



CEPT Workshop on Spectrum for Drones / UAS

ANACOM VIEWS

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1. ANACOM AND SPECTRUM ISSUES

WHO WE ARE / WHERE WE ARE



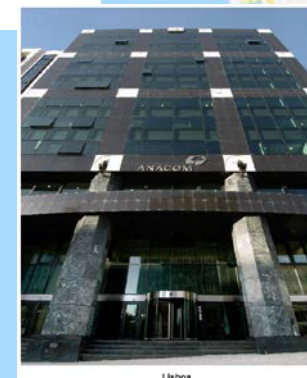
Açores



Porto



Barcarena



Lisboa



Madeira



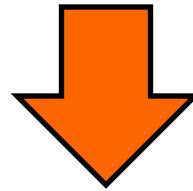
Madeira

Autoridade Nacional de Comunicações (ANACOM) has as its mission the regulation of the communications sector, including electronic and postal communications and, without prejudice to its nature as an independent administrative body, the provision of assistance to the Government in these areas

PLANNING

MANAGEMENT

CONTROL



**EFFECTIVE AND EFFICIENT USE OF THE
RADIO SPECTRUM**

INDIVIDUAL AUTHORISATION

Radio license

Protection against
interferences

With license costs

E.g. PP links, mobile services

GENERAL AUTHORISATION

License exempt

Non-protection non-
interference basis

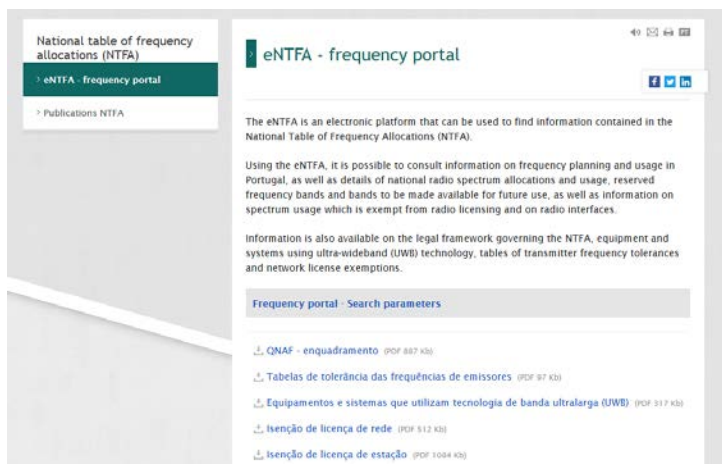
Shared spectrum, non
exclusive

Without license costs

E.g. Bluetooth, Wi-Fi, PMR446

- **NTFA – NATIONAL TABLE OF FREQUENCY ALLOCATIONS**
(<https://www.anacom.pt/eqnaf/>)

- Allocations
- National usage of the radio spectrum
- Frequency bands reserved and to made available in the future
- License exempt spectrum
- Radio interfaces



Select only one of the options below.

