

Strategic Spectrum Plan

Public consultation

Transformative Legal Experts

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1. Introduction

ANACOM (the Portuguese communications regulator) is holding a public consultation on the Strategic Spectrum Plan (“SSP”) until 4 November. This public consultation is open to all interested parties. The Portuguese regulator intends to listen to interested stakeholders, as it believes that the document approved six years ago is in need of revision. This is because of national, regional and international events which have occurred since it was first approved, and which may impact the strategy defined for spectrum management in the country.

ANACOM is holding a public consultation on the Strategic Spectrum Plan until 4 November.

The SSP contains the programming guidelines for future ANACOM actions in terms of spectrum management. It (i) identifies the main strategic actions to be taken in respect of the services identified as most important and which require spectrum for to operate (ii) lists the main characteristics of the mechanisms for making spectrum available, including the allocation of rights of use for frequencies, where applicable and (iii) identifies the factors to be considered by the Portuguese regulator in the pursuit of the objectives inherent to the strategy defined for spectrum management. These include the allocation of radio spectrum according to principles of efficiency and effectiveness, guarantee of competition, regulatory predictability, and technological neutrality.

This consultation is particularly significant in the current circumstances given the intensity and extent to which the spectrum is increasingly used as a result of the widespread use of services provided using frequencies. Accordingly, under its spectrum management powers, ANACOM needs to monitor the trend of growth of services in a wireless environment. These services include voice, data and mobile television, as well as the increasing use of emerging technologies such as the Internet of Things (“IoT”). ANACOM will need to ensure that users do not experience any disruption in the use of services provided using spectrum, and this is also one of the reasons for collecting input from the market on the SSP.

2. Spectrum management and strategic goals

ANACOM’s strategic objectives in the context of spectrum management listed in the SSP are as follows:

- a) **Make spectrum available for the various activities and users, according to its social, cultural and economic value**, and to that extent, spectrum allocation should meet the need for services / applications / users to correspond to those which maximise the value generated for society.
- b) **Pursue social and cultural objectives, and meet the needs in terms of civil protection and disaster relief, and provide support in mitigating climate change.** Therefore, the use of spectrum to support public services, for example, public safety and protection services, including civil protection and assistance in disaster situations, and scientific activities, such as meteorology, Earth observation, radio astronomy and space research, should be properly considered in planning spectrum.
- c) **Ensure and preserve competitive markets**, with the assignment of frequencies, where applicable, to contribute to the development of competition in the relevant markets.
- d) **Stimulate flexible use of spectrum, to adapt it to market needs** by implementing the principles of technological and service neutrality, and of secondary trading of spectrum (transmission and leasing of rights to use frequencies) accompanied by mechanisms to prevent distortion of competition.
- e) **Ensure efficient use of spectrum resources, monitoring and encouraging their proper use by market players**, with ANACOM, as part of its supervisory activity, ensuring that, users, networks and radiocommunications stations operate without harmful interference throughout the country.

- f) **Encourage technological innovation leading to greater efficiency in spectrum use, with a view to increasing benefits for users.** In other words, ANACOM should foster technological neutrality, enabling conditions for the offer of solutions with increasing diversity and quality to consumers, in an environment of permanent innovation and technological evolution.
- g) **Contribute to international harmonisation of the radio spectrum.**
- h) **Review the regulatory framework for radiocommunications,** as this contributes to making spectrum management and use more efficient.
- i) **Develop an integrated spectrum management platform.** Agile management of the spectrum management process requires the integration and suitability of its application system with regard to planning, assignment of frequencies and spectrum monitoring and control, which requires the continuous improvement of these processes.
- j) **Strengthen spectrum sharing.** As the spectrum is a scarce resource, with growing and intense use, this has been hindering the identification of frequency bands for the exclusive use of each service. Therefore, sharing is essential to allow its efficient, innovative and flexible management and use.
- k) **Strengthen radio communications literacy among users of the radio spectrum.**
- l) **Inform people about the possible health effects of exposure to electromagnetic fields from radiocommunications stations.**

