

INMARSAT'S REPLY TO THE ISSUES RAISED IN THE TRAI CONSULTATION PAPER 01/2018 ON FORMULATION OF NATIONAL TELECOM POLICY 2018

Introduction

Inmarsat wishes to thank TRAI for the opportunity to participate in this consultation on the formulation of the revised National Telecom Policy.

Inmarsat fully recognizes the Indian Telecom Sector as one of the currently fastest growing ones and entirely agrees that provision of world class telecommunication infrastructure is key to the socio-economic growth and development of the country.

Although the National Telecom Policy 2012 was very successful, a further revision and subsequent implementation of a novel Policy, with particular emphasis also towards a simplification of licensing frameworks and removal of unnecessary entry barriers, will be very important towards making telecommunication networks and services part of the essential infrastructure for industrial and social development.

Inmarsat, as a long established and trusted global provider of satellite mobile connectivity to a variety of users, will be looking forward to being part of this development for India and its citizens.

Inmarsat is in a unique position, as it offers global mobile communications in two different frequency bands, fully complementary to each other: L-band for resilience and availability, essential especially for security and safety services, and Ka-band, for true global mobile broadband connectivity.

Using its **L-band satellites**, Inmarsat has been providing global mobile connectivity for decades:

- Inmarsat aeronautical safety and security systems (e.g. cockpit communication, flight tracking) are installed on thousands of aircraft, corresponding to about 95% of the world's long haul airliner fleets.
- Inmarsat is currently the sole provider of GMDSS (Global Maritime Distress Safety System), compulsory on any cargo vessel above 300 Gross Tonnage.
- Inmarsat is also providing satellite telephony and data services (including IoT/M2M) on land, aircraft and vessels to a variety of users including government, maritime, commercial and private civil aviation, energy (e.g. oil/gas), banking, as well as to communities in rural and remote areas for health, education, humanitarian services and general development.

With its latest generation of **Ka-band satellites**, Inmarsat is the only truly global Ka-band mobile broadband provider, with particular emphasis on the maritime and aeronautical sector, changing the lives of people at sea and allowing In Flight Connectivity with data speeds similar to the ones available on terrestrial networks.

With the ongoing convergence process between terrestrial & satellite/fixed & mobile/voice & data/digital & physical and the telecommunication globalization process, Inmarsat has a key role to play for the benefit of Indian customers and is looking forward to the adoption of a revised National Telecom Policy that will be fully responsive to these needs.

Q.1 Stakeholders are requested to give their comments on structure and contents of the proposed inputs for National Telecom Policy, 2018, clearly outlining the specifics along with justification.

Inmarsat Response:

Inmarsat overall agrees with the structure and contents of the proposed inputs, which also reflect key guiding principles of alignment with the national vision, including connectivity for all, ease of doing business, streamlined regulatory and licensing framework and absorption of new technologies, all of which are extremely relevant to a company like Inmarsat and its Indian national partners.

As guiding principle, Inmarsat agrees that, for a country under such a strong and fast technological development as India, telecom services are essential facilitators of socio-economic growth. Inmarsat is of the opinion that introduction of such services should be facilitated and liberalized as much as possible.

While the Mission and Objectives (Sections B and C) rightly focus on enhancing the mass connectivity of the population, Inmarsat thinks that achieving excellence also in satellite communications and technology, including service provision to users on aircraft/vessels and enablement of state-of-the-art technological solutions, such as Earth Stations In Motion (ESIMs), should be one of the goals of the new Policy. It is important that the common strategy (Section D-I) will also apply to this market (see already for instance Section E, point e and Section F, point a), as suitable.

Section B

Inmarsat kindly suggests the following modifications to the text:

- To develop state-of-the-art secured communication infrastructure for delivering high-quality quality services to man and machines in urban as well as rural areas, as well to extend these services to users on the move, including on aircraft and vessels;
- To make available ubiquitous, ultra-reliable, and secured connectivity, with able to provide extremely low latency when necessary, for IoT/ M2M applications

Section C

Inmarsat kindly suggests adding the objectives below. The first is also coherent with the general mission of the Department Of Space, while the second is fully in line with the recent TRAI consultation on In Flight Connectivity. Connectivity services should be provided also to crew members on vessels, while out at sea for weeks on end.

