Workshop on recent developments relevant to EMF policy formulation
8 May 2024, Geneva

Approaches to adopting and updating EMF policies

Jack Rowley, PhD
GSMA

ITU-D Study Group 2 Rapporteur Group meetings (29 April – 10 May 2024)

http://itu.int/go/study-groups

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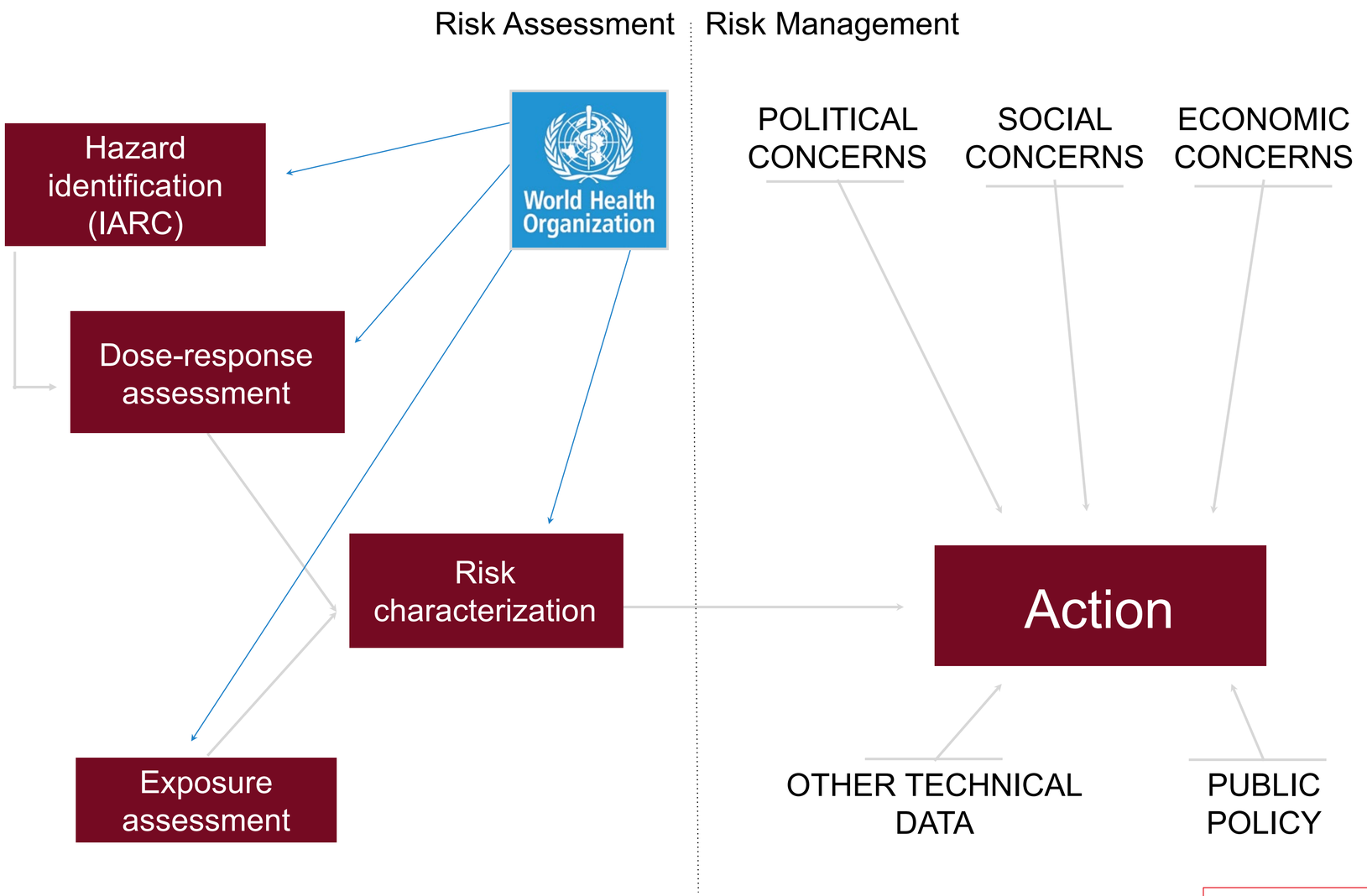
Risk Assessment and Risk Management