3. Scope and proposal for ANACOM's strategic action under consultation

In the light of the objectives identified above, in terms of lines of action, the SSP focuses on the following topics: (i) use of spectrum for technical trials and scientific studies, (ii) regulatory approach to matters relating to spectrum sharing, and (iii) spectrum sharing techniques and use of spectrum for short-range devices. The SSP also addresses the use of spectrum for the following services: mobile, fixed, digital radio and television broadcasting (including ancillary to broadcasting), satellite, scientific, maritime, aeronautical, amateur and amateur satellite services. Finally, the SSP focuses on issues relating to the mechanisms for assigning rights of use of frequencies.

The document put out for public consultation addresses each of the services in which spectrum use occurs. It summarises the current situation and the strategic actions that ANACOM proposes to take with regard to each group of services.

Due to their significance, we consider it pertinent to highlight here the following aspects of the Strategic Plan put out for public consultation.



3.1. SPECTRUM SHARING

3.1.1. As for **spectrum sharing**, the SSP focuses on the Licensed Shared Access (LSA) model and on new spectrum sharing techniques.

3.1.2. **LSA** has the advantage of allowing the allocation of individual (but not exclusive) rights of use of frequencies over the same frequency band to new operators and this enables them to offer services with a certain foreseeable quality of service. Despite the relatively successful pilot tests carried out in Portugal in 2020 in the 2.3-2.4 GHz band, ANACOM goes no further than stating that it will continue to analyse the advantages of introducing this model in Portugal. In this regard, in the United Kingdom, for example, the electronic communications regulator published a document in 2019 under which it introduced the LSA model into the regulatory landscape. More recently (September 2022), it published a document aimed at operators containing information on the requirements and conditions associated with the issuance of [Shared Spectrum Licences](#).

3.1.3. With regard to spectrum sharing techniques, ANACOM points that the sharing of this resource may have four different dimensions: by frequency, in space, in time or by signals. It may also be static or dynamic and performed horizontally (radio systems have the same rights with regard to access to the spectrum) or vertically (radio systems have different spectrum access priorities). Furthermore, new techniques continue to emerge such as beamforming, filtering, and dynamic frequency allocation between technologies.

3.1.4. Given this scenario, in terms of strategic action, ANACOM undertakes to monitor the development of these techniques, with a view to their case-by-case implementation in Portugal. This will depend on their suitability to the bands and services in which these techniques are to be used, on demand, and on the national circumstances in terms of spectrum usage conditions.

In the context of the terrestrial mobile service there is still spectrum available in the 700 MHz band.

3.2. USE OF SPECTRUM IN THE AREA OF MOBILE SERVICES

3.2.1. Analysing the various mobile services that make use of spectrum, it is important to stress that, according to ANACOM, in the context of the terrestrial mobile service there is still spectrum available in the 700 MHz band¹. Moreover, a public consultation may be held on the future uses of the duplex gap and the 700 MHz guard bands for the possible provision of additional spectrum for (i) supplementary downlink (SDL) (ii) applications for ancillary broadcasting (PMSE²), public protection and disaster response services (PPDR³), and M2M IoT, depending on market interest.

ANACOM also refers to the various discussions and analyses taking place at international level within the International Telecommunications Union (ITU) and the European Conference of Postal and Telecommunications Administrations (CEPT). These discussions are related to the identification of harmonised frequency bands for 5G mobile⁴, as well as bands that could contribute to the development of 5G/6G⁵.

1 The duplex gap and guard bands of this frequency.

2 Programme Making and Special Events applications

3 Public Protection and Disaster Relief

4 Bands 24.25-27.5 GHz; 37-43.5 GHz e 66-71 GHz and the 26GHz band

5 Band L (1427-1517 MHz), the higher part of 6 GHz, the interval 40.5-43.5 GHz and 66-71 GHz

The spectrum needs for the shared use of the 3800-4200 MHz frequency band by terrestrial wireless broadband systems providing private local area network connectivity are also being assessed.

