

CODIFICATION OF INDIA'S NATIONAL SPACE LAW- EMERGENT CONTOURS

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1. Introduction

Codification of a national legislation for regulation of space activities is a work in progress in India. According to the Annual Report 2018-19 of the Department of Space, “Department is in the process of enacting a legislation to support overall growth of the space activities in India with higher order of participation of various agencies including public/ non-governmental/private sector stakeholders, in compliance with the obligations under international treaties on space activities. The proposed legislation upon enactment through Parliament, would support the pursuance of space activities by various agencies in India including private sector and start-up companies in aerospace sector, under due authorization by the Central Government²”. Indian space programme has been traditionally focused on development of space science and technology and increasing its application for developmental purposes such as telecommunication and broadcasting, weather forecasting, tele-education, tele-advisory, natural resource management and environment protection. To achieve these purposes, the development of launch pads and launch vehicles, launching and maintenance of satellites in outer space, processing of data and creation of value-added products for decision making has been completely a Governmental activity.

The Department of Space is headed by the Prime Minister and assisted by the Space Commission in policy framing. The space program is implemented and undertaken by the Indian Space Research Organization (ISRO), Physical Research Laboratory (PRL), National Atmospheric Research Laboratory (NARL), North Eastern-Space Applications Centre (NESAC) and Semi-Conductor Laboratory (SCL). Antrix Corporation Limited, is the marketing wing of ISRO to engage in national and global negotiations and trade in space products and services. Recently India has formally announced that space sector is open for private

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²Annual Report of the Department of Space (2018-19), Government of India available at <https://www.isro.gov.in/sites/default/files/annualreport2018-19.pdf>.

investment and business, though some of the efforts were already taking place such as the failed launch of IRNSS-1H satellite in 2017 which was built by a private sector consortium led by Alpha Design Technologies. The augmented use of ISRO's launch facilities by foreign states and enterprises, demand of satellites by private companies, emergence of private companies for satellite manufacturing and related services and increased use of remote sensing and GIS data in business decision making has made the Government think of privatisation of space sector and its consequential regulation. The increased space traffic and debris and liability for accidents and collusion of spacecrafts is also a prodigious concern. Globally, private business in space such as space exploration and space tourism, space mining³ and space colonialization has gained a considerable hype (see business objectives of Virgin Galactic, Space-X, Bigelow Aerospace, Deep Space Industries, Planetary Resources and Mars One).

The current legal regime dealing with space activities in India include Art. 51 and 73 of the Constitution of India, The Satellite Communication Policy, 2000 and the Revised Remote Sensing Policy, 2011. India is also bound by the international law such as Outer Space Treaty 1967, Liability Convention 1972, Registration Convention 1976 and Rescue Agreement of 1968. In 2016, Geographical Information Regulation Bill was introduced in Parliament by the Ministry of Home Affairs which provided for taking mandatory permission from the Government agency before the acquisition, use and dissemination of geospatial data (data relating to earth and its features) relating to India. The Space Activities Bill 2017 was published on the website of ISRO on 21st November, 2017 for recommendations by the stakeholders and the public. The brain-storming on the noble principles of use of outer space, the activities to be regulated by the legislation and modus operandi of achieving the desired results is still continuing. There is a need to adopt sectoral and customised solution approach in the intended legislation.

2. Space Activities Needed to be Regulated

³ Executive Order on Encouraging International Support for the Recovery and Use of Space Resources, US WHITE HOUSE (April 6th, 2020) available at <https://www.whitehouse.gov/presidential-actions/executive-order-encouraging-international-support-recovery-use-space-resources/>.

With the privatisation of the sector and increasing applications of geospatial data, the national legislation is expected to provide for the following issues: -

2.1. Registration of Spacecrafts- For the launch and operation of satellites, certain requirements under international law need to be fulfilled such as notification and recording of the radio frequencies used by a satellite at the International Telecommunications Union (ITU), consideration of space debris mitigation measures in the design and operation of a satellite and registration of a satellite with the Secretary-General of the United Nations⁴. Till date, the space activities are conducted by ISRO and therefore, there has not been any need to establish a domestic registry. However, after the entry of private sector and expected launch of satellites by private entities, the legislation needs to provide for the classification of satellites, scope of information to be submitted by the applicant as per their category of satellites, procedure for registration, the termination of registration and follow up procedure.

