



STAKEHOLDER CONSULTATION ON THE SATELLITE FREQUENCY LICENSING FRAMEWORK

[2026]

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Purpose of this Consultation

The Communications Authority of Kenya (the Authority) has developed the proposed Satellite Frequency Licensing Framework to clarify the licensing and frequency spectrum authorization approaches applicable to satellite services in Kenya. The Framework responds to the developments in the satellite industry and seeks to promote efficient use of spectrum, lawful market entry, protection of incumbent users and the orderly introduction of emerging satellite services.

The purpose of this consultation is to invite stakeholders to comment on whether the proposed requirements of the Framework are clear, proportionate, and address the emerging issues related to satellite services and to propose any additional elements to be incorporated into the Framework.

How to Respond

- a. Responses should provide reasons, supporting evidence and practical alternatives where a different approach is proposed.
- b. Provide details of the stakeholder or organization submitting responses.
- c. Reference the consultation question number and, where applicable, the relevant section of the document.
- d. Clearly identify any information that the respondent considers confidential.
- e. Submit responses by the closing date and via email specified in the accompanying consultation notice.

1. Introduction

The satellite industry has undergone rapid growth, mainly driven by technological advancements, the entry of new market players and the expansion of services. Key developments include the deployment of high-throughput satellites in Geostationary Satellite Orbit (GSO), the rapid deployment of Non-geostationary Satellite Orbit (NGSO) constellations and increased access to space through cost-efficient small satellites.

These developments have lowered barriers to entry and stimulated innovation, resulting in the emergence of new and disruptive services. At the same time, commercial applications, particularly in Earth observation and data-driven services, are expanding rapidly, alongside new communication use cases such as satellite-enabled Internet of Things (IoT). Satellite technologies are becoming an increasingly important part of information and communication technologies (ICT), providing services such as broadcasting, broadband connectivity, backhaul for communications networks, global positioning and navigation, earth observation, emergency communications for aeronautical and maritime users, communications during disasters and space research, among others.

The rapid evolution of satellite technology and the increasing complexity of global satellite networks have increased the demand for spectrum and have made coordination to manage interference more complex. The emergence of NGSO systems has also brought new licensing and spectrum management challenges, as well as competition issues that require regulatory review. The deployment model of services provided by these NGSO systems has had implications for the telecommunications market. Further, the nature and scale of these systems impact spectrum usage and co-existence among users.

The Authority has established the telecommunications market structure based on technology and service neutrality principles, which guides the deployment of satellite-based communications services. Further, the Kenya National Table of Frequency Allocations guides the authorization of frequency spectrum resources for radiocommunications services including satellite services.

Accordingly, the Authority establishes this Framework to clarify the licensing and spectrum authorization approaches applicable to satellite services in Kenya, while promoting efficient spectrum use, lawful market entry, protection of incumbent users, and orderly introduction of emerging satellite services.

The purpose of this framework is to provide a guideline for the management of frequency spectrum resources allocated to satellite services to ensure efficient use of spectrum in Kenya.

2. Legal and Regulatory Framework

2.1. International Regulatory Framework

The International Telecommunications Union (ITU), of which Kenya is a member represented by CA, provides a legal framework that comprises basic instruments which have treaty status and are binding on ITU Member States. These instruments are the ITU Constitution, ITU Convention and the ITU Radio Regulations (RR), which complement the Constitution and the Convention.

These instruments govern, among others, the international use of radio frequency spectrum resources. In particular, the Radio Regulations incorporates decisions of the World Radiocommunications Conferences, including all Appendices, Resolutions and Recommendations. The Radio Regulations

provide an agreed framework of rights, obligations, and procedures applicable between countries in the use of the Radio Frequency Spectrum for various services. In developing national spectrum management regulatory frameworks, the Authority refers to these instruments.

The ITU coordinates the global use of the radio-frequency spectrum and satellite orbits to ensure that these finite resources are used efficiently and equitably. The ITU's Radiocommunication Sector (ITU-R) establishes regulations and standards for spectrum allocation, including international coordination, to guarantee access to the necessary frequencies for satellite operations while minimising interference with other users.