Adapted from Cogliano et al, 2004

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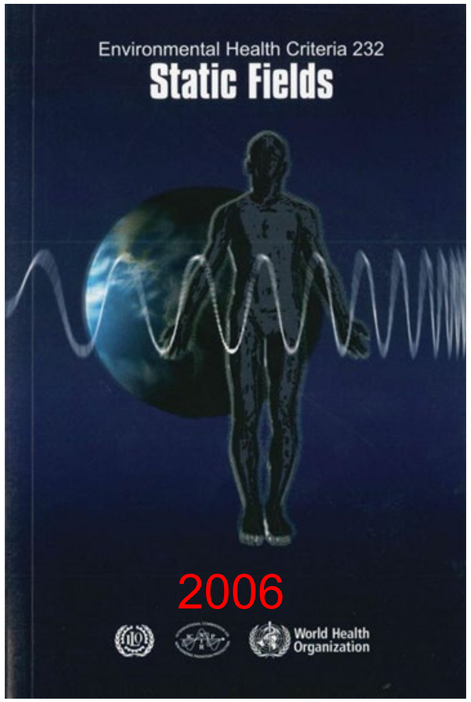
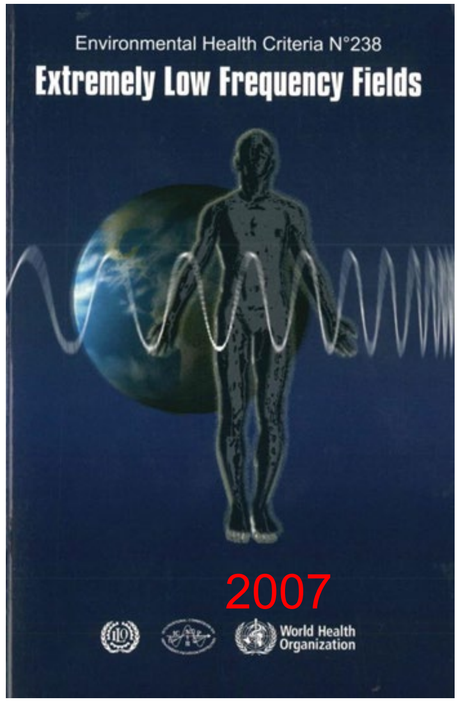
WHO health risk assessment of radio waves





RF-EMF

- 2013: Consultation
- 2019: Systematic Reviews
- 2021: Call for Experts
- 2022: Task Group
- 202?: Completion

202?

https://www.who.int/teams/environment-climate-change-and-health/radiation-and-health/non-ionizing/emf/health-risk

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Risk management actions

RF-EMF limit adoption

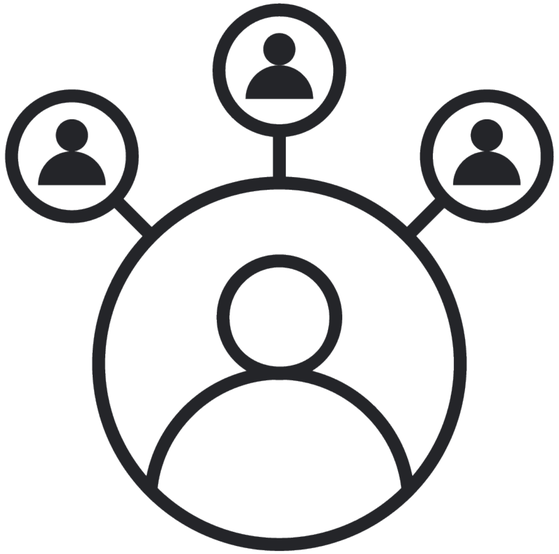
- International guidelines
  - Local modification
- Other national limits
- Develop own limits

Compliance rules

- Declaration/permit
- RF-EMF assessments
- Administrative procedures

Communication

- Who?
- What?
- When?



