Draft SpaceRS Policy - 2020

No. DS-3p-16013/62/2020-Sec-3 Government of India Department of Space

> Antariksh Bhavan, New BEL Road, Bengaluru.

November 20, 2020

Subject: SpaceRS Policy-2020 and SpaceRS NGP-2020 – Seeking Comments – reg.

Department of Space (DOS) being the administrative ministry in respect of space activities in India as per the allocation of Business Rules of Government of India, shall issue appropriate norms, guidelines and procedures from time to time for the space based remote sensing activities for the developmental purposes in India.

Accordingly, a draft "Space-based Remote Sensing Policy of India (SpaceRS Policy 2020)" and draft "Norms, Guidelines and Procedures for implementation of SpaceRS Policy 2020 (SpaceRS NGP 2020)" are published for public consultation.

Comments on the draft policy, if any, shall be forwarded to this Department to the email id:- <u>dir.projects@isro.gov.in</u> at the earliest, but not later than **11.12.2020**.

Draft Space Based Remote Sensing Policy of India - 2020 (SpaceRS Policy - 2020)

SPACE BASED REMOTE SENSING POLICY OF INDIA – 2020 (SpaceRS Policy - 2020)

Remote Sensing policy to enable wider stakeholders' participation and ease of data access

Preamble:

India has made tremendous progress in the field of space based remote sensing by building and launching satellites operating from various orbits, encompassing imaging and non-imaging observation in optical, infrared and microwave regions of electromagnetic spectrum and forms the basis of satellite based earth observation based applications.

Considering the global trends, advancement of technology, wide ranging demand for remote sensing data - both within and outside the country, and the recent initiative of the Government towards 'self-reliant' India, it is pertinent to evolve new policy directions for space-based remote sensing for enhanced participation of Indian industry and 'ease of data access'.

SpaceRS Policy – 2020:

The 'Space Remote Sensing Policy - 2020' (SpaceRS Policy - 2020) aims at encouraging various stakeholders in the country to actively participate in space based remote sensing activities to enhance commercialization of space technology. An easy access of space based remote sensing data and information shall enable unfolding of knowledge based solutions, addressing many planning and monitoring requirements of the nation.

The Policy states that Government of India shall:

- 1. promote Indian Industries to carry out space based remote sensing activities within and outside India.
- 2. enable easy access to space based remote sensing data, except for "sensitive data and information".
- 3. concentrate on realisation of space based remote sensing systems to cater to the country's needs, that cannot be effectively, affordably and reliably satisfied by the commercial entities, either due to national security concerns or economic factors.
- 4. provide a timely and responsive regulatory environment for the commercial Indian industry to establish and operate space based remote sensing systems.

Department of Space, being the administrative Ministry for space activities, as per business allocation rules of the Government of India, shall issue appropriate guidelines and procedures including approval mechanism from time to time for the services in the areas of societal and commercial applications of remote sensing.

Accordingly, the 'Norms, Guidelines and Procedures (NGP)' for implementation of Space Remote Sensing Policy - 2020 are issued. The SpaceRS Policy - 2020 along with SpaceRS NGP-2020 shall come into effect, upon approval of the Cabinet.

Draft Norms, Guidelines and Procedures for Implementation of Space RS Policy - 2020

(SpaceRS NGP - 2020)

DRAFT (November 04, 2020)

Norms, Guidelines and Procedures for Implementation of Space Based Remote Sensing Policy of India - 2020

(SpaceRS NGP - 2020)

November 2020

Department of Space

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Important Terms

Space assets: Remote sensing system mounted on-board a spacecraft orbiting the earth and facilitating the earth observation.

Indian entity: Indian entity refers to Indian Government bodies, PSUs/CPSEs, Academic institutions, Indian registered Non-Government Private Entity (NGPE) such as Indian industries, incubation centres, technology providers, start-ups, MSMEs, etc.

IRS data: Remote sensing and meteorological data from Indian Remote Sensing satellite (IRS) of Department of Space (DOS).

Remote sensing data: Remote sensing and meteorological data from any space asset.

