



# National Telecom Regulatory Authority (NTRA)

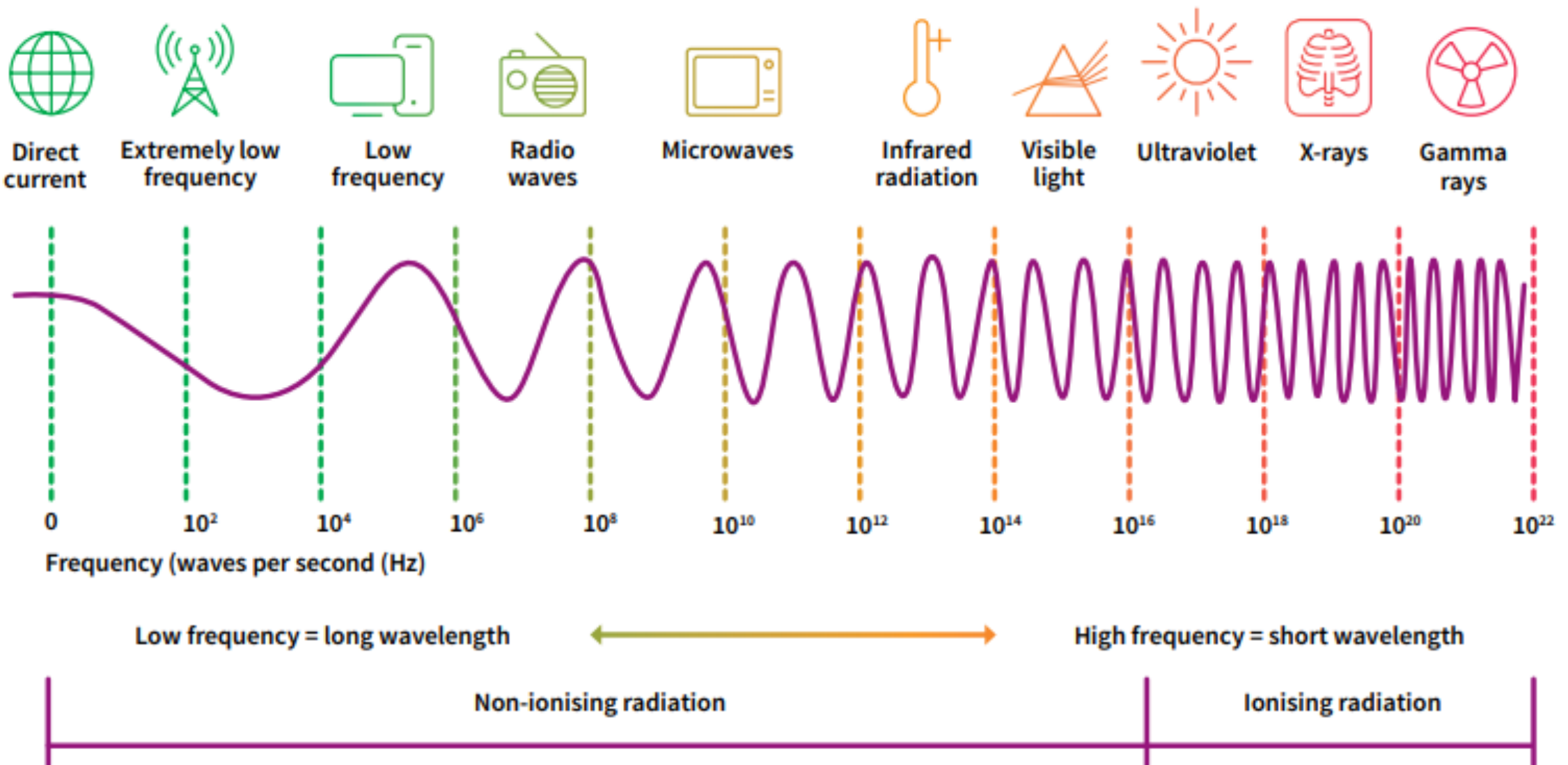
**ITU Regional Workshop on EMF Harmony: Balancing Connectivity, Safety and Tower Location Selection in the Arab Region (13-16 May 2024, Muscat-Sultanate of Oman)**

