



## INTERNATIONAL EMF PROJECT ADVISORY COMMITTEE (IAC) MEETING

ANATEL Report on EMF Activities in Brazil

### 1. Introduction

The main purpose of this document is to present an update of what has been done in Brazil regarding Electromagnetic Fields – EMF since the IAC meeting in June 2024.

### 2. Activities related to EMF Exposure

In 2019, we have established the Action Plan for the NIR (non-ionizing radiation) program, to assess compliance with Federal Law No. 11,934, which provides limits on human exposure to electric, magnetic, and electromagnetic fields, mobile probes were used in drive test measurements based on Recommendation ITU-T K.113. In 2024, ANATEL approved Ordinance No. 2768 of January 29, establishing rules and describing the measurement methods to be used by ANATEL'S Inspection for assessing EMF exposure by the public. The table below shows the types of assessment to be carried out depending on the results obtained from each measurement method.

Table 1: Assessment type: Results and actions

Assessment Type	Results between 0 and 13.99 V/m	Results between 14 V/m and 27.6 V/m	Results equal or greater than 27.7 V/m
Drive Test Measurements	Regular	Perform an Assessment using a portable broadband probe (Time Average: 6 minutes)	Perform an Assessment using a portable broadband probe (Time Average: 30 minutes)
Portable or Fixed broadband probe Measurements (Time Average: 6 minutes)	Regular	Perform an Assessment using a portable broadband probe (Time Average: 30 minutes)	Perform an Assessment using a portable broadband probe (Time Average: 30 minutes)
Portable broadband probe Measurements (Time Average: 30 minutes)	Regular	Regular	Perform an Assessment using a frequency selective probe



According to the Action Plan, in 2024, EMF exposure measurements were carried out in 1242 broadcasting stations and 1729 radiocommunication stations.

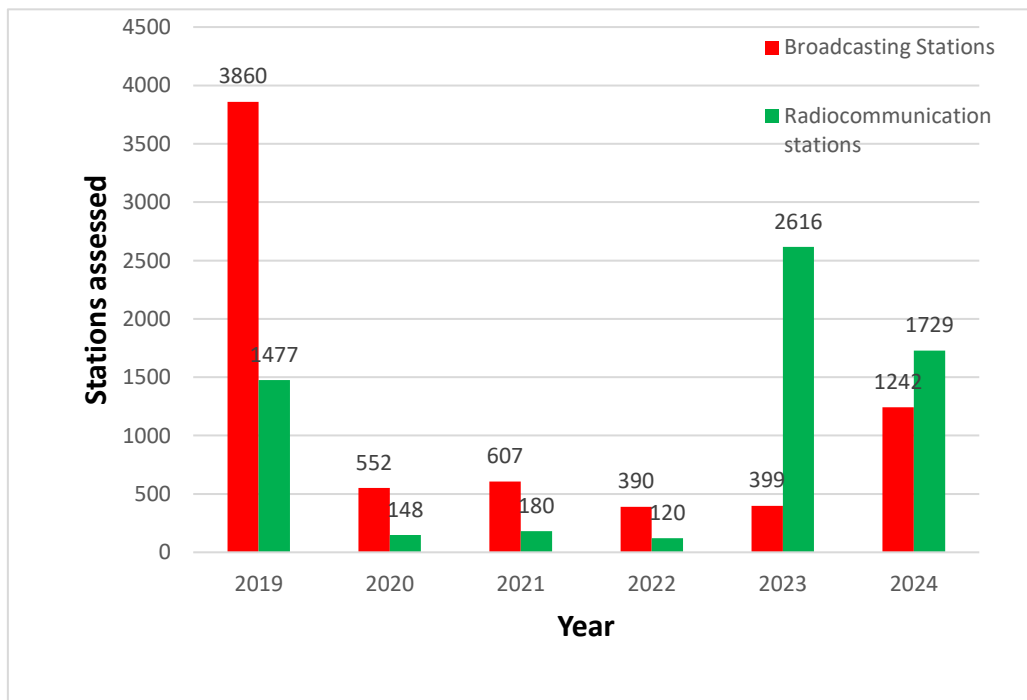
Emissions of 23 broadcasting stations had their electrical field strength measured above 14 V/m. Time-averaged field strength measurements were less than 27,7 V/m at these locations.

Table 2 shows the number of stations measured since 2019 as displayed in Figure 1.

Table 2: EMF exposure assessments in numbers

Station	2019	2020	2021	2022	2023	2024
<b>Broadcasting Stations</b>	3860	552	607	390	399	1242
<b>radiocommunication stations</b>	1477	148	180	120	2616	1729

Figure 1: EMF exposure assessments per year.



In 2024, 71 requests related to EMF compliance were received from government authorities and the general public. These resulted in 16 measurements, all of which were assessed and found to be below the exposure limits for the general public.



Measurement raw data by 2024 is available at:

[https://sei.anatel.gov.br/sei/modulos/pesquisa/md\\_pesq\\_documento\\_consulta\\_externa.php?HWH32bONvibUcMC3mewfUpIX7e-9fyZZC4iEjI2QHwXAoLCOrVZwNzRf5vR3YcCMWNZ4eCgQDLmVzIOFPcg7Rnxv2InQAtEboi-RllyRGDFFRPKsnHoL3kQNLThvkijl](https://sei.anatel.gov.br/sei/modulos/pesquisa/md_pesq_documento_consulta_externa.php?HWH32bONvibUcMC3mewfUpIX7e-9fyZZC4iEjI2QHwXAoLCOrVZwNzRf5vR3YcCMWNZ4eCgQDLmVzIOFPcg7Rnxv2InQAtEboi-RllyRGDFFRPKsnHoL3kQNLThvkijl)

### **3. New policies and legislation regarding EMF Exposure**

To ensure Environmental Health and Safety (EHS) throughout Brazilian territory, Federal Law No. 11,934 states the adoption of limits recommended by the World Health Organization (WHO) for occupational and general exposure to electric, magnetic and electromagnetic fields generated by broadcasting and radiocommunication stations. While no new or updated WHO recommendations are issued, limits recommended by the International Commission for the Protection against Non-Ionizing Radiation (ICNIRP) are the norm.

By the time the Law was enacted, ANATEL, Telecommunications National Regulatory Authority (NRA) in Brazil, responsible for the assessment of EMF exposure, had already issued Resolution No. 700/2018 defining general EMF exposure rules, and Act No. [17,865/2023](#) detailing procedures for assessing compliance with the recommended limits, in line with the ICNIRP 2020 and ICNIRP 2010 guidelines and ITU-T Recommendations (e.g. K.100, K.61, K.52, K.70 and K.91).

### **4. Public information activities**

As a result of the Action Plan, ANATEL published a radiofrequency electromagnetic field level map for consultation of monitored levels by the general public. The map displays EMF magnitudes measured by ANATEL and the private sector. The action is also part of the Government Open Data program.

The map is available at the following link:

<https://informacoes.anatel.gov.br/paineis/espectro-e-orbita/mapa-de-exposicao-a-campos-eletromagneticos>.

### **5. Closing remarks**

It is important to mention that ANATEL maintains an open dialogue with society, industry, service providers and other governmental authorities to present clear information about what is being done in Brazil and worldwide regarding EMF exposure issues, including EMF emissions from 5G base stations, while monitoring WHO responses to public concern over health effects of EMF exposure.



## **6. National Contact**

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