IN-SPACe: Indian National Space Promotion & Authorization Center is an independent body constituted by Government of India, under DOS, to promote, hand hold, permit, monitor and supervise space activities by NGPEs and accord necessary permissions as per the regulatory provisions, exemptions and statutory guidelines.

Sensitive data: Very high resolution data having ground sampling distance of better than fifty centimeter.

Free and Open: Radiometrically and geometrically corrected IRS data made available free of charge for use and re-use, without any restriction.

Norms, Guidelines and Procedures for Implementation of Space Based Remote Sensing Policy of India - 2020

(SpaceRS NGP - 2020)

1. Preamble

- 1.1 The role of remote sensing technology in sustainable development of the country began in 1970 with a pioneering experiment aimed at detection of coconut root-wilt disease using a multispectral camera system. Indian Space Research Organisation (ISRO) realized the potential benefits of remote sensing data for various societal applications and initiated remote sensing (RS) activities by launching its first operational IRS Satellite in 1988. Since then, IRS satellites have been providing timely information on various aspects of natural resources and addressing requirements on land, water, ocean, atmosphere and disaster management quite effectively. The modalities of remote sensing data dissemination in support of developmental activities were based on the Remote Sensing Data Policy of India (RSDP-2001 & 2011).
- 1.2 Satellite remote sensing has witnessed tremendous growth, as it finds use in a variety of applications and operational activities. Over the years, the demand for satellite data has been on increase to meet requirements of the country for developmental and commercial activities.
- 1.3 India's remote sensing capability has increased manifold. Advancements in sensor technology and data processing techniques are transforming use of remote sensing rapidly. Improvements are not only in spatial, spectral, temporal and radiometric resolutions, but also in their coverage and value addition providing solutions for a large number of applications.
- 1.4 The institutional mechanism established through National Natural Resources Management System (NNRMS) has ensured significant utilization of remote sensing data in various resource management sectors in the country. This led to institutionalisation and internalisation of remote sensing technology at many User ministries of State and Central Government departments and others institutions, in addition to private sector, Non-Governmental Organizations and academia. However, in order to further expand the use of space based remote sensing technology, active participation of more stakeholders is necessary.

- 1.5 Since the launch of first operational IRS satellite, IRS-1A in 1988, a series of earth observation (EO) satellites have been launched with enhanced capabilities to meet the requirements of developmental activities. Globally, Earth Observation (EO) from space is experiencing a paradigm shift with endorsement of EO for earth system studies & global change as a public good activity and easy accessibility of data on open basis. This has resulted in multi-fold increase in the utilisation of data, development of innovative applications, enhanced participation of industries/startups, economic growth due to generation of value added products, empowerment of citizens, etc.
- 1.6 With the EO applications expanding across all the domains in the country, the demand for EO data has increased significantly. Hence, it is important to provide an enabling environment in order to further expand the use of satellite based remote sensing technology through increased commercial industry participation. In this endeavour, while the private enterprises bring in funds, talent and speed in the activities, it is expected that Indian industry will become a significant player in the global economy using space based remote sensing technology.
- 1.7 SpaceRS Policy-2020 has been framed to enhance capability and capacity to harness the utilisation of remote sensing technology with larger involvement of non-government players and enable 'ease of data access' with simplified procedures.

2. SpaceRS Policy-2020 Norms

The SpaceRS Policy-2020 enables the activities of satellite based remote sensing under four major statements. SpaceRS Policy-2020 states that the Government of India shall –

- promote Indian Industries to carry out space based remote sensing activities within and outside India.
- enable easy access to space based remote sensing data except for 'sensitive data and information'.
- concentrate on realisation of space based remote sensing systems to cater to the country's needs, that cannot be effectively, affordably and reliably satisfied by the commercial entities, either due to national security concerns or economic factors.
- provide a timely and responsive regulatory environment for the commercial Indian industry to establish and operate space based remote sensing systems.