SEARCH PARAMETERS

SELECT FREQUENCIES

Frequency from : GHz to : GHz

☐ Radio services and applications

☐ Radio interfaces

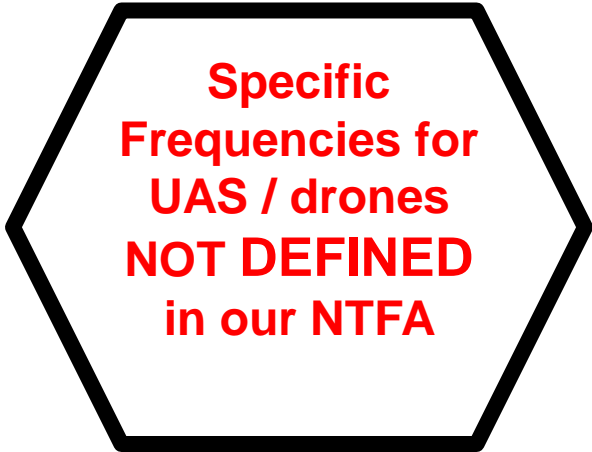
☐ Licence exempt radio use

☐ Uses

☐ Reservations

- **Frequencies in UAS / drones includes**

- Command and control
- Identification
- Payload transmissions
- Sense and Avoid



**Specific
Frequencies for
UAS / drones
NOT DEFINED
in our NTFA**

- **However ...**

- Opportunities under license exempt spectrum (**General Authorisation**)
- Frequencies also identified in Recommendation ERC 70-03
- Non-specific Short Range Devices (e.g. 5.8 GHz band)
- 2.4 GHz (Wideband Data Transmission Systems and Non-specific SRD)
- Frequencies for Model Control
- Non-interference non-protected basis
- Frequencies are shared, uncoordinated and can receive interference

- Possibilities under PMR (Private / Professional Mobile Radio) frequencies, on a case by case basis
 - Until now NO REQUESTS
- Requests for trials
 - UAS / drones in emergency situations and safety use
 - Airbeam project (<http://airbeam.eu/project/>)
 - Detect UAS / drones and prevent their use in specific areas

Sexto incidente com drones no aeroporto de Lisboa

A NAV Portugal confirmou a ocorrência, acrescentando que irá notificar a Autoridade Nacional de Aviação Civil e o Gabinete de Prevenção e Investigação de Acidentes com Aeronaves e de Acidentes Ferroviários.



2. UAS / DRONES IS NOT ONLY SPECTRUM

Rules and regulations for the granting of authorizations for the execution and dissemination of photography and aerial cinematography¹

Prohibition of flights over areas where are located sovereign entities, defense-related facilities and internal security and historical and natural patrimony²

Applicable regime to civil aeronautics administrative offences³

Operational conditions applicable to the use of airspace by UAS / drones⁴

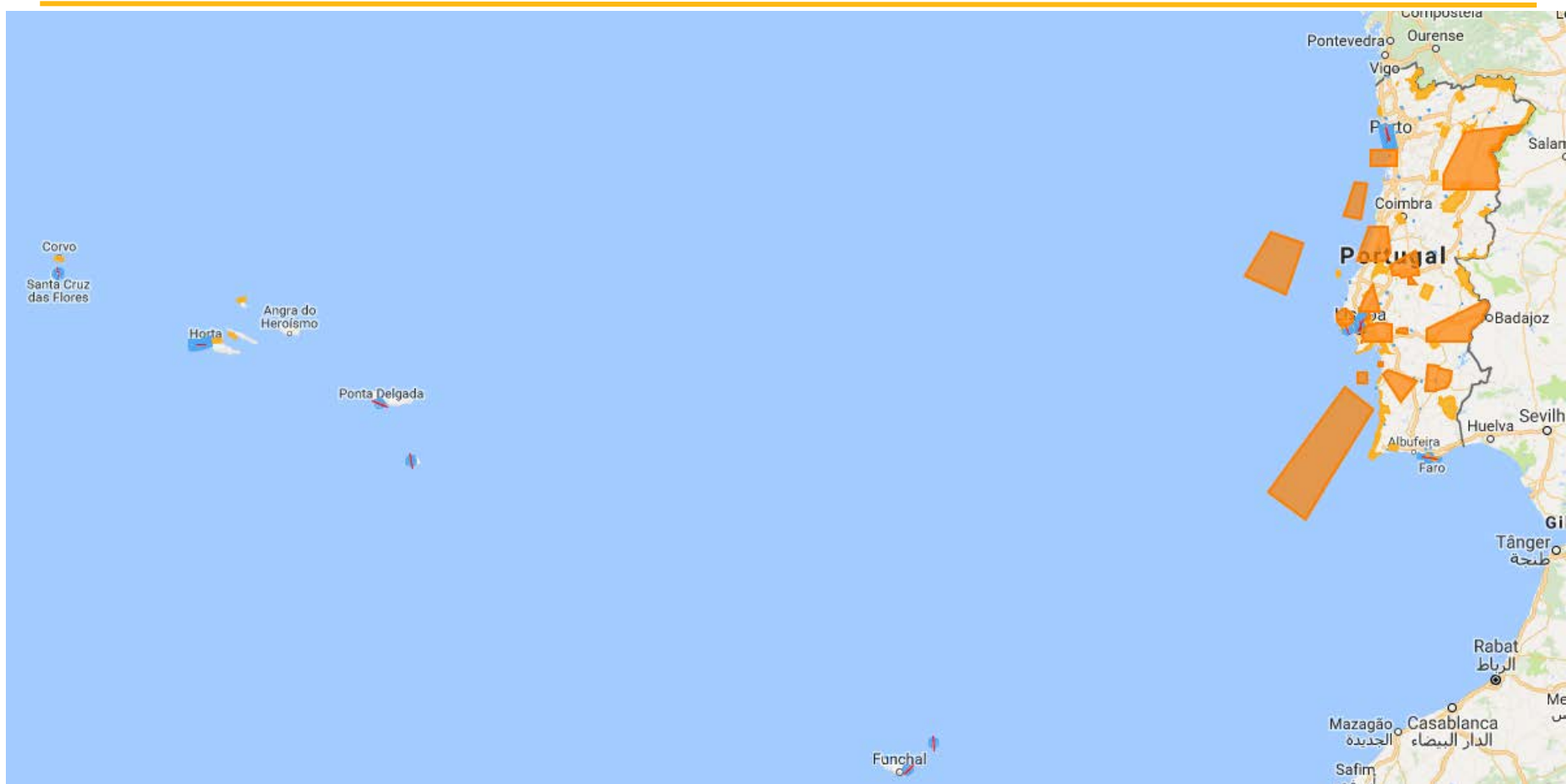
- ¹ Decree-Law No. 42071 of 30 December 1958, and Administrative Rule No. 17568 of 2 February 1969, amended by Administrative Rule No. 358/2000, of 20 June.
- ² Decree-Law No. 248/91 of 16 July.
- ³ Decree-Law No. 10/2004 of 9 January.
- ⁴ ANAC Regulation No. 1093/2016 of 24 November 2016.