Support for ICNIRP limits

WHO

'...endorses the guidelines of the International Commission on Non-Ionizing Radiation Protection (ICNIRP) and encourages Member States to adopt these international guidelines...'

https://www.who.int/publications-detail-redirect/9241594330

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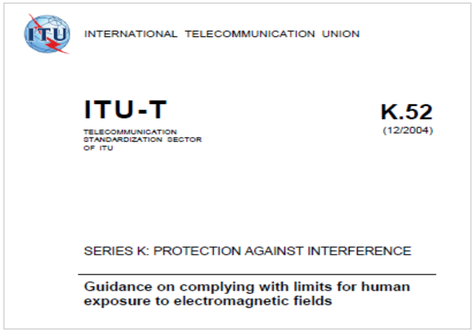
'If such limits do not exist, or if they do not cover the frequencies of interest, then ICNIRP limits (Appendix I) should be used'



https://www.itu.int/rec/T-REC-K.52-202106-I/en

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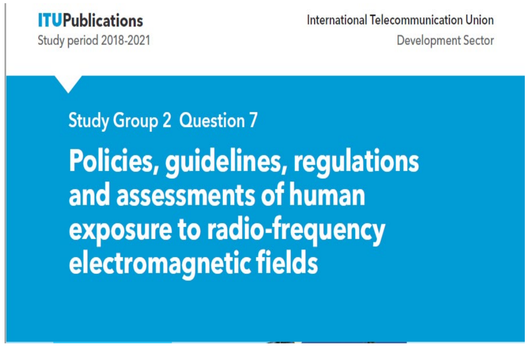
The best practice for administrations that choose to use international RF-EMF exposure limits is to limit the exposure levels to the thresholds specified in ICNIRP (2020) Guidelines.



https://www.itu.int/hub/publication/D-STG-SG02.07.2-2021/

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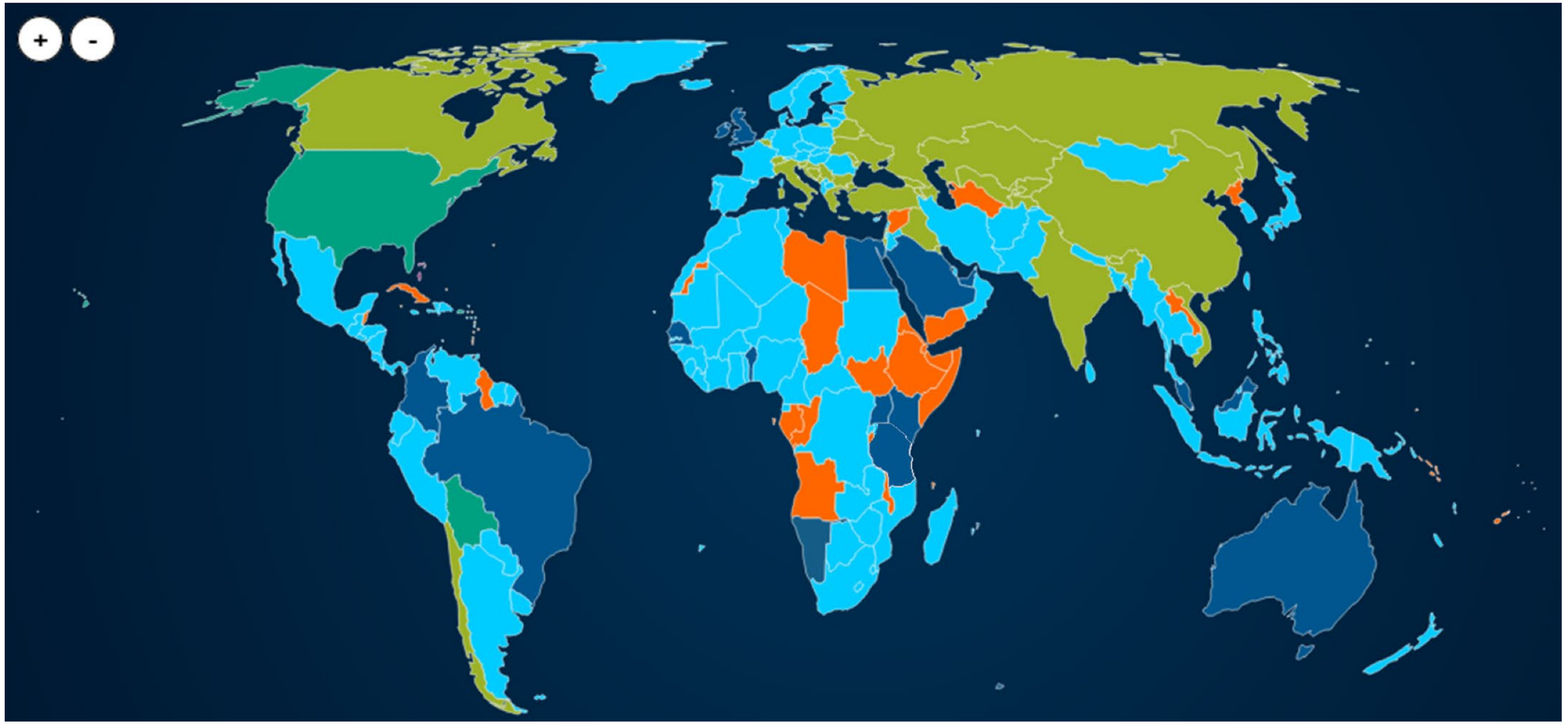
ICNIRP (2020) adoption – mobile networks (public)