**Public Awareness and Education Outreach of EMF in Egypt**

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# Introduction



## Telecom

- **Article 5** – Scope of actions of the NTRA
- **Article 6** – Competence of the NTRA for health and environmental safety
- **Article 37** – Licensing requirements: Health and environmental impact assessments

## Environmental protection

- Environmental Impact Assessment mandate
- Environmental Affairs Agency role

## NTRA role

### Protecting public health and safety



# Setting standards (collaborative)

## Macro (More than 100 watt EIRP)

### Compliance requirements

[Antenna Height](#)

[Exposure Levels](#)

[Minimum Horizontal Safe Distance](#)

[Roof Access](#)

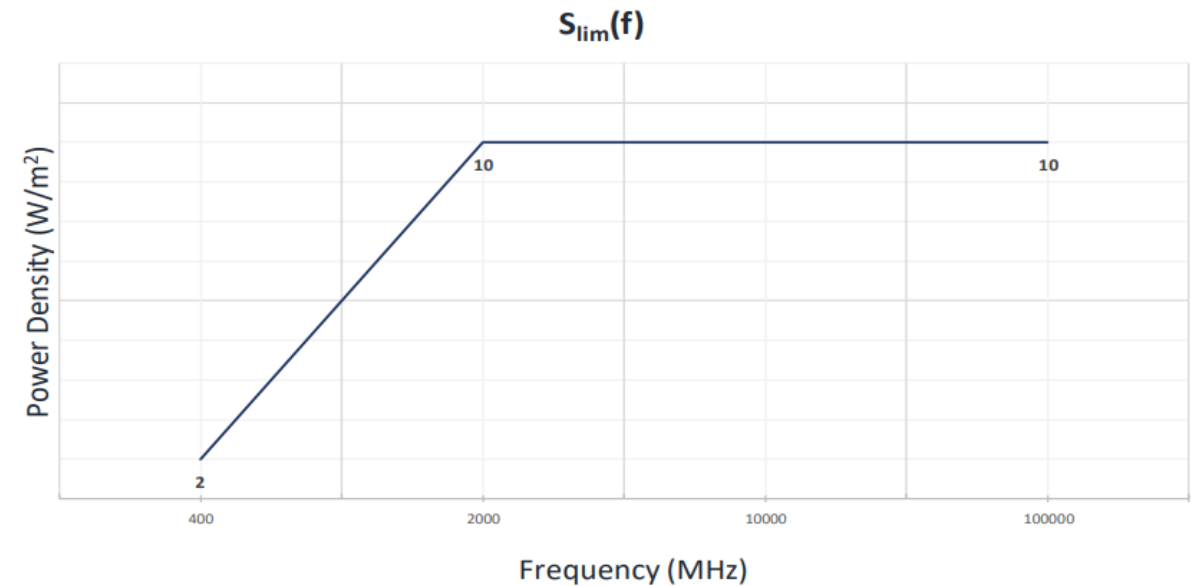
[Hospital Buildings and schools](#)



Macro cells

$f$ (MHz)	$S_{lim}(f)$ (W/m <sup>2</sup> )
400 - 2000	$f/200$
2000 - 300000	10

$S_{lim}$  is the relevant limit given by the EMF exposure standard at the relevant frequency  
 $f$  is the carrier frequency, in MHz



Limits of public exposure levels to electromagnetic power density (ICNIRP)

## Small Cells (less than 100 watt EIRP)

### Compliance requirements

[Installation Safe Distance](#)

[Small Cell Placement Outdoors](#)

[Small Cell Placement Indoor](#)

[Small Cell Inter-distance for Category \(C\)](#)

[Medical and School Buildings](#)

Category	EIRP (watt)	Minimum Antenna Height (m)
(A)	Less than 2	-
(B)	From 2 to 10	2.2
(C)	From 10 to 100	2.5