Article No. 18.1 of the RR provides that no transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of the Radio Regulations by or on behalf of the government of the country to which the station in question is subject.

ITU-R Resolution 22(WRC-19) provides that the operation of transmitting earth stations within the territory of an administration shall be carried out only if authorised by that administration.

2.2. National Legal Regulatory Framework

The Authority is mandated under the Kenya Information and Communications Act, (KICA) CAP 411A, to facilitate the development of the information and communications sector. In particular:

- a) Section 25 of KICA gives the Authority power to license telecommunications services that may be provided by means of any telecommunications system.
- b) Sections 35 and 36 of KICA further empower the Authority to license the establishment and use of any radio communication station or apparatus. Further, Section 37 provides for the issuance of such licenses for scientific or research use.
- c) Section 46 of KICA provides that all provisions in the Act related to radio communication shall apply to stations and apparatus operating over Kenya and within its territorial waters.

The National Table of Frequency Allocations (TOFA) outlines the specific frequency bands allocated to different radio services in Kenya. TOFA, which is closely modelled on the relevant parts of the ITU Radio Regulations, serves as a guideline for assignment of frequencies to various users, ensuring efficient and coordinated spectrum utilization.

The Frequency Spectrum Management Guidelines provide that the Authority will determine the terms and procedures necessary for the issuance of licences, as well as monitoring compliance with the terms of licenses and authorizations issued.

This framework is aligned to the National ICT Policy Guidelines 2020 and the National Broadband Strategy 2018–2023.

3. Scope

This Framework applies to radiocommunication services and facilities deployed using satellite technology within Kenya. The Framework also applies to spectrum management activities necessary to facilitate satellite services, including authorization of earth stations, monitoring of compliance, and such activities as may be necessary in relation to satellite filings and coordination processes within the Authority's mandate.

Question 1. Do you agree that the purpose and scope of the proposed Framework are sufficiently clear to cover current and emerging satellite communications services in Kenya? Please give reasons for your response.

Question 2. Does the proposed legal and regulatory basis provide sufficient clarity on the relationship between telecommunications licensing and frequency spectrum authorization for satellite services?

Question 3. What additional legal, regulatory or policy issues should the Authority consider in defining the scope and application of the Framework?

4. Licensing of Satellite Services under the Telecommunications Market Structure

The telecommunications market structure establishes the operating licence categories through which satellite-based communications services may be introduced in Kenya. In addition, a separate frequency authorization is required depending on the type of service.

The Authority issues infrastructure and service licenses to enable deployment of satellite services in the country, which include:

- a) Landing Rights Authorization – The authorization permits satellites operators to land their signals in Kenya to facilitate international connectivity and is a prerequisite to providing satellite-based services in the country.
- b) International Gateway Systems and Services Licence - This licence allows for the establishment and operation of international gateway/systems and to provide international gateway services using satellite communication systems or terrestrial systems.
- c) Network Facility Provider Licence - This licence allows for the deployment of communications infrastructure using any technology, including satellite, and is tiered based on geographical coverage.
- d) Application Service Provider License - This licence allows a licensee to provide any form of service to end users using the infrastructure leased from any NFP-Tx Licence holders as well as satellite based IoT and GMPCS services.
- e) Communications Equipment Distributor Licence – This licence allows a licence holder to supply (including importation and purchase from local communications Equipment manufacturers) and sell telecommunication equipment and devices (both ordinary terminal equipment and complex network equipment) and provide after-sales support through the

supply of spares to vendors that purchase from them. They also must ensure that all the equipment they distribute or sell are type approved.

Question 4. Do you have any comments on the licensing requirements for satellite services under the Telecommunications Market Structure?

5. Frequency Spectrum Authorization for Satellite Services

The Authority aims to promote the use of technologies that achieve efficient use of spectrum and to ensure that spectrum resources are available for emerging services while protecting existing ones. The existing telecommunications licensing framework has ensured that GSO and NGSO services can operate in Kenya within necessary legal and regulatory provisions.