3.2.2. The private terrestrial mobile service is mostly composed of digital networks, and the introduction of 5G could have a significant impact on its offer. So could its expansion into businesses targeting specific market segments beyond the traditional mobile broadband market, such as the automation of industry, public services, smart buildings, public safety and telemedicine.

Private networks used for mobile rail communications on the other hand are based on obsolete technology specifications that are more than 20 years old, and the industry cannot be expected to support their operation beyond 2030. Therefore, the specifications of the future rail mobile communication system (FRMCS) are being designed to allow a better quality of service, and a more efficient and effective use of the spectrum.

3.2.3. Regarding emergency and security networks, the Integrated System for Portugal's Security and Emergency Network (SIRESP) is currently in place in Portugal. It is based on a shared national telecommunications infrastructure and uses digital trunking technology (TETRA). SIRESP is supported on the 380-383 MHz / 390-393 MHz frequency bands, and, if necessary, on the 383-385 MHz / 393-395 MHz extension bands, and is used by several bodies.

The use of broadband services for emergency communications is currently under discussion and this may imply the availability of spectrum in the 400 MHz and/or 700 MHz frequency bands.

3.2.4. In light of the above scenarios, ANACOM proposes to take the **following strategic actions regarding the mobile service:**

- Develop the appropriate regulatory framework to implement mobile broadband (BB) networks, identifying spectrum for terrestrial mobile service, in particular for use in services with 5G and 6G technology.
- Foster the use of wireless BB technologies with higher transmission speeds, lower latency and ultra-reliability.
- Monitor and if necessary impose conditions to improve the coverage and capacity of mobile networks in the country.
- Foster the growth and innovation of applications, such as machine-2-machine and IoT;
- Explore new scenarios for private local networks in frequency bands above 1 GHz and try to make spectrum available to accommodate new scenarios for private networks.
- Implement Commission Implementing Decision (EU) 2021/1730 of 28 September 2021⁶ and monitor the development of technical specifications and standards for the future rail mobile communication system.
- Fostering the use of the 5875-5935 MHz band by intelligent systems in urban rail and road transport.
- Depending on the model defined for broadband applications for public protection and disaster relief, make spectrum available to meet the requirements of broadband services for emergency communications and security. For this purpose, ANACOM will hold a public consultation on future uses of the duplex gap and the 700 MHz guard bands to consider the possibility of making additional spectrum available for these applications.

⁶ Establishes, on a non-exclusive basis, the conditions of use of the paired frequency bands 874.4-880.0 MHz, 919.4-925.0 MHz and 1900-1910 MHz for rail mobile radio communications.

3.3. USE OF SPECTRUM IN THE SCOPE OF THE FIXED SERVICE

3.3.1. In the SSP submitted for consultation, ANACOM states that the spectrum currently allocated to the fixed service⁷ is adjusted to current and future market needs, even taking into account the implementation of mobile operators' own infrastructures for the offer of mobile networks and services supported on 5G.

The spectrum allocated in larger quantities is in frequency bands below 1 GHz, namely in the 406-430 MHz band, essentially to establish point-to-point links between the mainland and the autonomous regions of the Azores and Madeira. However, according to some decisions at the European level, part of the 406-430 MHz band may in the future be allocated to terrestrial mobile communications or emergency systems supported on broadband.

As for frequencies above 1GHz, there has been an increase in demand in the bands 1500 MHz, 2, 6, 7, 8, 11, 13, 15, 18, 23, 38 and 80 GHz by mobile operators for interconnection of their base stations. If demand increases, ANACOM may consider making more frequency bands available above 90GHz.

