

## SPACE LAW - EXISTING STRUCTURE AND FUTURE PROSPECTS

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### **PREAMBLE**

India is one of the fastest growing economies of the world and at a growth rate of 7.5% it has fared better than many other developing countries. As we march ahead in all spheres of human endeavor, we are also making immense forays in the field of space exploration and its research. With recent accomplishments in this highly specialized area, we are now claiming our place amongst the elite nations who are the recognized world leaders in space technology.

Our country has tried to bring in all possible legislations, rules and regulations, and guidelines to stimulate growth. Even as we make in-roads in the area of space technology and research through various space agencies instituted by the Central Government, appropriate space legislation is a sphere that has largely been neglected or overlooked for a long time by the law makers. In an increasingly competitive global business environment, every nation would want to set its own priorities even in the use of the stratosphere and beyond. Again co-operation among nations in the use of space, sharing of information and space technology would become a need rather than a contentious issue. To make this happen, it is imperative that suitable legislation and a unified governance system recognized by all the nations of the world is put in place. However as a first step, we must be able to safeguard our own interests and enable the space sector business environment to accommodate and facilitate both public and private sector participation and investment.

### **Background and current state of affairs**

As spaceflights funded by the private organizations in different countries are becoming a reality, it is high time that we take precautions to ensure that a system of governance is in

place to resolve any possible issues or calamities that might occur in outer space. The Indian Space Research Organization (ISRO), is a space agency that was created by the Government of India. Since its establishment in 1969, it has launched many successful lunar and mars missions. This organization has been able to launch 83 satellites in a span of 47 years for various research purposes. The Chandrayaan I mission brought us laurels with the pioneering discovery of water in the moon. The Mars mission was another feather in the cap for our space scientists. And the success stories do not end here.

Even after such achievements, our Government has failed to enact any legislation in this area that would not only help protect our interests but also propel India as a leading player to earn international acceptance. India today has opened up Foreign Investment in almost all the sectors enabling direct private investment in space research as well. In the absence of appropriate legislation, our contributions may become dulled or unrecognized as funding and investments particularly private, becomes an obstacle. As an enabler appropriate legislation should be put in place.

### **The United Nation Treaties:**

Space law can be described as the body of law applicable to and governing space-related activities. The term "space law" is most often associated with the rules, principles and standards of international law in the five international treaties and five sets of principles governing outer space which have been enumerated under the patronage of the United Nations Organization and various other national laws.

Soviet Union was one of the very first countries in the world to launch a satellite named Sputnik 1 in 1957 and this led to the famous space race between the USSR and USA during the cold war period. As the tension between the two countries intensified regarding the use of outer space, the famous treaty "Outer Space Treaty" was drafted, which was ratified by 24 UN member states. This piece of legislation made exploration of space free for the States and also raised the importance of nuclear weapons which was prohibited to be placed in outer space.

The second treaty is the Rescue Agreement, which deals with making potential support available to the astronauts who have landed in other State's territory during re-entry, due to an accident, distress, emergency and or unintentional landing. Rescue of man from space was another issue that was touched upon by the assembly. In 1968, the number of human spaceflights or any manned mission to space was very few. So this treaty was designed keeping in mind the frequent visits to the outer space by humans in the future. In 2007, the then ISRO Chairman, Mr. Madhavan Nair announced the country's dream of launching its first human spaceflight by 2017. But due to inadequate funds this dream project had to wait for its green signal.<sup>1</sup> But this does not put a full stop to the human spaceflight missions as it may be a reality in the coming years. So India should be prepared for such an eventuality with appropriate legislations in place.

The third treaty is the Liability Convention of 1972 which is an elaboration of the Outer Space Treaty, 1968. This imposes liability on states for the damages it creates in the space and in other state territory through its space activities. It even imposes the same liability on any joint launches by two or more states. These clauses will help India to double check its activities so that it could avoid calamities; and also existence of such Acts provides for well defined structure for compensation for the said liability.

The fourth treaty being the Registration Convention has been ratified by 62 member States of the UN in 1976. This requires all the states to maintain a register of every bit of detail about the particular countries' space objective. India has been a signatory to this treaty and has been abiding by the above mentioned standards by providing information to the secretary general of the UN for inclusion in the United Nation register.

The fifth and last treaty is the Moon Agreement that regulates the state from using any nuclear weapons on the celestial bodies as well as bans all exploration of the Moon without the permission of other nation for the benefit of the entire human race. This treaty has been

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<sup>1</sup> Available at [http://articles.economicstimes.indiatimes.com/2012-09-17/news/33902713\\_1\\_cryogenic-engine-gslv-mk-iii-radhakrishnan-today](http://articles.economicstimes.indiatimes.com/2012-09-17/news/33902713_1_cryogenic-engine-gslv-mk-iii-radhakrishnan-today) (accessed on 1 June)

said to be a disappointment as the states which are into launching of satellite exploration has declined to ratify the treaty itself. Even our country has not ratified the same.