2020 Ireland
Uganda

2021 Australia, Benin, Malaysia, Malta, Mauritius,
Saudi Arabia, United Arab Emirates, United Kingdom

2023 Colombia, Egypt,
Kenya, Tanzania

2024 Brazil
Trinidad and Tobago?



https://www.gsma.com/publicpolicy/emf-and-health/emf-policy

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No health benefit from precautionary measures

‘*There is no evidence of adverse health effects at exposure levels below the restriction levels in the ICNIRP (1998) guidelines and no evidence of an interaction mechanism that would predict that adverse health effects could occur due to radiofrequency EMF exposure below those restriction levels.’*

‘*There is no evidence that additional precautionary measures will result in a benefit to the health of the population.*’

ICNIRP
INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION

ICNIRP (2020) RF-EMF guidelines

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Impacts of restrictive EMF limits

More antennas are needed for equivalent coverage

Colocation of antennas is often not practical

In-building coverage may be reduced

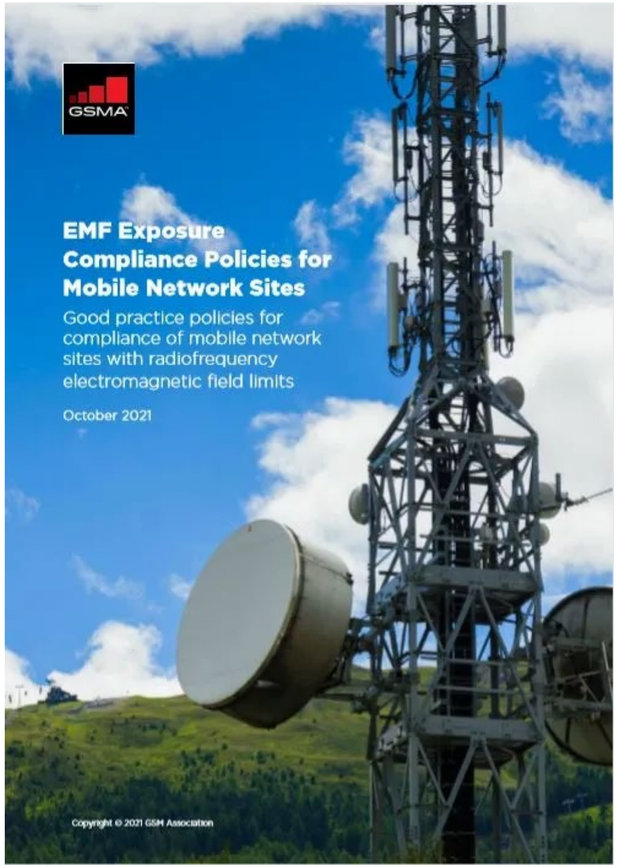
The full potential site capacity can't be deployed