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Norms for the above policy statements are explained below:

2.1 Promoting Indian Industries to carry out space based remote sensing activities within and outside India.

The space based remote sensing technology is becoming more important for the decision-making around the world and accordingly, its demand is climbing up. Over the years, India has demonstrated end-to-end indigenous capabilities in building, launching and operating EO satellites. However, to meet the growing demand, the potential of the Indian industry needs to be harnessed to bridge the gap between the demand and supply. The Industry can build on the technological base to provide remote sensing technology solutions both within and outside India.

Towards this, Government promotes increased participation of Indian Industries to provide end-to-end space based remote sensing services, that includes building and operating space assets, establishing ground stations, satellite data acquisition and dissemination, to compete as a provider of space based remote sensing capabilities within and outside India, on commercial basis.

Since, space is beyond the delineation of territorial boundaries of countries and is accessible from any part of the globe, it has huge potential to be used for commercial, social and strategic exploitations. Use of outer space for peaceful purposes is governed by the UN treaties and international conventions. Government of India as member of UN bodies has responsibilities and obligations towards use of outer space as a common province of humanity.

Towards meeting this responsibility and obligation, the realisation of any space asset by an Indian entity, operating in Low Earth Orbit (LEO), Medium Earth Orbit (MEO), Geostationary Orbit (GEO) or in any other orbit and use of space based remote sensing in any part of electromagnetic spectrum, to or from Indian territory, will be permitted through a process of authorization.

2.2 Enabling easy access of satellite based remote sensing data.

In order to unlock the immense potential of remote sensing data, easy dissemination of data and services originating from space based remote sensing systems in the country will be enabled. Any service provider will be free to provide remote sensing data and services to any user in the country. However, a simple process of registration/authorisation of space asset is

envisaged to keep the Government informed about the space asset whose data and services are being offered to the users in the country.

Due to national security considerations, a category of data will be identified as 'sensitive' and a different mechanism for dissemination of such data is envisaged. Also, Government shall reserve the right to impose/control on the imaging/observation and its data distribution, when national security and/or international obligations and/or foreign policies of the Government, so requires. In such cases, Government may restrict operations of the commercial systems and limit collection and/or dissemination of certain data and products.

2.3 Concentrate on realisation of space based remote sensing systems to cater to the country's needs, that cannot be effectively, affordably and reliably satisfied by the commercial entities, either due to national security concerns or economic factors.

The space based remote sensing systems for providing the data for long term sustainable development initiatives, climate change studies, societal applications and disaster mitigation has enormous benefits and cannot be measured only on commercial terms. It is essential to provide continuity of such key remote sensing missions services. Also, the development of remote sensing systems with newer technologies needs to be taken up for realising innovative applications and R&D. Such remote sensing systems will be brought into operation for sustainability by the Government and shall be pursued by DOS.

Similarly, in view of sensitivities involved for strategic observations, the systems that needs to be developed with indigenous designs will be under the direct control of Government and shall be pursued by DOS.

2.4 Provision of timely and responsive regulatory environment for the commercial Indian industry to establish and operate space based remote sensing systems.

Participation of private entrepreneurs to establish, operate and provide space based remote sensing requires an enabling regulatory mechanism. The players should be made aware of their roles, eligibilities, responsibilities and accountabilities in clear terms. SpaceRS NGP-2020 addresses these aspects and the authorizations required. Space based remote sensing activities shall be authorized by the autonomous body under Department of Space (DOS). DOS being the administrative Ministry in respect of space activities shall bring out policy guidelines and further regulations, time to time, as necessary and appropriate.

3. Participation of Indian entities in Space based Remote Sensing activities

Under the provisions of SpaceRS Policy-2020, Indian entities can establish and operate satellite remote sensing systems to provide remote sensing data. NGPEs can also undertake design, development and realization of satellites and associated remote sensing systems. They can establish satellite system through their own built satellite or procured satellite. They can establish Telemetry, Tracking & Command (TT&C) and Satellite data reception stations in or outside India. They can offer the capacity to commercial and societal applications within India as well as outside India. They can also supply their systems and solutions to international markets.

Indian entities can avail state-of-the-art facilities of the Government for manufacturing satellite and associated ground segment. It can be availed from designated PSU/CPSE under DOS on commercial terms, subject to availability.