2.2. Licencing- The legislation is supposed to establish or recognise the required national agency to grant licences to entities to operate in the space sector. The eligibility criterion to attain a licence is to be clearly determined. The terms and conditions of licence must be reasonable and their violation should attract a reasonable liability so as to make a balance between the nation's interests of promoting space activities and curbing the unwanted use of the space technology. The liability may be in the form of damages, fine, imprisonment in addition to cancellation of licence or certain other measures may also be prescribed such as reducing the spatial resolution of images or delaying or controlling the dissemination of geospatial data for commercial use. The permitted activities may range from operating launch vehicles, launching spacecrafts, entry and re-entry of satellites, manufacturing satellites, assisting in building space infrastructure, assignment and lease of satellites etc.

2.3. Liability and Indemnification- The Outer Space Treaty as well as the Liability Convention provide that the State is liable to pay compensation to the aggrieved person or the entity of a foreign state for loss of life or property by its space objects. The state can claim indemnity from its private entities as per its national laws and policy. Therefore, it becomes imperative to develop norms of fixation of liability of private enterprises. This is very important issue as the space debris is growing at an alarming rate and space traffic is increasing leading to risk of

⁴ United Nations Office for Outer Space Affairs, Guidelines on Space Object Registration and Frequency Management for Small and Very Small Satellites available on Handout on Small Satellites (unoosa.org).

accidents and collusion of spacecrafts in the outer space⁵. The indemnity norms to be provided in the space legislation may include compulsory insurance cover taken by private entities, financial guarantees, caps on amount of indemnity, waiver of claim by the state in certain circumstances, liability towards third parties and measure of damages. The mode of dispute resolution also needs to be given due attention. The scope of alternative dispute resolution should be considered at the preferential basis.

2.4. Assignment and Lease of Spacecrafts- Spacecrafts are also a property and therefore can be transferred to others. The transfer of ownership and lease in outer space i.e., in the orbit is already taking place. The issues such as inclusion or removal of the spacecraft from the national registry, obligations of the operator towards the Government and under the international law and transfer of intellectual property rights will arise.

2.5. Supervision and Control of Space Objects and National Security- National Security is the foremost concern. Government needs to have certain privileges such as priority access to data, data supervision, control of dissemination of data to foreign entities and shutter control measures. There should be sound measures as to data traceability, financial reporting and auditing of records of entities.

2.6. Data Policy and Intellectual Property Rights- There is a need for a robust data policy and legislative recognition of appropriate intellectual property rights in geospatial data, both at international as well as national level. The data collectors and providers do not enjoy requisite protection under IPR laws and the data handlers and Utilizers suffer from the want of easy access to data, data integrity, accuracy and legitimacy.

3. Conclusion

In the recent times, the increased scope of space activities such as planetary exploration, space station, manned space missions, space mining, space tourism and other commercial activities in space, use of geospatial data in administrative and business sector for planning, decision making and product delivery has led to the entry of private sector in the space activities and geospatial data processing and value addition. Most of the countries have opened space sector for private investment and India has also made such formal announcement. For smooth

⁵ According to the Index of Objects Launched into Outer Space, maintained by the United Nations Office for Outer Space Affairs (UNOOSA), there were 5 774 individual satellites in space at the end of March 2020; an increase of 15.78% compared to the start of 2019. See [https:// www.pixlytics.com](https://www.pixlytics.com).

functioning of the sector, promotion of private investment, more scientific research and development and adequate supervision and control, a national space legislation is required. The legislation must be carefully drafted balancing the interests of the state, general public as well as the private entities. Indian law should be in line with the general principles of the international space law and must fulfil the broader obligations in relation to climate change, disaster management, peacekeeping and humanitarian services. There has been a shift in India's attitude towards demonstration of space power in recent time following the lines of China (particularly after ASAT test) and desire for the formation of space force by other developed countries. India must keep in mind the real aim of space program that is the use of space assets for development of the country and well-being of the humankind. National security, development goals and promotion of more private investment in the space sector should be so aligned in the national space law that its space program remains undisputed, productive and progressive as it has been till date.