GSO satellites enable the delivery of a variety of communications services within the Fixed Satellite Services, Broadcasting Satellite Services and Mobile Satellite Services. Some of these services include:

- a) Global positioning, navigation and timing
- b) Connectivity for moving platforms such as planes and ships
- c) Direct to Home Satellite Television
- d) Earth observation
- e) Broadband connectivity for remote areas
- f) Backhaul for telecommunications networks
- g) Space research

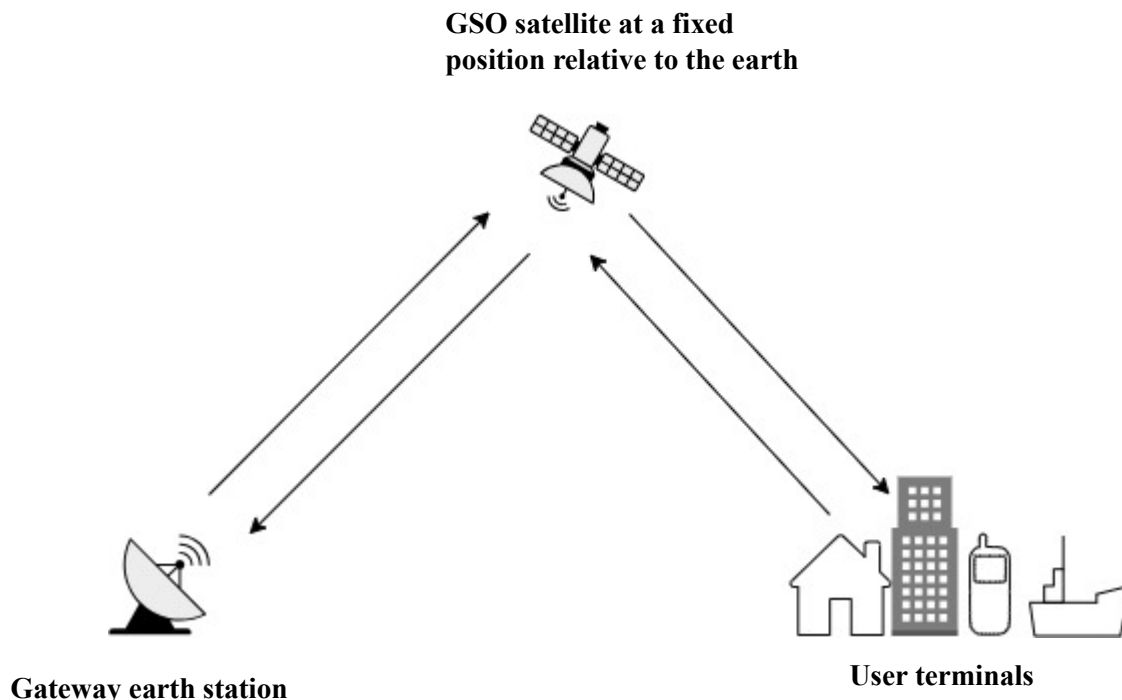


Fig 1. GSO satellite Network

NGSO satellites operate from non-geostationary orbits that are closer to the earth than the geostationary orbit enabling delivery of lower latency satellite communication albeit with more satellites. The emergence of NGSO satellite networks, particularly Low Earth Orbit (LEO) satellites is attributed to the lower cost of deployment that has lowered the barriers to entry for operators and availed lower cost services to consumers.