4. Authorizations for space based remote sensing

Government encourages all Indian entities to venture into space sector and provide competitive services in the country. However, space assets for remote sensing need to abide by the guidelines and procedures on technical and legal grounds to ensure that the international framework and the norms of the Government are adhered. Hence, space asset owned by Indian entity shall need authorisation. The remote sensing activities within the Indian territory can be carried out, only with an authorized space asset.

Any NGPE, intending to set up the ground station for satellite data reception, facilities for satellite tracking, controlling and monitoring, within Indian territory, shall need authorization.

To ensure that Government of India is aware and has knowledge of all space assets used for providing remote sensing data in India, a simple process of registering/authorising such space assets is enabled. However, considering the requirements of national security, a different mechanism for authorising the dissemination of sensitive data is envisaged.

Accordingly, following authorisations are spelt out, which need to be obtained from INSPACe.

4.1 Establishment of space asset, owned by an Indian entity, for remote sensing data collection.

Indian entities can seek authorisation to establish space asset for remote sensing by providing information on the spacecraft, such as, payload details, spectral bands, orbital parameters, coverage area, etc.

The NGPEs which owns and operates a space asset for remote sensing shall be liable for any potential damages caused to other space objects in outer space and its environment. This obligation shall be fulfilled by the entity by providing a financial guarantee or insurance cover to a sum, as determined by the authorizing body by taking into account the risks involved in nature and operations of that space object in outer space.

- An Indian entity shall submit the proposal for establishing space asset based remote sensing system in a prescribed format (Annexure-A) for authorization, by providing relevant information.
- b) Authorization requires the financial guarantee or insurance cover by the Indian Entity as part of its ownership towards fulfilment of nation's liability as per UN treaties to use the outer space.
- c) The authorization shall be applicable to a specific Indian Entity and any change of ownership requires a fresh authorization.
- d) The authorization shall be applicable to a specific space asset and any change or replacement of the asset requires a fresh authorization.
- e) Government may impose control on operations of space assets, in case of the national security and/or international obligation and/or foreign policy of Government requires so.

4.2 Establishing ground station within India for monitoring and control of remote sensing satellite and/or data reception.

Indian entities can seek authorisation for setting up of ground station within India for monitoring and control of remote sensing satellite and/or reception of remote sensing data.

 An Indian Entity shall submit the proposal in a prescribed format (Annexure-B) for authorization for establishment and operations in Indian territory:

- i. Telemetry, Tracking and Command (TT&C) station(s)
- ii. Satellite Data Reception station(s)
- b) The authorization shall be applicable to a specific Indian Entity. Any change in ownership requires a fresh authorization.
- c) The authorization shall be applicable to specific facility for monitoring and control of specific space asset and/or data reception from specific space asset. Any change in these requires a fresh authorization.

4.3 Registration/authorisation of space asset for dissemination of remote sensing data over Indian territory.

Remote sensing data over Indian territory shall be made easily accessible to users by Indian entity as long as the source of remote sensing data is originating from a registered/authorized space asset and the remote sensing data is not 'sensitive'.

- a) Any service provider shall submit the proposal in a prescribed format (Annexure-C) for registering the space asset, used for acquiring remote sensing data over Indian territory.
- b) Such remote sensing data will have ground sampling distance coarser than fifty centimeter (non-sensitive).
- c) The registration/authorization shall be applicable to a specific space asset. Any change or replacement of the asset requires a fresh registration/authorization.

4.4 Dissemination of sensitive remote sensing data/services of Indian territory emanating from the space asset.

The very high resolution data having Ground Sampling Distance (GSD) less than fifty centimeter will be treated as 'sensitive' and requires specific authorization for dissemination. The dissemination of such data will be regulated/controlled by the Government of India, as per the consideration of national security and prevailing foreign policy.

 Any service provider shall submit the proposal in a prescribed format (Annexure-D) for authorization of dissemination of sensitive data of the Indian territory to any user in India.