- **DRONE CODE**

- Identifies areas where UAS / drones can not fly (e.g. airports)
- Identifies areas where UAS / drones can only fly up to a predefined height
- UAS / drones flights in areas with more than 12 people concentrated requires authorisation from ANAC
- etc.

VOA NA BOA (“*Flying cool*”)



Source: www.voanaboa.pt

UAS/DRONES – SOME SECURITY IMPLICATIONS

**DISTURBING
SOCIAL PEACE**

**RISK OF
ACCIDENT**

**INTERFERENCE
IN AIRSPACE**

**INDUSTRIAL
SPYING**

**USING AS A
GUN**

Illegal surveillance
actions
(*“paparazzi”*)

3. HARMONISATION MEASURES

- Is the power allowed under general authorisation enough for the UAS / drones already in the market (open category according to ECC Report 268) or the users have to illegally increase the power to fullfill their requirements?
- National authorities (e.g. police) may have the need to stop UAS / drones when are not following the national rules
 - **CEPT should work** on the possible measures to control drone usage (e.g. identification of frequencies for UAS / drones detection and jamming(?))
- **CEPT should further work to:**
 - Identify frequencies for UAS / drones
 - Harmonise frequencies for the use of UAS / drones

- **CEPT should further work to (cont.):**
 - Make it clear if there is a need to have different frequencies for e.g. “Command and control” and “Payload transmissions”
 - If not, what mitigation mechanisms should be implemented on UAS / drones to avoid interference and malfunctioning?
 - Clarify the use of MFCN frequencies for UAS / drones within the current regulatory framework for MFCN
 - Consider regulatory challenges, if any, considering UAS / drones in the scope of 5G
- CEPT should develop an ECC Decision, or at least an ECC Recommendation **“on the harmonised use of frequency bands for UAS / drones”**

Thank you for the attention