With regard to Band L, ANACOM stresses that it may no longer be used as of 1 January 2023, particularly the 1492-1517 MHz band, due to the adoption of Commission Implementing Decision (EU) 2018/661 of 26 April 2018⁸ in the context of the EU Digital Single Market strategy.

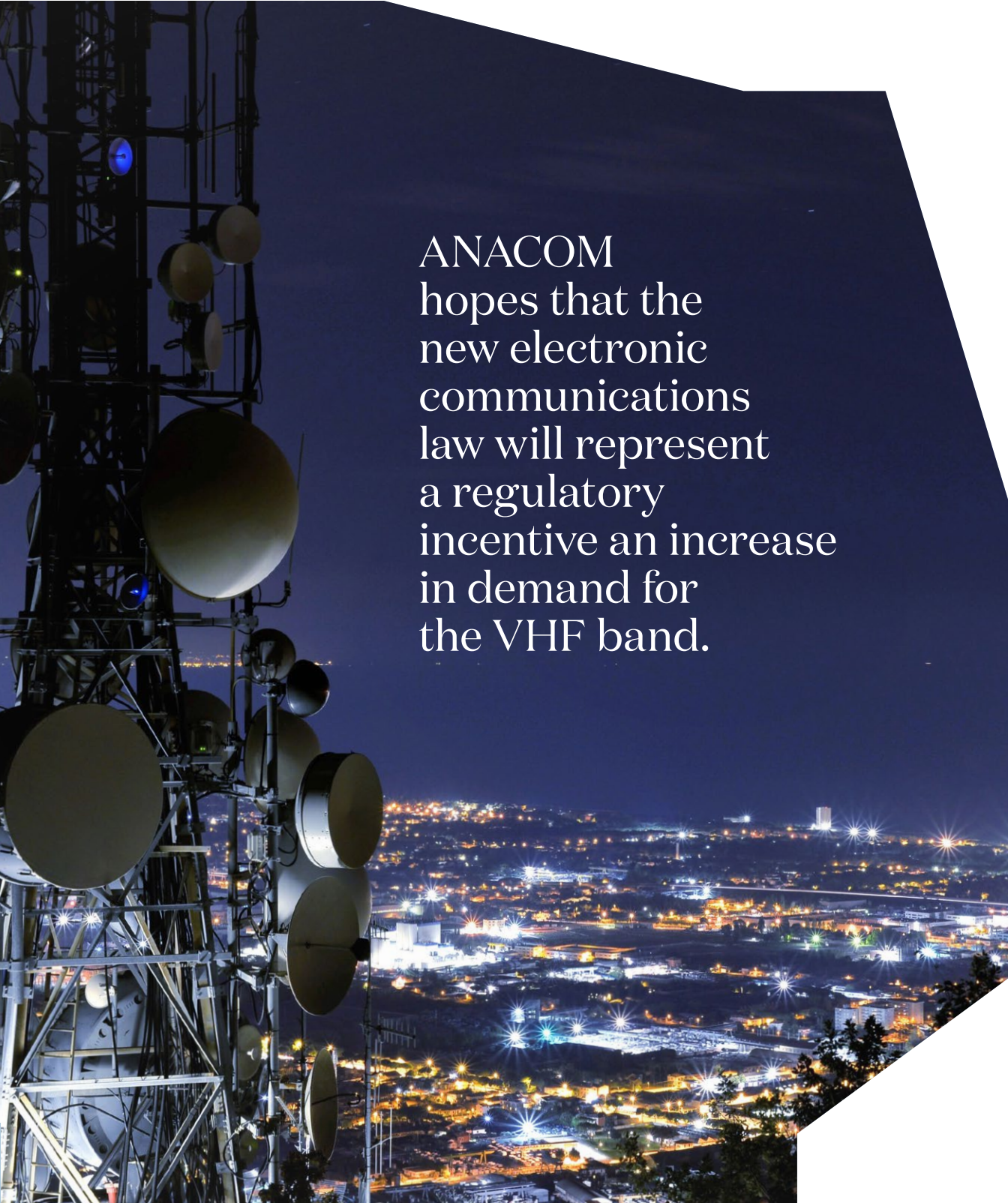
Given the current use of spectrum and its evolution in the context of the provision of fixed services, ANACOM proposes to take the following strategic actions.