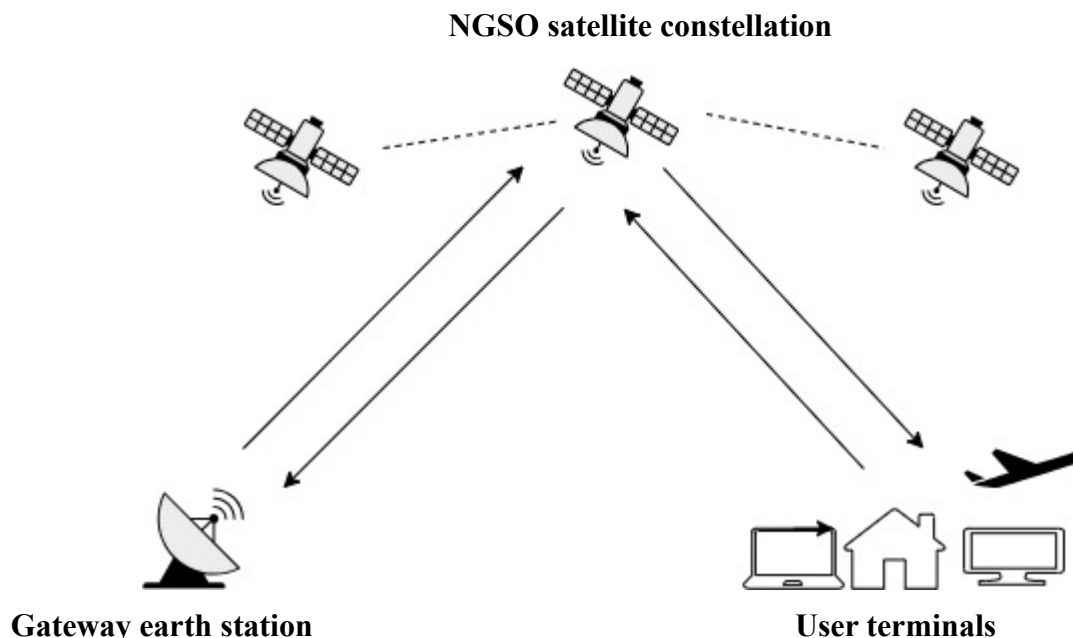


Fig 2. NGSO satellite Network

NGSO systems provide connectivity in remote areas, enable communication through earth stations in motion (ESIMs), provide backhaul for terrestrial networks and enable the delivery of satellite Internet of Things (IoT) among others.

The growing deployment of NGSO systems operating in the same frequency bands as GSOs and terrestrial services increases the potential interference scenarios between the services. This requires more regulatory oversight to ensure their co-existence, including the implementation of frequency monitoring systems that can facilitate satellite monitoring and support interference resolution.

This section sets out the general authorization requirements and common regulatory conditions applicable to all satellite services.

Question 5. Where regulatory treatment may need to differ between GSO and NGSO systems because of their technical or operational characteristics, what matters should the Framework expressly distinguish?

5.1. Fixed Satellite Services (FSS)

Fixed Satellite Service is a radiocommunication service between earth stations at given positions, and one or more satellites; the given position may be a specified fixed point or any fixed point within

specified areas. The fixed-satellite service may also include feeder links for other space radiocommunication services.

Both GSO and NGSO satellite systems are used to provide fixed satellite services, with allocations across different frequency bands depending on the application and service requirements.

The frequency allocations to fixed satellite services are provided in the National Table of Frequency Allocations, and only entities licensed or authorised to operate in the country can apply for authorizations to use the respective frequency bands. As a prerequisite, an operator must obtain a landing rights authorization to enable deployment of satellite services in the country. Further, depending on the type of service to be provided, additional operating licenses may be required as per the prevailing telecommunications market structure.

The Fixed Satellite Earth Stations include Gateway Earth Stations, User Terminals, VSATs and ESIMs. The respective frequency authorization requirements are provided in this section.

5.1.1. Gateway Earth Stations

Gateway Earth Stations (deployed in both GSO and NGSO satellite networks) are ground stations that connect the satellite network to the internet or private networks. Gateway earth stations are used in different services, including direct-to-home broadband connectivity, broadcasting feeder links, backhaul for terrestrial networks and connectivity for ESIMs.

5.1.1.1. Frequency Authorization Requirements

- a) Applicants must hold an International Gateway Systems and Services (IGSS) Licence
- b) The applicant shall be required to submit a duly completed application form together with the required supporting documentation.
- c) The authorization shall attract an annual frequency utilisation fee as prescribed in the Frequency Fee Schedule.

The authorization shall be valid for the duration of the IGSS licence.

5.1.2. User Terminals

User terminals for Fixed Satellite Services are devices that transmit and receive satellite signals, enabling user access to broadband services. Within the FSS, user terminals communicating with GSO and NGSO satellites are located at a fixed position and can be installed at the customer premises.