Till now Indian space activities have been governed by the international principles and treaties which the United Nation has laid down. So far there has been a lack of lack of initiative by our legislators to introduce similar laws in our country. The Constitution of India also plays its part in governing these space activities. Article 51 of the Constitution strives for international peace and security. The clause (3) of this Article pursues the state to respect all its international treaties and conventions it is party to. As India has been a signatory to above said treaties, it also makes its maximum to effort to embrace the same.

The government in its present state of mind is planning to bring in private players in this field. In the key line of working parameters, the private companies may be permitted for manufacturing of satellites, launch vehicles and even technology transfers. The private companies will be authorized to form association with the commercial arm of ISRO, which is the Antrix Corporation for their operations. The “Make in India” campaign started by the Government has allowed 100% FDI for companies that are planning to set up its base plant in the country. Such schemes are always helpful to attract the attention of the potential investors<sup>2</sup>.

One of the main reasons why the draft of this particular legislation has not seen the limelight is due to inclusion of the military component, which has been opposed by the ISRO time and again. But the armed forces has started to draft a parallel policy which will talk about the militarization of space which may in turn lead to formation of a new space agency which will handle all the matters relating to security in space. The main cause for adopting a space war strategy by our defense establishment is the on-air tension created by our neighbor China. Though ISRO for the past many years have been following a holistic approach in its space missions, it is high time it took an offensive strategy. In 2007 China has showed the world

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<sup>2</sup> Available at <http://m.dailyhunt.in/news/india/english/financial-chronicle-epaper-finance/space-law-to-launch-private-players-into-great-void-newsid-52213767> (accessed on 7 June)

what it is capable of, by displaying its anti-satellite devices and killer satellite devices. These preparations should not be taken lightly and such action on the part of China only gives us an impression of a probable space war in the future. This leads us to another important aspect which is also well connected to this subject that is the Tri-service aerospace Command<sup>3</sup>. Unfortunately this proposal has not received the nod from the Government and still cannot find its path through the paperwork. The establishment of such an authority will solve any impediments in handling well equipped space and missile force and other activities relating to space war.

### **A QUALITATIVE ANALYSIS ON THE NEED FOR SPACE LAW**

India is now gaining momentum in every sphere of human endeavor and is growing by leaps and bounds in the race to become a global economic power. In the field of space research and technology too India has made great strides and is in an envious position today vis-a-vis the acknowledged space super powers so to speak. In the wake of pioneering efforts by India in space technology there has to be adequate rules, regulations and laws that will aid proper governance and administration of the stratosphere and beyond to protect the interests of India and for the benefit of the human race as such. An analogy may be made here - as to how the oceans are governed by the International Maritime Laws.

Although India has shown immense enthusiasm and has been very supportive at various discussions and debates at conventions to promote the development of international space law, it however lacks the gusto to develop a space law of its own. Heated deliberations have taken place in various forums regarding the formation of a well defined space law in India.

### **THE NEED**

As a developing nation India is preoccupied with other pressing needs of a more mundane kind like poverty alleviation, education, medical care, housing etc. and other routine matters

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<sup>3</sup><http://timesofindia.indiatimes.com/india/Govt-gets-cracking-on-three-new-tri-Service-commands/articleshow/48550424.cms> (accessed on 7 June)

on terra firma. Given such priorities some think tanks may put the need for developing a Space Law, on the backburner. Some experts also suggest that India has not yet expanded its space activities and have not matured to such an extent that it warrants regulations and a proper governance mechanism bounden by Law.

However, this opinion is highly subjective in nature. The extent of India's space activities have far surpassed expectations and are advancing at a rapid rate. Also Space Law being the next most significant area of research and experimentation requires a robust and well defined internal legal framework to guide the Space Agencies irrespective of the extent of activities undertaken. There has to be appropriate legislation with clear and transparent guidelines that will help facilitate and promote inflow of investment whether domestic or foreign, in an increasingly globally competitive environment. Increased civilian applications of space technology will require support from private sector and in such a scenario, national space legislation becomes indispensable.

The launching of satellites and other vehicles into outer space has been the greatest scientific and technological achievement of our era. Hence laws that govern such a scientific breakthrough is significantly essential in safeguarding sovereign as well as commercial interests of our country. However space law is a precarious ground to set foot in. As much as it is necessary, it is important to design the laws in a way beneficial to mankind and not harmful to the country's progress.

### **GLOBAL SCENARIO**

From the inception of space exploration, Soviet legal experts have expressed the view that Countries must be guided by the International Laws and as prescribed by the United Nations charter. As it is a herculean task, where consensus has to be shaped, it may be the single and most important reason why India has lagged in developing laws relating to space.

