



# Policies to limit exposure to radiofrequency fields and National Practices

ITU Regional Training Workshop on

**“Human exposure to Electromagnetic Fields (EMF) & Specific Absorption Rate (SAR)” in the Arab Region**

**3-2 December 2019, Amman, JORDAN**



# Introduction

- There is a need to inform the public of the potential effects of exposure to EMF;
- An awareness is needed In order to dispel myths about EMF emissions;
- Public awareness is key in any matter regarding a population. This step is even more justified when it comes to public health.
- Public awareness campaign may take several forms, but the goal is the same: alerting the population for a better protection.
- The key message of this campaign is the reduction of the level of exposure to EMF by implementing precautionary measures. Countries have already launched or are about to launch a campaign to raise awareness about how to reduce exposure to the electromagnetic radiation from electronics, cell phones, and wireless devices.
- Administrations are encouraged to follow the guidelines set by ICNIRP and IEEE expert groups, or limits set by their own experts.

# Legal Framework



The protection of population against potential adverse effect of electromagnetic radiation requires a legal framework. In order to have this important tool, many administrations have developed or are developing a legislation on exposure to electromagnetic fields (EMF).

More than 40 countries have put in place a legislature to protect their citizens. These legislations consider static, low and high fields for the general public and the workers. The current status of those different legal frameworks varies from recommended to mandatory.



# ITU recommendation on Stakeholder responsibilities

## The possible responsibilities for planning authority or regulator:

- Protect public health;
- Authorize siting of transmitters;
- Establish planning rules for transmitters;
- Approve land use near transmitters;
- Coordinate with other stakeholders.



## **The possible responsibilities for landowner of site housing a transmitter, or which a network operator would like to use for a transmitter:**

- Decide whether to lease site;
- Act as a good neighbor;
- Use position as landowner to encourage or promote local priorities.



## **The possible responsibilities for network operator:**

- Operate radio telemetry network to monitor status of local infrastructure;
- Operate private mobile radio network to communicate with staff;
- Operate Wi-Fi network for public use;
- Comply with regulatory requirement.



## **The possible responsibilities for employer:**

- Meeting occupational health and safety responsibilities for staff working near wireless network transmitters.

## **The possible responsibilities for source of information:**

- Lead public communications about health issues;
- Respond to questions about wireless networks from local residents, elected representatives,
- Forward position of national health authorities.

# Best Practices



Administrations are encouraged to:

- Stablish a legal framework
- Public awareness
- Measure base station exposure levels;
- Measure SAR of Handset;
- Limits exposure nearby sensitive areas such as kindergartens, schools, hospitals;
- Limits Personal exposure to Wi-Fi signals.



# Guidelines for national regulation



The International Commission for Non-Ionizing Radiation Protection (ICNIRP) periodically evaluates the database on non-ionizing radiation studies worldwide. Based on the extensive and in-depth review of the literature, ICNIRP proposes electromagnetic field guidelines, gives recommended electromagnetic field exposure limits and revises them periodically. The Committee of Experts regularly reviews the guidelines and updates them.

The guidelines have been adopted as the standards for electromagnetic radiation safety protection by many countries. The World Health Organization (WHO) and the International Telecommunication Union (ITU) also endorsed the ICNIRP guidelines. WHO supports safety limits of the ICNIRP guidelines and actively works on the coordination of the electromagnetic exposure standards.

# Mitigation techniques to decrease the radiofrequency exposure level (ITU-T K.70)



- Restrict access to areas where the exposure limits are exceeded. Physical barriers, lockout procedures and adequate signs are essential; workers can use protective clothing;
- Increase the antenna height;
- Increase the antenna gain (mainly by reducing the elevation beam width), and consequently decrease the radiation in the direction accessible to people.
- Minimize the base station transmission to the minimum.



## SENEGAL NATIONAL PRACTICES

The Republic of Senegal is aware of the impact of non-ionizing waves on the populations through the various studies being carried out by the international organizations. Senegal carried out measurements campaigns to evaluate the non-ionizing radiations, acquired equipment for control and monitoring of the levels of electromagnetic fields on the national territory.

A coordination strategy has been implemented with all mobile phone operators and private independent network operators with a view to ensuring permanent monitoring of radio facilities and applying recommendations and guidelines on permissible EMF levels for each technology according to the recommendations of the international organizations.

## CHINA NATIONAL PRACTICES



China applies environmental limits that differ from international recommendations for base station electromagnetic fields, although the exposure limits for mobile devices and the method of measurement generally comply with international standards. Tests carried out in China have shown that problems such as fatigue, sleep quality and reduced sexual hormone secretion are linked to the use of and time spent using mobile phones.



## INDIA NATIONAL PRACTICES

To create a transparent and accountable eco-system of information sharing on mobile towers and EMF emissions compliances, the Department of Telecommunications (DoT) of India has recently launched a web portal known as “Tarang Sanchar”, with a view to generate confidence and conviction with regard to safety and harmlessness from mobile towers, clearing any myths and miscommunications.

## Next Q7/2 meetings



**The Third meeting of ITU-D Study Group 2 (2018-2021 study period): ICT services and applications for the promotion of sustainable development**  
24-28 February 2020, Switzerland [Geneva]

ITU-D study groups are open to participation by ITU Member States, ITU-D Sector Members, Associates and Academia, who are invited to attend these meetings and to provide contributions to the relevant study Questions. Membership is encouraged to submit contributions to the work of the study Questions in accordance with the outlines of the Question deliverables and scope of work.



<b>Meeting</b>	<b>Date</b>	<b>Deadline for fellowship applications</b>	<b>Deadline for interpretation requests</b>	<b>Deadline for submission of documents for translation</b>	<b>Deadline for submission of documents without translation</b>
<b>Study Group 1 Rapporteur Group meetings</b>	17 - 21 February 2020	2 January 2020	2 January 2020	2 January 2020	4 February 2020
<b>Study Group 2 Rapporteur Group meetings</b>	24 - 28 February 2020	2 January 2020	2 January 2020	9 January 2020	11 February 2020

THANK YOU FOR YOUR ATTENTION



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