_Missions.html> accessed 16 September 2026.

⁵⁶ Rupin Chopra and Shantam Sharma, Space Law in India – S.S.Rana &CO. Navigating the Cosmos:Need for comprehensive Space Law in India", February 28,2024, available at <https://ssrana.in> , (last Visited: September 15)

⁵⁷Supra note 6 at 170.

this policy helped the Indian space sector to make an impact on International space market. However only a direct statute can remove the ambiguities. Permanent statutory legal framework for the country is no longer an option but a necessity. A codified uniform space law will empower the regulator to take up enforceable authorizations, set the risk and liability parameters for private players, protect the interests of foreign and domestic investors, and lay down norms for maintaining sustainable orbits and space junk. The outer space has been proclaimed to be the heritage of humankind. Therefore, there is a need to protect and preserve outer space from pollution, alteration and exploitation.

Carl Sagan's words capture the very spirit of space exploration. For India the incredible is no longer waiting to be known. What is now waiting is the law that protects the incredible discovery. Knowledge without law is vulnerability. We know how to reach space but the vacuum in Indian Space Legislation creates risk in exploring the universe without a legal shield.



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