Deployment is delayed and costs increased

Impact on public concern

Good practice RF-EMF compliance policies

- Allow operator declaration of site RF-EMF compliance
- Assess site RF-EMF compliance through calculation
- Specify assessment uncertainty based on best practice
- Carry out appropriate post-installation measurements
- Reassess sites only when RF-EMF compliance changes
- Apply public or worker RF-EMF limits depending on access controls
- Define standardised site RF-EMF compliance assessment methods
- Agree compliance procedures for shared sites
- Adopt uniform small cell deployment rules
- Update assessment rules for active antennas
- Adopt efficient approaches to monitor compliance
- Practice effective communication of compliance information



https://www.gsma.com/publicpolicy/resources/emf-exposure-compliance-policies-for-mobile-network-sites

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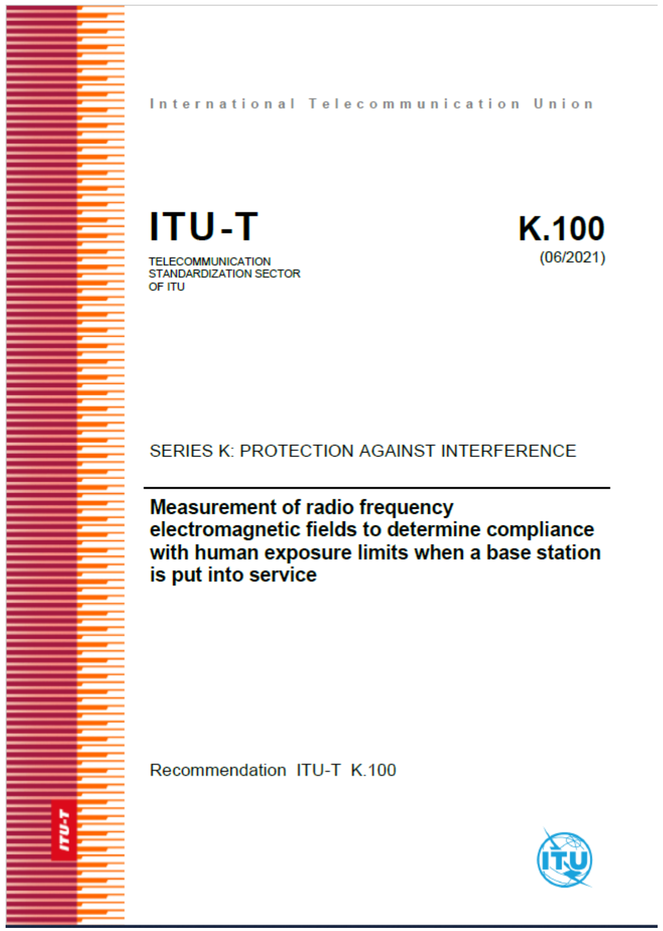
Update RF-EMF assessment methods

ITU-T K.100



International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

K.100
(06/2021)

SERIES K: PROTECTION AGAINST INTERFERENCE

Measurement of radio frequency electromagnetic fields to determine compliance with human exposure limits when a base station is put into service

Recommendation ITU-T K.100

IEC 62232

IEC 62232

Edition 3.0 2022-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Determination of RF field strength, power density and SAR in the vicinity of base stations for the purpose of evaluating human exposure

Détermination de l'intensité du champ de radiofréquences, de la densité de puissance et du DAS à proximité des stations de base dans le but d'évaluer l'exposition humaine

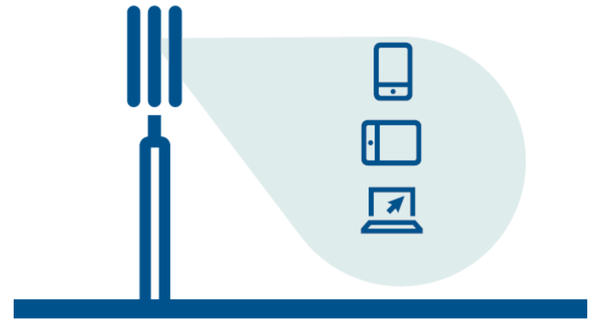
INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 13.280; 17.240

