



**Dated October 27, 2021**

**Dr. K Sivan,  
Chairman ISRO and  
Secretary to the Government of India,  
Department of Space,  
Antariksh Bhavan, Bengaluru  
(By Email)**

**Subject: Comments of IAFI on draft Space Based Communication Policy of India 2021 dated Oct 22, 2021**

Dear Sir,

We, the ITU-APT Foundation of India (IAFI) are a registered non-profit and non-political industry association registered under the Cooperative Societies Act in India. IAFI has been recognized by the ITU as an international/ regional Telecommunications organization and has been granted the sector Membership of the ITU Development Bureau (ITU-D) and ITU Telecommunication Standardization Bureau (ITU-T).

We are writing to you with reference to the draft Spacecom policy (Space Based Communication Policy of India- 2021) dated Oct 22, 2021

In this connection, we recall the words of the Hon'ble PM in his speech delivered while inaugurating ISPA on 11 October 2021<sup>1</sup> regarding boosting private participation in Space sector activities, which inter-alia, states that: *"there should be no restrictions on Indian talent, whether it is in the public sector or in the private sector"*.

In this regard, we would also like to bring to your attention various provisions regarding "Strengthening Satellite Communication Technologies in India", under Connect India mission of National Digital

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<sup>1</sup> <https://www.isro.gov.in/update/11-oct-2021/hon%E2%80%99ble-pm-shri-narendra-modi-launches-indian-space-association-isp>

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Communications Policy (NDCP)-2018 notified by the DoT, Government of India in Oct'2018:

- Optimize Satellite communications technologies which includes new Spectrum bands and rationalization of charges
- Reviewing SATCOM policy for communication services, along with Department of Space, to create a flexible, technology-neutral and competitive regime, keeping in view international developments and social and economic needs of the country
- Develop an ecosystem for satellite communications in India – streamlining administrative process for various clearance & permissions, Promoting local manufacturing, Infrastructure development and participation of private players, with due regard to national security and sovereignty

In view of these provisions under the NDCP-2018 and the announcement in May'2020 which aims at structural reforms by policy simplification, private participation, bringing in transparency & ease of doing business, IAFI has been working with various Industry stakeholders and satellite experts in the country and around the world.

Towards this end, we also hosted a virtual industry dialogue on this subject on 10<sup>th</sup> September 2020, which was addressed by yourself as well as Dr. R S Sharma, IAS, the then Chairman of TRAI, among other dignitaries and Space sector experts.

In this connection, I am pleased to share the following 4 key recommendations on the opening of the Indian space sector to the private industry for your kind consideration as follows:

1. Quick and easy licensing of new Indian & foreign satellites for early implementation of the announced policy to encourage both private domestic as well as foreign investment.
2. Additional Regulatory changes needed for quick and easy licensing of new satellite earth stations, VSATs and satellite mobile terminals in the Satcom policy to meet the connectivity needs.
3. Adopt global/regional harmonized spectrum and regulations for all satellites to maximize spectrum availability for all satellite communications.
4. Development of a suitable regulatory framework for timely deployment of NGSO systems in Ku and Ka spectrum bands.

Details of these recommendations are given in the attachment. These recommendations, if implemented regarding overall policy and regulatory framework for satellite communications in India and creating enabling

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environment for private sector participation, will derive the maximum advantage from the available & developing satellite communication technologies, leading to a win-win solution for all stakeholders including the Government, the Industry and the consumer. An early implementation of these recommendations will hugely benefit the Indian economy leading to tremendous economic growth and creation of jobs:

We hope our submission merits your kind consideration. We will be happy to provide any further information/ clarification required for implementation of our recommendations.

We would also like to take this opportunity for seeking a meeting with your good self to explain the matter in more details.

Warm Regards,

**Bharat B Bhatia,**  
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**Recommendations for the Satcom Policy**

The fundamental aim of the policy framework for Satellite Communications should be to develop a healthy satellite broadband industry in India, and, in parallel, a thriving communications satellite and ground equipment industry. Encouraging private sector investment and attracting foreign investments in India's satellite communications market, are required to achieve these aims. These can bring about a revolution in satellite communication services, similar to mobile telephony services during last two decades.

**A Quick and easy licensing of new Indian & foreign satellites for early implementation of the announced policy to encourage both private domestic as well as foreign investment.**

All applications for satellites system should be approved in principle within 6 months of submitting an application so that they could initiate ITU notification process through WPC Wing of DOT, the Indian Administration for ITU, at the earliest. For such systems, the approval process should focus primarily on interference studies with respect to Indian Registered/notified space systems and be based on analysis submitted by the applicant rather than any new studies. For this:

1. Institute an approval cycle of 30 days, or less with monthly meetings to approve or comment on applications. Other options to explore are exemption from authorization/licensing of spectrum use, and/or equipment use/installation;
2. Rely on trust and industry compliance. For example, the terminals and gateway equipment should not require DoS reviews as part of an Indian satellite approval process.
3. Be flexible and understand that satellite technology is improving at a rapid rate and accommodations are necessary. For example, in GEO satellites during design and construction, changes may be required which would not change the fundamental parameters of the satellite. Similarly, non-GEO systems are also under constant technological improvement and changes to the constellation may occur over time.
4. Recognize that slot//orbit/spectrum allocation is done in the ITU with an arcane process. If India does not move fast, slot/orbit/spectrum allocation will be granted on a first come, first serve basis via other more agile space administrations.