- b) The authorization shall be applicable to a specific space asset and any change or replacement of the asset requires a fresh authorization.
- c) The authorization shall be applicable to a specific entity and any change of ownership requires a fresh authorization.
- d) Additional authorisation is required for disseminating the sensitive data of certain areas following a procedure laid down by the Government.
- e) Government may impose control on the imaging/observations and data distribution, in case of the national security and/or international obligation and/or foreign policy considerations.

5. Realization of space based remote sensing systems for societal applications, strategic purpose and research & development

The emphasis on research and development shall continue to be under DOS in the areas of (i) implementation of societal programmes aimed at national development, (ii) development of satellites for strategic applications, and (iii) remote sensing satellite technologies including technology demonstration.

- 5.1 Considering the demands and importance of natural resources management, disaster management support and weather monitoring at national level, DOS shall build, operate and maintain, continuous & improved observing/ imaging capability from its own Indian Remote Sensing Satellites (IRS) programme. In order to fulfil the national commitment and as a "public good service", such space based remote sensing systems shall be realised by DOS, due to reasons of economic viability or sustainability.
- 5.2 Remote sensing systems with newer technologies, for carrying out innovative experiments and technology demonstrations, shall be undertaken by DOS. On successful technology demonstration, the same can be made available to non-governmental Indian entities for realising such systems through designated PSU/CPSE under DOS, when deemed appropriate.
- 5.3 The satellite systems for strategic sector shall be realized using indigenous designs, systems and infrastructure providing the capabilities of secured environment by DOS. While realizing such missions, DOS may avail capabilities of Indian industry, when deemed appropriate.

- 5.4 In order to meet the requirements of national imperatives and priorities of Government, DOS shall continue to undertake remote sensing applications including research and development of algorithms/models, tools and techniques.
- 5.5 In the interest of promoting research, innovation, societal applications and value addition, DOS shall make IRS satellite data having GSD of 5 meter and coarser, easily accessible on 'free and open' basis.
- 5.6 IRS satellite data and services which have commercial value, shall be made easily accessible through the designated PSU/CPSE under DOS, on commercial terms.
- 5.7 All available archived satellite data and satellite derived thematic data shall be made available for further value addition, research and development purposes on 'as is where is' condition.

6. Promotion of usage of space based remote sensing systems

While it is expected that multiple players would establish remote sensing satellite systems and ground infrastructure, DOS shall endeavour to provide the space based remote sensing systems it has established, through its designated PSU/CPSE.

- 6.1 The space assets for satellite remote sensing established hitherto by DOS comprising of satellite systems and associated ground segment shall be transferred at no/notional cost to its designated PSU/CPSE for operational maintenance and commercial utilization, as deemed appropriate.
- 6.2 Remote sensing systems that are created upon fructification of research and development efforts shall also be transferred at no/notional cost, to the designated PSU/CPSE under DOS for commercial utilisation, when deemed fit.
- 6.3 The designated PSU/CPSE under DOS shall be free to adopt suitable pricing and marketing mechanisms to commercially utilize the capacity of transferred assets for remote sensing data services to suit the market demands.
- 6.4 The designated PSU/CPSE under DOS shall bring timely replacements for operational satellites with similar or enhanced capacity. Based on the demands, the PSU/CPSE will also take appropriate measures for ensuring continuity of space assets by development of satellites.

6.5 The designated PSU/CPSE under DOS can avail state-of-the-art facilities of the Government for manufacturing satellite and associated ground segment at no/notional cost, as deemed appropriate.