3.3.2. Given the current use of spectrum and its evolution in the context of the provision of fixed services, ANACOM proposes to **take the following strategic actions:**

- Reassess the allocation of the part(s) of the 410-430 MHz band to the fixed service if it becomes available in the future for the provision of radiocommunications networks for private use.
- Monitor technological development aimed at making available higher frequency bands to establish networks of point-to-point and point-to-multipoint connections.
- Adopt the necessary actions regarding Band L, depending on the results of future public consultations. For example, the implementation of new plans with reduced bandwidth in an alternative frequency band, to meet the possible need to migrate current uses of Hertzian beams.
- Consider the possibility of assigning exclusive frequency blocks at regional or national level, as well as other simplified licensing solutions, to make spectrum licensing for the provision of fixed service more agile.

⁷ As a rule, spectrum may be allocated to provide fixed services to establish connections between locations that are a long distance apart (e.g., connections between islands) or when the topography or orography of the terrain is not suitable to install physical connections supported by cable/fibre.

⁸ It harmonises the frequency band 1452-1492 MHz for terrestrial systems capable of providing electronic communications services in the Union, with regard to its extension into the harmonised frequency bands 1427- 1452 MHz and 1492-1517 MHz



ANACOM
hopes that the
new electronic
communications
law will represent
a regulatory
incentive an increase
in demand for
the VHF band.

3.4. USE OF SPECTRUM IN RADIO AND TELEVISION BROADCASTING SERVICES

- 3.4.1. Analysing the supply of these services using the spectrum, ANACOM notes that the short- and medium-wave **radio broadcasting** service still does not merit much attention from operators in Portugal. From this, ANACOM deduces that the new digital technology available, Digital Radio Mondiale (DRM), will not be widely adopted.
- 3.4.2. The **FM band** continues to be the preferred means for radio broadcasting and it is saturated in the main areas of the country (Lisbon and Porto). As a result, the licensing of new local radio stations will necessarily have to be subject to public tender and for very specific districts, which are unlikely to be very economically attractive.
- 3.4.3. As for **the VHF band**, although there has been an increase in demand in some countries, this is not the case in Portugal. ANACOM hopes that the new electronic communications law will represent a regulatory incentive to reverse this trend. Article 165 of the law stipulates that all car radio receivers integrated in a new category M vehicle placed on the market for sale or rental as from the entry into force of this law must have a receiver capable of receiving and reproducing at least radio services provided by terrestrial digital radio broadcasting. The exact moment of reversal remains to be seen given the current environment of shrinking demand, which will affect the production of new cars and consequently the demand for this band. Moreover, it is also important to understand consumption trends to determine the extent to which this provision of the Electronic Communications Law can encourage effective demand for the VHF band.
- 3.4.4. After the migration that took place in 2020, **digital television broadcasting** is currently broadcasting in the 470-694 MHz band. There continues to be a low penetration of this service in Portugal, and there has even been a progressive reduction in its penetration. Only 5% of the population accesses the free-to-air television service exclusively through the digital terrestrial television platform - DTT.

Furthermore, the initial term of validity of the right of use of frequencies (DUF) currently attributed to MEO for DTT use ends on 9 December 2023. To date, it is not known whether that operator will request its renewal and it has until 9 December of this year to do so.

Finally, at the EU level, it is on the table to discuss the re-analysis of the band 470-960 MHz (either in 2023 or in 2027), to allow its use for mobile services in Region I, of which Portugal is part. It is certain that the Lamy Report to the European Commission of the High Level Group on the future use of the band 470-790 MHz and the RSPG 15-595 and the opinion of October 2015 recommend that the band 470-694 MHz should remain available for DTT until at least 2030.