5. Specify clear security norms and adhere to a processing time of 30 days for security clearance also and also remove vague or unclear norms in the draft policy, such as “treaty compliance”

**B Additional Regulatory changes needed for quick and easy licensing of new satellite earth stations, VSATs and satellite mobile terminals in the Satcom policy to meet the connectivity needs**

Following policy changes are immediately needed to promote a healthy satellite broadband industry in India, and a thriving communications satellite and ground equipment industry

1. Changes in Indian Space Policy to permit all private satellite systems (both Indian and foreign ones) to meet the connectivity needs of lakhs of unconnected remote and rural users. Current process of getting the capacity /NOC from is causing a major bottleneck and delays in connecting these remote areas.
2. A simplified regulatory regime, with increased flexibility and the removal of unnecessary barriers to entry, while guaranteeing security requirements.
3. simpler and clear regulations for spectrum and market access (e.g. allow for blanket licensing of ubiquitous satellite user terminals, such as for *VSAT based mobility services* and land fixed terminal applications);
4. Decoupling of the service provider from the gateway earth station ownership;
5. Reduction of requirements and fast track process for importation of satellite equipment through a mutual recognition with other countries/regions (e.g. US/Europe). This will greatly help the manufacturing industry, for equipment manufactured in India which can be easily exported abroad.
6. Exempt satellite user equipment from the WPC import licensing process (similar to the current policy for import of mobile phones)
7. Allow blanket licensing of satellite terminals to the registered dealers or license holders rather than individual approvals – similar to what is being done for mobile phones
8. Current system of DoT licenses for Gateway Earth stations to be set up in the country should be streamlined. All such gateways should align with TEC specifications where they exist; or can be adopted from global type approval standards (such as ITU or FCC or ETSI).
9. In line with international norms (see conventions of ICAO and IMO), the current requirement of a physical gateway station located in India needs to be removed for foreign airplane and ships which are transiting Indian airspace or waters. Current Indian regulations are extremely limiting for the provision of in-flight services to passengers and crew on international flights. Such services are offered by the airlines and are shut down (unnecessarily) when aircraft are entering Indian airspace, or foreign ships are transiting in national waters.

**C Adopt global/regional harmonized spectrum and regulations for all satellites to maximize spectrum availability for all satellite communications**

1. The role of the government is a facilitator of growth. It is important that a level playing field be provided to all technologies whether terrestrial or wireless or satellite. It is important

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for government policy to ensure adequate spectrum is available for satellite communications in general.

2. In particular for broadband, this includes the Fixed Satellite Service allocations in the Ku (11/14 GHz) and Ka-bands (18/28 GHz), which are widely used for satellite communications for provision of broadband services to homes, airplanes and ships. Also, ensuring adequate national regulations to the newly assigned allocations (by the ITU WRC19) in the Q/V bands (38/48 GHz).

3. Not to also forget narrow band and slow data services of IOT and M2M application via constellations of small satellites. These satellite infrastructures use satellite allocations in the VHF/UHF, L-, S-, C- and X-band spectrum for their TT&C and communication payload. These services, which provide very low data rates usually in IP packet mode, are key for applications in farming, smart cities, machine automation and control, utilities (water and electricity monitoring and billing), etcetera. It is expected that more than 50+ billion of such sensors/devices will be deployed by 2025.

#### **D Development of a suitable regulatory framework for timely deployment of NGSO systems in Ku and Ka-bands**

1. Advancements in satellite technologies, includes the more recent Non-Geostationary Satellite (NGSO) systems which allow for very low-latency applications and can deliver quality and affordable broadband to everyone and everywhere. These satellite technologies will complement GSO and current ground-based services to fully support the Government's forward-looking vision of Digital India, removing the digital divide and providing broadband to all. In fact, despite the telecom revolution in India over the last decade, there is still a very significant portion of the Indian population that lacks consistent and high-quality connectivity, which can be effectively addressed with the new satellite communication technologies.

2. To allow for a timely introduction of these innovative services, development of a suitable regulatory framework for NGSO systems in Ku and Ka-band is required (e.g. modifications to the DoT TEC Interface Requirement Document<sup>2</sup> on VSAT *based mobility services*, to allow also for NGSO maritime and aeronautical service provision in India). Examples<sup>3</sup> of such regulatory framework already exist in other countries/regions, as administrations around the world have introduced this more recent technology.

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<sup>2</sup> No.: TEC/IR/SS/SCB-109/01/MAR-19

<sup>3</sup> In the portions of the Ku and Ka-bands shared with terrestrial systems, the same sharing conditions applicable to GSO satellites are normally used, as equally effective. See for instance ECC/DEC(15)04 <https://docdb.cept.org/download/47f8be60-b651/ECCDEC1504.PDF> ( a recently revised version of this Decision with the introduction of also aeronautical terminals has undergone the European Public Consultation process and will go for final approval to be published at the ECC meeting in November <https://www.cept.org/ecc/groups/ecc/client/meeting-calendar/>)