7. Provision of timely and responsive regulatory environment

- 7.1 Indian National Space Promotion & Authorization Center (IN-SPACe), an independent body constituted by Government of India, under Department of Space (DOS), shall accord necessary authorizations and permissions for all space based remote sensing activities, to or from Indian territory, as per the applicable acts, regulatory provisions & exemptions and statutory guidelines.
- 7.2 The provisions brought out under this Norms, Guidelines and Procedures for Implementation of Space Based Remote Sensing Policy of India - 2020 (SpaceRS NGP - 2020) forms the basis for authorizations and operations of space based remote sensing in India.
- 7.3 DOS through INSPACe shall make available its state-of-the-art facilities for realisation of satellites and on orbit control along with data reception through its designated PSU/CPSE to any Indian entity. While DOS makes these facilities available at no or notional cost, its designated PSU/CPSE shall provide this to any NGPEs on commercial terms.
- 7.4 IN-SPACe shall formulate additional authorisations, if any, as and when needed and also bring out detailed guidelines for submission of applications, processing and grant of authorizations, from time to time.
- 7.5 Department of Space being the administrative Ministry in respect of space activities as per the Government of India allocation of business rules, shall bring out policy guidelines and additional regulations in respect of space based remote sensing.

* * * * *

ANNEXURE

Template application forms for authorizations (Form A to Form D)

Application for Authorization for Establishment of space based system for remote sensing over India

[Completed application may be submitted to IN-SPACe, Department of Space, Antariksh Bhavan, New BEL Road, Bangalore 560 231]

1. Entity Information

- a) Name of the Indian Entity:
- b) Category of the Indian Entity*:

{* Indian government body, PSU/CPSE, Indian registered non-Government Private Entity (NGPE), company, start-up, MSME, industry, academic institution, others (please specify)}

- c) Details of the Indian Entity (include registration details):
- d) Financial profile:
- e) Address of the Registered Office:
- f) Ownership pattern (FDI, if any):
- g) Address of the Corporate Office:
- h) Address for Correspondence:
- i) Name, Designation and contact details of Authorized Person:

Mobile No.:

Telephone No.:

Fax No.:

Email address:

Website:

2. Technical Information

- a) Space segment details (satellite bus, propulsion, operational life, mass, power etc.):
- b) Payload details:
- c) Planned service types:
- d) Planned service duration:

- e) Target services:
- f) Location and details of TT&C station(s):
- g) Location and details of data reception station(s):
- h) Location and details of Satellite Control Center (SCC):
- i) Whether TT&C station/SCC located outside India, if yes details of arrangements made to utilize them:
- j) Ground segment details:
- k) Orbital parameters:
- l) Coverage area:
- m) Redundancy planned in the sensors or hardware:
- n) Plans for limiting the hazards resulting from the in-orbit activity (e.g. de-activating or fragmentation of the in-orbit system):

3. Management Information

- a) Plan for satellite realization:
- b) Companies names, responsible for the design and manufacture of the satellite:
- c) Built-in India or abroad or procured, please provide details:
- d) Launch service to be used:
- e) Expected launch schedule:
- f) Arrangements for third party liability insurance:
- g) Project schedule with key milestones:
- h) Estimated budget & funding details:

(Please provide detailed information in annexures/enclosures, as necessary)

Note:

- 1. For the Government entities, the third party liability insurance will not be mandatory.
- 2. For the procured space based remote sensing asset, the Indian industry will be liable for insurance etc.
- 3. Details of arrangements made with foreign satellite company for procurement of inorbit satellite, shall be provided.

4. Undertakings:

- a) We hereby affirm that we have read and understood the "Space Based Remote Sensing Policy of India – 2020" and "Norms, Guidelines and Procedures for Implementation of Space Based Remote Sensing Policy of India – 2020". We shall fully comply with the conditions given therein.
- b) We hereby agree to provide all the necessary technical and management details as per the requirements and any additional information as and when sought.
- c) We hereby agree to provide financial guarantee or insurance cover as determined by the authorizing authority, for the space assets owned by us towards fulfilment of nation's liability as per UN treaties to use the outer space.
- d) We hereby agree to participate in the meetings/discussions, at our cost, with the Indian Authorities related to authorization and subsequent operations of the proposed space based remote sensing.
- e) We hereby agree to pay all the stipulated charges/fee towards authorization.
- f) We hereby agree to provide the necessary status reports as sought by the concerned authorities about the implementation of our project.
- g) We hereby agree to seek fresh authorization in case of any change of ownership, change or replacement of the asset.
- h) We hereby agree to provide the details of arrangements made with foreign satellite company for procurement of in-orbit satellite, if applicable.
- i) We hereby agree to abide with the Government policy to impose control on operations of space assets, in case of the national security and/or international obligation and/or foreign policy of Government.