The terminals form part of the satellite system and operate on frequency bands associated with the space stations. In this regard, the operational limits for these user terminals are provided in the relevant Radio Regulations and the national TOFA to ensure co-existence with other systems operating in the same or adjacent bands.

Satellite operators are required to hold the applicable telecommunications licences or partner with licensed entities to establish the required local network infrastructure for the operation of the user terminals and to provide end-user services. However, noting that satellite operators deliver proprietary user terminals to end users, the responsibility of controlling the operations of the terminals lies with the satellite operators. This includes ensuring that user terminals operate within the prescribed

conditions to avoid harmful interference and their operation does not contravene legal and regulatory provisions.

5.1.2.1. Frequency Authorization Requirements

- a) Applicants must hold the requisite infrastructure licenses under the Telecommunications Market Structure to apply for frequencies for deployment of user terminals for a particular satellite service. These licences include:
- Landing Rights Authorization permitting the transmission of telecommunication signals to Kenya to facilitate international connectivity.
 - International Gateway and Services Systems where the operator intends to establish a gateway earth station in the country.
 - Network Facility Provider Licence where the operator intends to establish terrestrial network infrastructure.
 - Application Service Provider Licence for delivery of services to end users.
 - Communications Equipment Distributor Licence for supply and importation of user terminals and after-sales support through the supply of spares to vendors that purchase from them.
- b) The applicant shall be required to submit a duly completed application form together with the required supporting documentation.
- c) The authorization shall attract an annual frequency utilization fee.
- The frequency authorization shall be valid for the duration of the Applications Service Provider Licence.

5.1.3. Very Small Aperture Terminals (VSATs)

VSATs are earth stations used in fixed-satellite services, characterized by small antenna reflectors and allowing direct installation at user premises. They provide narrowband or broadband satellite connectivity. Entities or persons intending to use VSATs must ensure that the satellite operator holds a valid Landing Rights Authorization in Kenya.

5.1.3.1. Frequency Authorization Requirements

- a) Applicants must hold a VSAT licence under the Telecommunications Market Structure.
- b) The applicant shall be required to submit a duly completed application form in the prescribed format together with supporting documentation as may be required.
- c) The authorization shall attract an annual frequency utilization fee.

The frequency authorization shall be valid for the duration of the VSAT licence.

5.1.4. Earth Stations in Motion (ESIMs)

Earth Stations in Motion communicate with GSO and NGSO satellites within the FSS to provide connectivity on board aircraft, ships and land-based vehicles and are categorised into aeronautical, maritime and land-based ESIMs.

ESIMs operate within the frequency bands allocated to FSS, and the Radio Regulations prescribe the conditions for the operation of aeronautical and maritime ESIMs. Land-based ESIMs fall under national regulatory frameworks. ESIM operators authorised to deploy ESIMs in the territory of Kenya shall operate within the conditions set out in the relevant ITU-R Resolutions and Recommendations.

Entities interested in operating ESIMs on foreign-registered aeronautical and maritime vehicles within the territory of Kenya shall seek authorization from the Authority and obtain landing rights authorization for the satellite system. For land-based ESIMs, the operators shall be required to hold the necessary local infrastructure and service licences, and only type-approved user terminals will be permitted for distribution and use in the country.

5.1.4.1. Frequency Authorization Requirements

- a) Applicants seeking to deploy land based ESIMs must hold an Application Service Provider Licence. Furthermore, they will be required to hold the following licenses or partner with licensed entities :
 - Landing Rights Authorization permitting the transmission of telecommunication signals to Kenya to facilitate international connectivity.
 - International Gateway and Services Systems where the operators intends to establish a gateway earth station in the country.
 - Network Facility Provider Licence for establishment of terrestrial network infrastructure
 - Communications Equipment Distributor Licence for supply and importation of user terminals and after-sales support through the supply of spares to vendors that purchase from them.
- b) The applicant shall be required to submit a duly completed application form together with required supporting documentation.
- c) The authorization for the land-based ESIM shall attract an annual frequency utilization fee.