(x) To develop and enhance the application and use of satellite communications to assist in all-round development of the nation.

(y) To provide for broadband connectivity to users on the move, including on aircraft and vessels, enabling state-of-the-art technological solutions, including the use of Earth Stations In Motion (ESIMs)

Section D

As far as Section D is concerned, Inmarsat fully supports its content and especially *points c-h, u, w and bb*).

Inmarsat wishes to make the following general comments:

- It is very positive that license fees are to be reviewed (point c). In general, for essential services such as the satellite ones, the broader positive impact of having the services deployed together with the associated eco-system (e.g. increased safety and security, jobs, manufacturing, positive impact to the population) needs to be considered as part of the overall “income” to the nation.
- A general restructuring of the legal/licensing and regulatory framework (point d) is most welcome and will be essential to attract investments and further develop the telecommunication market.
- It is also a good idea to separate network and service licenses (points e-f). Some services (such as for instance In Flight Connectivity and maritime VSATs, including ESIMs – Earth Stations In Motion) will need special consideration for their peculiar nature with a significant international component. In many countries, services such as VSATs on cargo vessels (i.e. service not to the general public and for the majority of time outside the national territory) are, for instance, very lightly licensed.
- Simplification and clarification (point g) will be key aspects of the overall process to reduce unnecessary entry barriers (point w). It is also important that the National Frequency Allocation Plan is regularly updated to reflect newly globally harmonised spectrum use (point u), such as for instance, Ka-band spectrum for ESIMs, also coherently with point e in Section E. This, in turn, will also help improving the international coordination aspect (point bb).
- In relation to international coordination aspects (point bb), mutual recognition of licenses issued by other countries and free circulation of duly licensed foreign visiting terminals will be worth considering. This is especially the case for global services to be deployed also in India, so that the same treatment could be expected towards Indian terminals travelling to other countries.
- Novel spectrum licensing approaches, such as “blanket licenses” will require consideration to reasonably accommodate large numbers of mobile/ubiquitous user terminals.

Overall, Inmarsat suggests the following additional point to this section:

(x) By allowing broadband connectivity services to moving platforms (as aircraft, vessels and trains) using also solutions such as Earth Station In Motion (ESIM);

Section E

Inmarsat is very appreciative of point e and would kindly suggest the following modification to the text:

(e) By promoting use of satellites to provide telephony and broadband services in remote and inaccessible areas, *as well to extend these services to users on the move, including on aircraft and vessels,* through–

Section F

The following point may be added:

(x) By incentivizing state-of-the-art broadband connectivity solutions such as Earth Stations In Motion (ESIMs) to provide access to user in moving vehicles and other platforms such as aircraft, vessels and trains;

Section G

In general, satellites will be a de-facto integral part of the overall ecosystem for IoT/M2M and 5G, as it will be practically impossible to provide sufficient coverage with terrestrial networks. As such, Inmarsat courteously suggests that the use of satellites to provide IoT/M2M connectivity is considered in the overall strategy for the corresponding regulatory framework, spectrum availability and general coordinated development (points a-c).

Section H:

No comment

Section I

Inmarsat is in agreement with the general strategy and very much appreciates point (b). The importance of expeditious allocation of spectrum for demonstration and experimental purposes is occasionally undervalued, but it actually removes a significant entry barrier. The fact that equipment/systems are allowed to be tested locally normally favors quicker adoption and deployment.

Q.2 Stakeholders may also suggest any other issue related to Policy Framework which stakeholders feel is important for growth of telecom sector, along with justification.

Inmarsat Response: All the points that Inmarsat wished to make are covered in the reply to Q.1.