**Small Cells Categories (ITU-T k.100)**



**Small cells**

## Accreditation and approval of Mobile stations

**Site  
assessment**

- Matching permissible electromagnetic power density limits
- Determine safe distances

**Issuing secured  
certificate**

**Periodic  
Inspection**



Site measurements



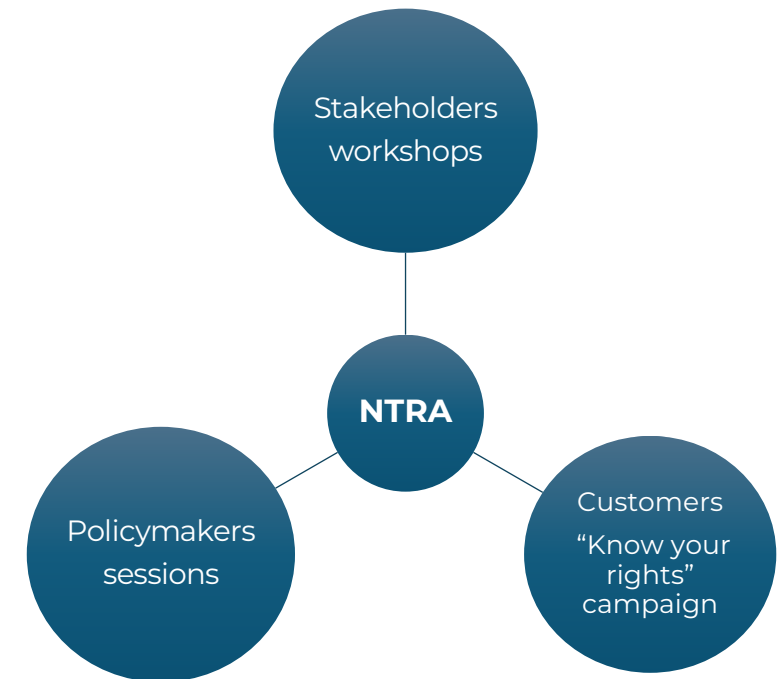
Site Certificate

## Outreach activities on EMF in Egypt

- Public awareness campaigns are conducted to educate the public about electromagnetic fields and address any concerns or misconceptions about their potential health effects.
- These campaigns may include disseminating information about EMF safety standards, providing tips to reduce exposure, and addressing common myths or misunderstandings.

## Mobile stations safety

- Measure the human exposure to electromagnetic fields, especially in sensitive areas like schools....
- Provide evidence, that the exposure to electromagnetic fields is below a certain threshold (defined by laws or regulators)
- Avoid health and safety concerns of the population to avoid delays of 5G NR deployments



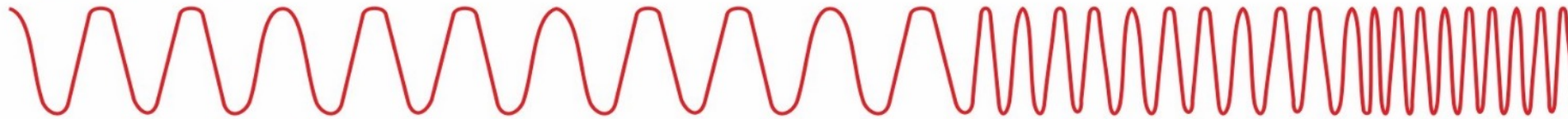




## ICNIRP RF Guidelines (2020)

Cover exposures from 5G mobile telecommunications:

### 5G is Safe:



Whole body average  
restrictions for frequencies  
>6 GHz

Restrictions for brief (<6 minutes)  
exposures for frequencies  
>400 MHz

The reduction of the averaging  
area for frequencies >6 GHz  
which reduces the maximum  
exposure that a person can have

No evidence for:



## Lessons learned

- Collaborative regulation is an effective mechanism to develop/revise national EMF exposure guidelines, market stakeholders have to be included in the process
- Continuous inspection is necessary for existing and pre-approved mobile stations
- Accreditation of mobile stations through certification can be utilized to alleviate public concerns



**Thanks**