We hereby submit our proposal / application for due consideration for authorization.

Signature of the Authorized Signatory with Seal and Date

Annexure / Attachments:

a) ... b) ... c) ...

Application for Establishment of ground station for Indian remote sensing satellites in India (TT&C and Data Reception station)

[Completed application may be submitted to IN-SPACe, Department of Space, Antariksh Bhavan, New BEL Road, Bangalore 560 231]

1. Entity Information

- a) Name of the Indian Entity:
- b) Category of the Indian Entity*: {* Indian government body, PSU/CPSE, Indian registered non-Government Private Entity (NGPE), company, start-up, MSME, industry, academic institution, others (please specify)}
- c) Details of the Indian Entity (include registration details):
- d) Financial profile:
- e) Address of the Registered Office:
- f) Ownership pattern (FDI, if any):
- g) Address of the Corporate Office:
- h) Address for Correspondence:
- i) Name, Designation and contact details of Authorized Person:

Mobile No.:

Telephone No.:

Fax No.:

Email address:

Website:

2. Technical Information – TT&C station

- a) Location of TT&C station
- b) Frequency band & Frequency range:
- c) Antenna size:
- d) Max uplink power:
- e) Tracking capability:
- f) Details of satellites planned for tracking:

3. Technical Information – Earth Station

- a) Number of sites, location and its functionality:
- b) Frequency band & Frequency range:
- c) Antenna size:
- d) Details of satellites planned for data reception:
- e) Currently planned duration of services and coverage:
- f) Number of Staff dedicated to the satellite, their shifts and responsibilities:
- g) Details of the uninterruptible power supply at ground station:
- h) Redundancy plan for the ground segment elements e.g. mission computer, antennas, software:
- i) Plans for limiting the ground hazards:

4. Management Information

- a) Names of the companies responsible for setting of ground station:
- b) Third party liability insurance:
- c) Expected date of commencement of operations:
- d) Project schedule with key milestones:
- e) Estimated budget & funding details:
- (Please provide detailed information as annexures/enclosures, as necessary)

Note:

For the Government entities, the third party liability insurance will not be mandatory.

5. Undertakings:

- a) We hereby affirm that we have read and understood the "Space Based Remote Sensing Policy of India – 2020" and "Norms, Guidelines and Procedures for Implementation of Space Based Remote Sensing Policy of India – 2020". We shall fully comply with the conditions given therein.
- b) We hereby agree to provide all the necessary technical and management details as per the requirements and any additional information as and when sought.
- c) We hereby agree to participate in the meetings/discussions, at our cost, with the Indian Authorities related to authorization and subsequent operations of the proposed TT&C station, and/or data reception station.

- d) We hereby affirm that proposed ground station shall not cause harmful interference to other operational satellite networks. In case of any complaints received we hereby agree to eliminate such inferences immediately and we agree to shut off the operations if the interferences cannot be eliminated.
- e) We hereby agree to pay all the stipulated charges/fee towards authorization.
- f) We hereby agree to seek fresh authorization in case of any change of ownership, change or replacement of the asset.
- g) We hereby agree to abide with the Government policy to impose control on operations of space assets, in case of the national security and/or international obligation and/or foreign policy of Government.

We hereby submit our proposal / application for due consideration for authorization.

Signature of the Authorized Signatory with Seal and Date

Annexure / Attachments:

a) ...

b) ...

c) ...