ISBN 978-2-8322-6444-7

Conventional antennas



Active antennas

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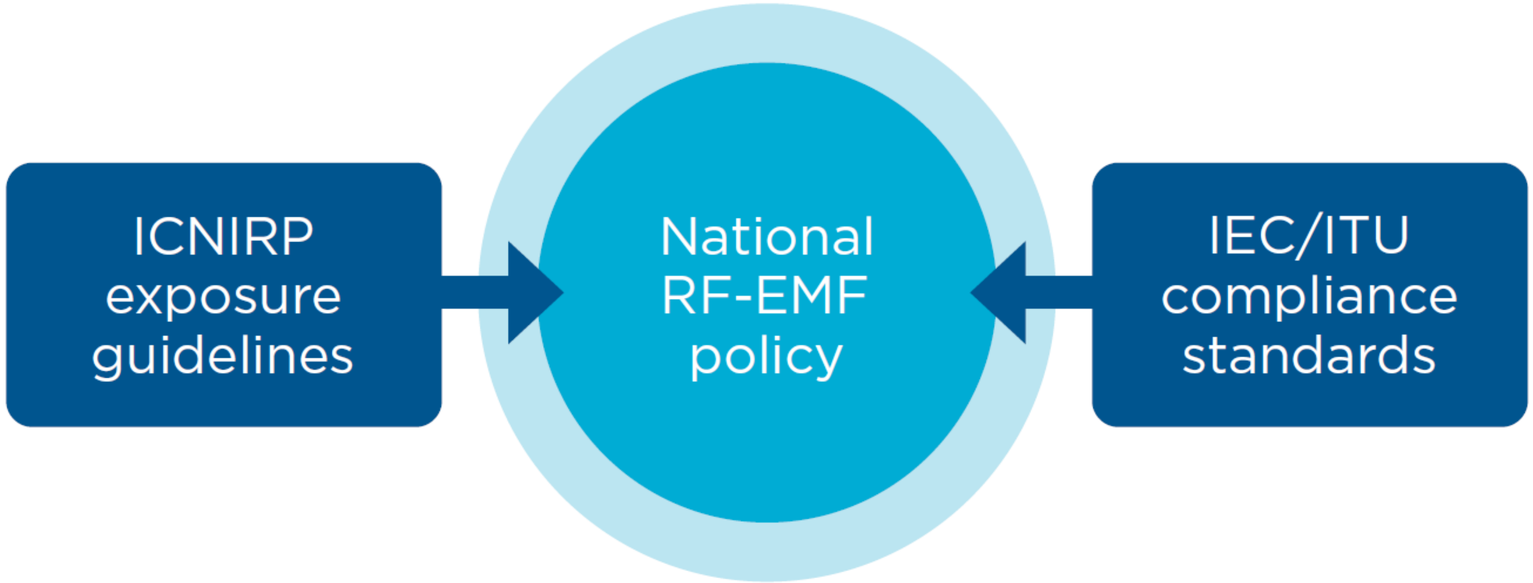
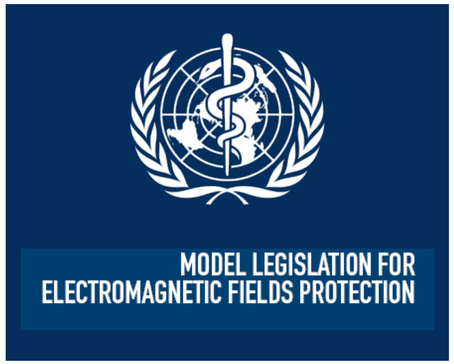
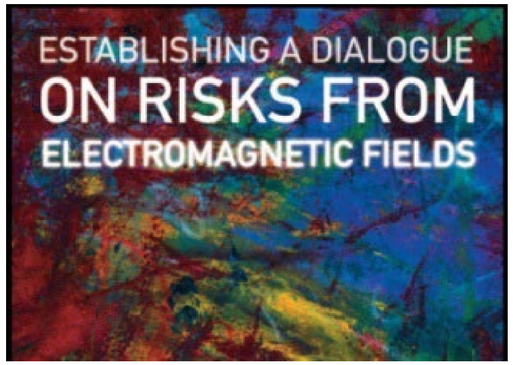
Harmonise with international EMF policy







ITU-D Q7/2 Final Report

Strategies and policies concerning human exposure to electromagnetic fields

Chapter 4: Formulating national EMF policies on exposure limits

- National legal framework on EMF
- Risk communications, risk management and EMF misinformation
- Methodologies for the assessment of RF-EMF exposure
- Presentation of assessment results for the public

- More contributions are encouraged

Thank You

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