As regards services ancillary to broadcasting, there has been an increase in demand for spectrum.

3.4.5. **As regards services ancillary to broadcasting⁹**, there has been an increase in demand for spectrum to allow access to these applications as a consequence of the presence of new streaming content producers and new ways of making content available. The bands in which there is very intensive occupation are (i) the 470-694 MHz band for audio applications, which are exempt from licensing when the apparent radiated power (a.r.p.) of the equipment is less than 50 mW, and (ii) the 2200-2400 MHz band for video applications. Spectrum in the latter is currently scarce due to the high demand by companies that produce and cover events. They therefore have to resort to temporary licensing.

3.4.6. Given the current framework for broadcasting services, ANACOM proposes to **adopt the following strategic measures:**

- **As regards radio broadcasting**, (i) to maintain in the medium/long term the current use of the band (87.5-108 MHz), given the widespread use of analogue FM receivers in the Portuguese market, and (ii) to continue to assess annually the development of the use of the VHF/DAB+ band at the European level, to decide, in due time, on the possible reintroduction in Portugal and reformulation of the current planned coverage that Portugal holds under the Geneva Agreement 06 (GE06);
- **As regards DTT**, if the Government decides that the population's access to free-to-air television in Portugal will continue to be processed via DTT (by virtue of the renewal of the MEO DUF or attribution of the DUF to another operator following a tender) to advocate that there is no immediate change in the use of the band 470-694 MHz. If the Government opts to make free-to-air television available by means that do not use the 470-694 MHz frequency band (e.g., via the fibre-optic network complemented by satellite broadcasting or exclusively via satellite broadcasting), it may argue that the band in question may be used by other services;
- **Regarding services ancillary to broadcasting**, analyse possible solutions for reorganising the different uses in the 470-694 MHz band, for both licence-exempt and licence-subject applications, to mitigate the occurrence of possible interference, notwithstanding the guidelines that the European Union will define for this band in the near future;
- Conduct a public consultation on future uses of the duplex gap and the 700 MHz guard bands to make additional spectrum available for audio and video SAP/SAB applications.
- Consider making additional frequency bands available for SAP/SAB applications (audio and video links), such as 1350-1400 MHz and 7-8.5 GHz, as is already the case in other EU countries.

⁹ A set of applications that use the radio spectrum to support programme making and production (audio and video), which may consist of audio (e.g., wireless microphones and aural monitoring aids) or video links (e.g., wireless cameras and portable and mobile video links, including in-vehicle video links).

3.5. SPECTRUM USE FOR SATELLITE SERVICES

3.5.1. The spectrum is also used for satellite services. In 2021, there were 105 radioelectric licences for space radiocommunications services in Portugal, consisting of 65 ground station licences (9 from the fixed satellite service, 1 from the mobile satellite service), 41 from the space operations service and 4 from the earth exploration satellite service), 8 VSAT¹⁰ licences, 30 SNG¹¹ ground station licences and 2 network licences from the mobile satellite service in the 2 GHz that include complementary ground stations.

3.5.2. Notwithstanding the widespread coverage of the electronic communications terrestrial infrastructures implemented in Portugal; the offer of satellite services continues to grow. This is mainly driven by the development of national teleports which have attracted foreign companies that have installed their gateway ground stations to connect the satellite network to the ground network (to offer internet or television services), and their telecommand and control ground stations at these teleports.

3.5.3. Most of the spectrum available for space-based radio services – about 4 GHz upwards and 5 GHz downwards – can be used under the licence-exemption scheme. This is the case for earth stations in motion (ESIM) which do not require radio licensing, as the spectrum allocated for their operation is subject to international harmonisation. In addition, exclusively receiving earth stations operating in the frequency bands 3.4-4.2 GHz, 10.7-12.75 GHz and 17.7-20.2 GHz operate under the exemption scheme, by virtue of the implementation in 2003 of Decision ERC/DEC/(99)26¹². ANACOM considers that this scheme is particularly restrictive and should be revised so that these stations may now operate on a non-protected basis in any frequency bands allocated to this service, with the aim of promoting the satellite communications market.