Application for registration/authorisation of space asset for dissemination of satellite remote sensing data in India

[Completed application may be submitted to IN-SPACe, Department of Space, Antariksh Bhavan, New BEL Road, Bangalore 560 231]

1. Entity Information

- a) Name of the Entity:
- b) Details of the Indian or foreign data provider (include registration details):
- c) Type: Government or Private:
- d) Address of the Registered Office:
- e) Address of the Registered Office in India (if any):

2. Technical Information

- a) Specification of satellite data offerings of the company:
- b) Constellation of satellite details, if any:
- c) EMR spectrum of satellite data dissemination:
- d) Data specifications, in terms of resolution, spectral and temporal coverage:
- e) User segment in India:
- f) Whether owner of satellite or reseller:

3. Undertakings:

- a) We hereby affirm that we have read and understood the "Space Based Remote Sensing Policy of India – 2020" and "Norms, Guidelines and Procedures for Implementation of Space Based Remote Sensing Policy of India - 2020". We shall fully comply with the conditions given therein.
- b) We understand that the purpose of registration is to monitor the availability of particular remote sensing data in the country, lifetime of the space asset for continuity of resources, etc.
- c) We hereby agree to provide all the necessary technical and management details as per the requirements and any additional information as and when sought.
- d) We hereby agree to seek fresh registration/authorization in case of any change of ownership, change or replacement of the asset.

We hereby submit our proposal / application for due consideration for authorization.

Signature of the Authorized Signatory with Seal and Date

Annexure / Attachments:

a) ... b) ... c) ...

Application for authorization for dissemination of sensitive* data of Indian territory

[Completed application may be submitted to IN-SPACe, Department of Space, Antariksh Bhavan, New BEL Road, Bangalore 560 231]

1. Entity Information

- a) Name of the Entity:
- b) Category of the Entity*: (*Government, Private, etc.)
- c) Details of the Entity (include registration details):
- d) Financial profile:
- e) Address of the Registered Office:
- f) Address of the Corporate Office:
- g) Address for Correspondence:
- h) Name, Designation and contact details of Authorized Person:
 Mobile No.:

Telephone No.:

Fax No.:

Email address:

Website:

2. Details of space asset

- a) Satellite name:
- b) Payload details:
- c) Location and details of data reception station(s):
- d) Coverage area:
- e) Constellation details:
- f) Redundancy planned in the sensors or hardware:

3. Satellite data specifications:

- a) EMR spectrum of satellite data dissemination:
- b) Data specifications, in terms of GSD**, spectral and temporal coverage:
- c) Purpose of intended data use:
- d) Safe custody certificate:
- e) Latency of data:

Note:

* Sensitive data: very high resolution data having ground sampling distance of better than 50.0 centimeter.

** GSD is ground sampling distance of the imaging data which is generated by sampling at certain specified ground distance. It is distance between two consecutive pixel centres measured on the ground.

4. Dissemination of sensitive data of certain areas:

Additional authorisation is required for disseminating the sensitive data over certain region. To enable this, data dissemination for these identified zones will be authorised following a procedure to be laid down by the Government.

5. Undertakings

- a) We hereby affirm that we have read and understood the "Space Based Remote Sensing Policy of India – 2020" and "Norms, Guidelines and Procedures for Implementation of Space Based Remote Sensing Policy of India – 2020". We shall fully comply with the conditions given therein.
- b) We hereby agree that the dissemination of sensitive data will be regulated/controlled by the Government of India, as per the consideration of national security and prevailing foreign policy. We also hereby understand that dissemination of sensitive data would be illegal without authorisation.
- c) We hereby agree to obtain additional authorisation for disseminating the sensitive data of certain areas and abide by the procedure laid down by the Government. We hereby also agree to abide non-disclosure obligations and keeping the confidentiality of such data dissemination.
- d) We hereby agree that ownership information need to be changed and informed, in case of such data is re-distributed and ownership changes. All liability and safe custody responsibility will belong to the new owner of the data.
- h) We hereby agree to seek fresh authorization in case of any change of ownership, change or replacement of the asset.

- i) We hereby agree to abide with the Government policy to impose control on operations of space assets, in case of the national security and/or international obligation and/or foreign policy of Government.
- e) We hereby agree to provide all the necessary technical and management details as per the requirements and any additional information as and when sought.
- f) We hereby agree to pay all the stipulated charges/fee towards authorization.

We hereby submit our proposal / application for due consideration for authorization.

Signature of the Authorized Signatory with Seal and Date

Annexure / Attachments:

a) ... b) ... c)...