The frequency authorization issued for operation of land based ESIMs shall be valid for the duration of the Application Service Provider licence.

5.1.5. Other Fixed Satellite Services

Satellite ground stations established for purposes of Global positioning, navigation and timing, Earth observation, Space research, and telemetry, tracking and command, shall require authorization from the Authority. Applicants seeking frequency authorization to operate these earth stations must hold landing rights authorization.

5.2. Mobile Satellite Service

A mobile satellite service is a radiocommunication service between mobile earth stations and one or more space stations, or between mobile earth stations by means of one or more space stations. This service may also include feeder links necessary for its operation.

Mobile Satellite Services include maritime, aeronautical and land mobile satellite services which operate on designated frequency bands in the national TOFA. The corresponding earth stations/terminals communicate with GSO and NGSO satellites to enable connectivity while in motion, particularly in remote locations and are required to comply with relevant provisions of the Radio Regulations.

5.2.1. Frequency Authorization Requirements for Mobile Satellite Services

- a) Applicants seeking to deploy MSS must hold an Application Service Provider Licence. Furthermore, they will be required to hold or partner with licensed entities holding the following licenses:
- Landing Rights Authorization permitting the transmission of telecommunication signals to Kenya to facilitate international connectivity.
 - International Gateway and Services Systems where the operator intends to establish a gateway earth station in the country.
 - Network Facility Provider Licence where the operator intends to establish terrestrial network infrastructure
 - Communications Equipment Distributor Licence for supply and importation of user terminals and after-sales support through the supply of spares to vendors that purchase from them.
- b) The applicant shall be required to submit a duly completed application form together with supporting documentation.
- c) The authorization shall attract an annual frequency utilization fee.

The frequency authorization shall be valid for the duration of the Application Service Provider licence.

5.3. Broadcasting Satellite Service

Broadcasting Satellite Service (BSS) is a radio communication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public. Frequencies for broadcasting satellite services and feeder links for BSS are allocated regionally as contained in the ITU Appendix 30 Plans and are used by GSO networks and systems to provide television and radio broadcasting services.

Earth stations in the BSS consist of Direct-to-Home user terminals and ground stations for BSS feeder links. Earth stations established as feeder links in the BSS shall require authorization from the Authority.

5.3.1. Frequency Authorization Requirements

- a) Applicants seeking to deploy earth stations as feeder links in the BSS must hold a landing rights authorization.
- b) The applicant shall be required to submit a duly completed application form together with supporting documentation.
- c) The authorization shall attract an annual frequency utilization fee.

The frequency authorization shall be valid for the duration of the Landing Rights Authorization.

Question 6. Are the proposed requirements for frequency authorizations for the various satellite services clear and proportionate for both GSO and NGSO systems? What additional information should applicants be required to provide in support of their applications?

Question 7. Do you have any comments on the frequency authorization requirements for satellite services?

6. Type Approval

All electronic equipment used for service provision in the satellite network shall be subject to type approval /authorization from the Authority. This requirement shall be applicable to both electronic equipment used in the satellite network/service provider's core and access network as well as those to be used by end users.

Question 8. Do you have any comments on the type approval requirements for electronic equipment used in providing satellite services?

7. Reporting Requirements

Satellite services licensed in Kenya will be required to adhere to the compliance requirements outlined by the Authority. This includes, inter alia, maintaining a record of all terminals in their networks and their locations and areas of operation in Kenya and submit periodic returns as required by the Authority.

Question 9. Do you have any comments on the reporting requirements for satellite services?

8. Review of the Framework

This Framework may be reviewed from time to time to ensure that it meets the Authority's statutory obligations related to satellite services.

Question 10. Do you have any comments on the overall satellite frequency licensing framework and its implementation?

9. Annexes

- 9.1. [Telecommunications Market Structure](#)
- 9.2. [Application Form For Telecommunications Licenses](#)
- 9.3. [General VSAT Licensing Procedure](#)
- 9.4. [Kenya National Table of Frequency Allocation](#)
- 9.5. [Frequency Fee Schedule](#)