The increase in the supply of satellite services will result in the need for more spectrum to adequately meet demand.

However, the increase in the supply of satellite services will result in the need for more spectrum to adequately meet demand for use in new applications (IoT, M2M, broadband, satellite television services and use by government bodies), new technologies and competition in the industrial sector. In the latter case, it is crucial to foster the competitive positioning of European industry on par with industries such as the US.



10 Very Small Aperture Terminal network

11 Satellite News Gathering.

12 Relating to the exemption of individual licensing of exclusively receiving earth stations.

ANACOM is aware to the need to drive the development of new satellite systems and new applications, from a strategic point of view.

3.5.4. Given the need to drive the development of new satellite systems and new applications, **from a strategic point of view ANACOM proposes to:**

- Take into account the national interests of industry, operators, service providers and academia with regard to the development of projects involving new satellite radio technologies and systems, in order to seek to satisfy inherent spectral needs
- Establish the regulatory framework and the appropriate technical conditions to accommodate the use of higher frequency bands, specifically in the Q/V bands (40/50 GHz)
- Keep abreast of developments relating to ESIM and other satellite terminals and, where appropriate, make available harmonised frequency bands for these terminals at national level
- Adapt the current regulatory framework to encourage the satellite communications market and allow the reception of these signals in any frequency bands allocated to the service in question, under the licensing exemption scheme (operating on a non-protected basis).

3.6. USE OF SPECTRUM IN THE SCOPE OF MARITIME AND AERONAUTICAL SERVICES

3.6.1. For communications in the **maritime mobile service**, the spectrum band most commonly used in Portugal is VHF. A national frequency plan in VHF (metric waves) was approved for this purpose by Ministerial Order 630/2002 of 12 June, which was revised in 2015. This plan is due to be revised again soon, as a result of CEPT Decision ECC DEC (19)03 and of the World Radiocommunication Conference (WRC)-19.

3.6.2. The frequencies allocated to **aeronautical mobile satellite service (AMS)** are managed by ANACOM in close coordination with the Portuguese Civil Aviation Authority (ANAC) and NAV Portugal. ANACOM is responsible for licensing ground stations and the licensing of stations on board aircraft is the responsibility of ANAC.

3.6.3. At the international level, the Global Aeronautical Distress and Safety System (GADSS) is currently under discussion. This is a concept being developed by the International Civil Aviation Organisation (ICAO) and it is intended to ensure the timely identification and tracking of aircraft in all phases of flight. This includes tracking in normal flight situations, autonomous distress tracking (ADT) and flight data recovery (FDR) in abnormal situations.

3.6.4. Thus, given the current situation of spectrum use in the maritime and aeronautical services, **ANACOM's proposed strategic action** consists of:

- Drawing up a procedure to streamline the process of updating the Maritime Mobile Service Frequency Plan
- In the context of the maritime mobile service, preparing a new national plan of VHF frequencies
- Continuing to monitor technological developments and reflecting on the widespread use of digital technology in the maritime mobile service

- Considering the development of possible technical and regulatory measures necessary for the introduction of the IRIDIUM system in GMDSS
- Clarifying the powers of each of the parties involved in managing the aeronautical spectrum
- Closely following the issues being discussed at international level, in particular, the possible allocation of additional spectrum for the aeronautical mobile-satellite (R) radiocommunication service (AM(R)S) in the 117.95-137 MHz band and for AMS in the 15 GHz and 22 GHz bands, or the development of any spectrum requirements and technical and regulatory measures necessary for the introduction of GADSS (terrestrial and satellite components).