Of course the general agreement is that space research and technology should be used for the benefit of the peoples of the world. However it is observed that almost 75% of the satellites

stationed in outer space orbiting the earth are primarily performing military tasks such as surveillance, early warning, communication and navigation. The military capability of satellites have inspired military planners to develop anti-satellite systems<sup>4</sup>.

The nations of the world shall therefore provide guarantees against the abuse of rights that they have been privileged to have. Activities in outer space that are contrary to the peaceful interests of mankind, can lead to hostility amongst nations disrupting international peace and security. While nations are within its rights to have military satellites used for its own home security and defense purposes, it is necessary to ensure that control and restraint is to be exercised when it involves matters of international security to prevent confrontation, aggression or subversive activities across borders. It is a very touchy issue when nations will be arguing to protect their own interests.

Ultimately it is the harmonious use of outer space among nations and international co-operation that will form the basis of a framework for Space legislation. Fulfillment of treaty obligations should be given utmost importance. This is devised in Article 253 of the constitution of India that confers power on the parliament to make laws for the implementation of India's international obligations arising from treaties, agreements, conventions or decisions made at international conferences, associations or bodies<sup>5</sup>.

Considering the Asian region, India and China are two space powers with indigenous commercial launch capability. China is already in the process of developing its national space law. Another significant step towards space research was undertaken by China when it recently launched a bullet shaped retrievable scientific research satellite SJ-10 meaning Shijian-10. The satellite was launched with the sole objective of aiding scientists in their study of microgravity and space life science. This satellite falls under the CAS space programme. Unlike the other satellites under this programme, SJ-10 is returnable. The probe will include 19 experiments in space, including in microgravity fluid physics, microgravity

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<sup>4</sup> <http://thediplomat.com/2016/06/indias-anti-satellite-weapons/> (accessed on 5 June)

<sup>5</sup> Article 253, Constitution of India, 1950

combustion, space material, space radiation effect, microgravity biological effect and space biotechnology, before returning to earth with results<sup>6</sup>.

In the coming years, innovative methods to use outer space will originate. Using outer space for weather forecasting involves the issue of weather control in which all nations have vital interest. Military campaigns, medical emergencies, telephone calls, weather forecasts, online maps, news materials and other forms of information and communication all rely on highly advanced and sophisticated satellites that hover above the Earth's atmosphere. Presently more than 40 countries of the world have at least one satellite in orbit. According to the orbital box score created by the U.S space surveillance network, there are 3129 functioning satellites in outer space. Of those, U.S. has 1081, Mexico has 7, Saudi Arabia has 12, Japan has 102. Countries like Portugal and Algeria also have satellites in orbit<sup>7</sup>. Then there is the issue of space debris, which needs to be addressed within the broad framework of space legislation.

With the advances in space technology and with the increase of space traffic and proliferation of nations in the space race, there will be a pressing need to device and formulate an internal legislative framework that will act as a safeguard and provide reasonable safety standards. This will help India to follow a certain path during situations when a conflict arises internally among citizens involving outer space related activities and externally among other nations.

Outer space laws that are codified will bring in much more clarity and will provide direction to nations as well as individuals researching and experimenting in outer space related activities. Not far from now, almost all the countries of the world will be involved in space research and hence conflicts are bound to take place with increasing space traffic. Under such circumstances international space law will prove to be deficient in tackling all the problems that are likely to arise. This is mainly due to the fact that all the countries of the world are not governed by international law and the chances of law breaking is high and hence should not be overlooked.

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<sup>6</sup> [http://news.xinhuanet.com/english/2016-04/06/c\\_135252986.htm](http://news.xinhuanet.com/english/2016-04/06/c_135252986.htm) (accessed on 4 June)

<sup>7</sup> [http://www.abajournal.com/mobile/mag\\_article/making\\_space\\_matter/](http://www.abajournal.com/mobile/mag_article/making_space_matter/) (accessed on 5 June)



## **CONCLUSION**

From the foregoing arguments it is of paramount importance that legislation may be put in place to safeguard India's interests primarily; rather than wait until the situation gets out of hand. Should that happen, it would tantamount to a fire-fighting situation and finding ad-hoc solutions.

In-depth studies are to be made in this emerging field and the law makers should have the far-sightedness to enact legislations well ahead and be in a state of preparedness. When the legal framework and boundaries are clearly defined, it will only bode well for the growth of space technology and research in India for the benefit of all. Enacting the legislation at this stage will help the country to make use of the law in an efficient manner presently and also will make it easier to make amendments in the future to adapt to the changing world scenario. Also, this can be considered as a right moment to construct a robust law mechanism as India has had enough experience in the field of space research and has enough sources to rely upon. The launching of Chandrayaan and Mangalyaan proves this fact. Such an undertaking will only help India progress and advance towards greater success in the field of space law.