3.7. SPECTRUM USE FOR SHORT-RANGE DEVICES (SRD)

Under the current regulatory framework, SRDs do not require a radio licence or rights of use of frequencies to operate. However, they must comply with certain conditions associated with the use of spectrum and with the applicable ETSI standards and legislation relating to their placing on the European market. All frequency bands and their conditions of use are set out in the National Frequency Allocation Table.

3.7.1. This equipment has advantages for consumers as it reduces the need for installation of cabled networks, allows the connection of devices to fixed broadband networks, and does not require fees to be paid for spectrum availability and use. Manufacturers also benefit from the exemption scheme, as they can develop niche markets with new applications or services at low cost under clear and well-defined regulatory and technical conditions.

The associated disadvantages are the inability to guarantee quality of service, as the frequency band is shared, and the limited coverage, due to the output authorised for SRDs.

3.7.2. Considering that changes in technology and consumption requirements will dictate the emergence of new applications for SRDs, ANACOM intends to take the following strategic actions with regard to the evaluation and availability of spectrum for SRDs:

- Monitoring developments in the SRD industry and preparing the regulatory framework so that, when placed on the market, new equipment can operate in Portugal¹³
- Monitoring the developments at the CEPT regarding the Permanent Mandate of the European Commission¹⁴
- Work towards harmonising licence-exempt frequency bands and their technical conditions for use by SRDs at the European and global levels, to avoid harmful interference and ensure the greatest possible flexibility, while fostering reliable and efficient use of frequency bands by SRDs, and develop economies of scale
- Monitoring the future impact of new spectrum needs (as yet unpredictable) for smart energy grids, smart metering, intelligent transport systems, and M2M and IoT communications, to ensure that the regulatory solutions to be implemented accommodate these developments appropriately.

¹³ In this regard, ANACOM points out that the European Conference of Postal and Telecommunications Administrations ("CEPT") has been analysing the possibility of making the high part of the 6 GHz band available for Wi-Fi since November 2021. However, although the high part of the 6 GHz band (6425-7125 MHz) is also being disputed for terrestrial electronic communications services.

¹⁴ See "Annual update of the technical annex of the Commission Decision on the harmonisation of radio spectrum for use by short-range devices"


4. Concluding remarks

It follows from the above that the SSP is a very extensive and somewhat complex document. The public consultation now underway is an excellent opportunity for the various stakeholders of the entire value chain of the electronic communications sector and adjacent industries. These range from equipment manufacturers and technology developers to consumers and spectrum users. They will be able to learn in greater detail about the state of play of the Portuguese environment in terms of spectrum use, the debates taking place in the country, and the expected developments.

The regulator's concern in communicating information on the specifics of the regulatory framework regarding spectrum licensing should be emphasised. This allows interested parties to have a comprehensive overview of the applicable framework in the Portuguese market and thus make an informed contribution to the consultation process. In fact, the market's interest in participating in this procedure is immediately clear, as evidenced by the three extensions of the deadline for sending contributions. As a result, it is anticipated that the consultation will have a high level of participation.

It is also expected that ANACOM will give proper consideration to the contributions received. These will doubtlessly focus on the need for the regulator's intervention to encourage investment, particularly to provide greater incentives for the progressive mass roll-out of 5G, a technology which is still relatively scarce in Portugal. According to data disclosed by ANACOM, at the end of the first half of 2022, 5G traffic represented only 1.7% of mobile data traffic.

Regarding satellite services, with the gradual adoption of non-geostationary systems, with higher bandwidth and lower latency, it is important to create regulatory incentives that attract companies offering services (e.g., television and Internet) to view them as commercially attractive even in rural areas. This is particularly true in a scenario where Portugal has been investing in its transformation as an important digital hub endowed with infrastructures, such as data centres and submarine cables, which complement the offer of content services that can be transmitted via satellite, both in the residential market and in other market segments.



The regulator's concern
in communicating
information on the
specifics of the regulatory
framework regarding
spectrum licensing
should be emphasised.

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→ What we do

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