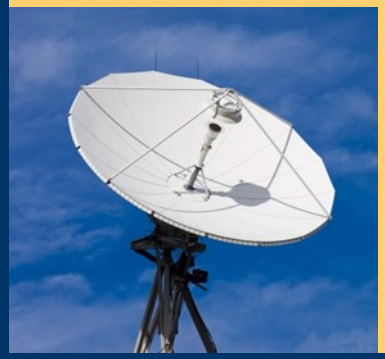
Human Exposure to Electromagnetic Fields (EMFs)



Ahmed Zeddam, Chairman of ITU-T Study Group 5 "Environment and Climate Change" and
Cristina Bueti, Adviser, ITU

Background

Main ITU conferences:

- **World Telecommunication Standardization Assembly** (WTSA)
  Johannesburg, 2008 and Dubai, 2012
- **World Telecommunication Development Conference (WTDC)**
  Hyderabad, 2010
- **Plenipotentiary Conference 2010 (PP-10)**
  Guadalajara, 2010

ITU

- UN specialized agency for ICTs
- unique public/private partnership

Members:

- **193 Member States** (Governments and regulatory bodies)
- **Over 700 Private Sector** (Sector Members and Associates)
- **Over 63 Academia**

Mr. Ban Ki-moon, Secretary-General of the United Nations and Dr. H. Touré, Secretary-General of ITU

ITU-T Mandate

ITU-T Resolution 72 - "Measurement concerns related to human exposure to electromagnetic fields"

ITU-T Resolution 72 urges ITU to:

- disseminate information related to this topic through organizing workshops and seminars for regulators, operators and any interested stakeholders from developing countries;
- continue to cooperate and collaborate with other organizations working on this topic and to leverage their work, in particular with a view to assisting the developing countries in the establishment of standards and in monitoring compliance with these standards, especially on telecommunication terminals.

ITU-T Vision

"The rational solution to citizens' concerns regarding exposure to EMFs is to ensure that the actions of national regulators and network operators are accompanied to the greatest possible extent by ***transparency and communication with citizens****.*

Compliance with international standards *and associated reporting mechanisms assures citizens that regulators and network operators have complied with international best practices in deploying base stations, thereby* ***safeguarding citizens' health****."*

Malcolm Johnson, ITU/TSB Director

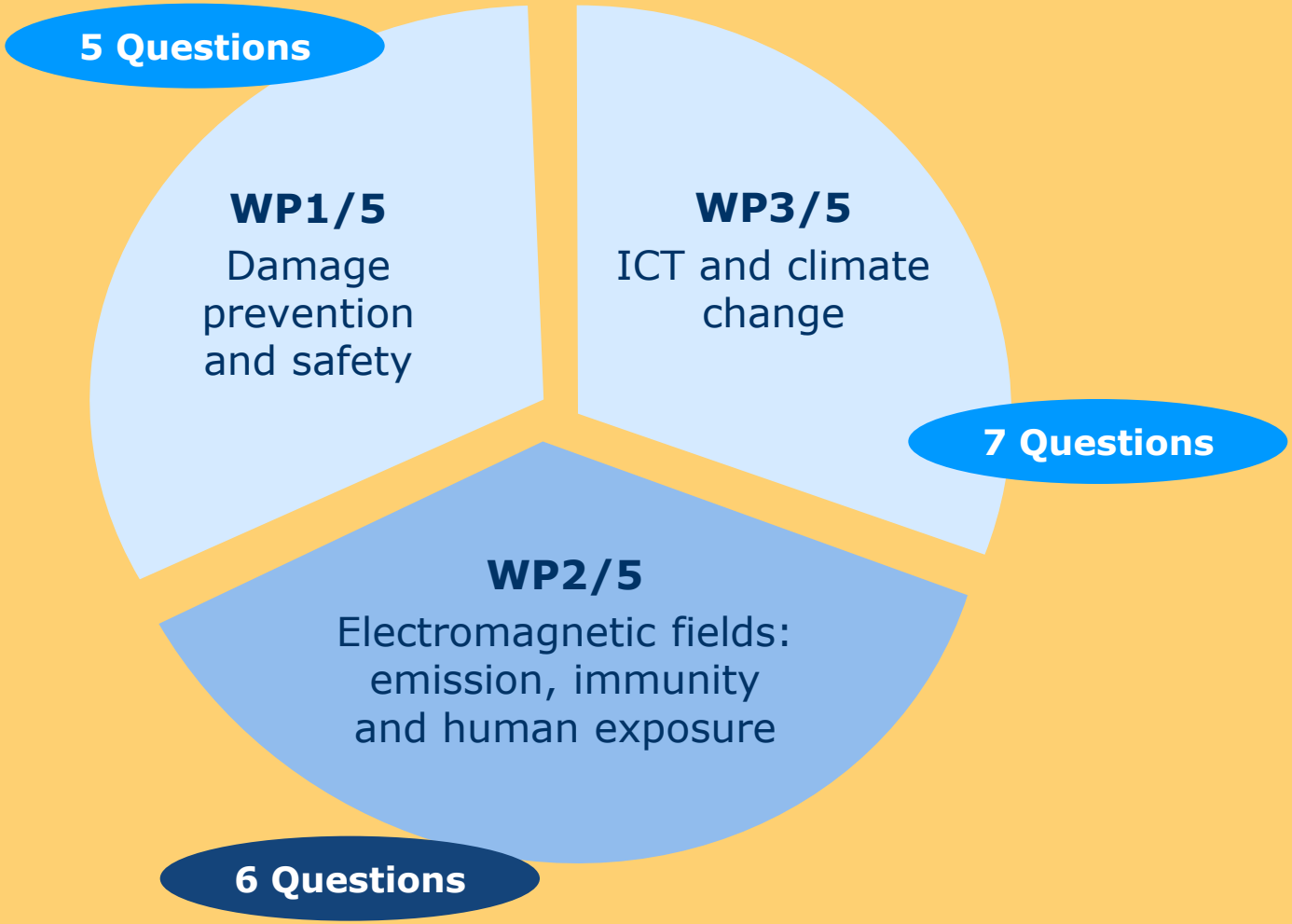
ITU-T Study Group 5

Lead study group for:

- Environment and climate change
- **Electromagnetic compatibility and electromagnetic effects**

Structure

ITU-T Study Group 5



Human exposure to electromagnetic fields (EMFs) due to radio systems and mobile equipment

Question 7/5

Goals

To provide a high level framework for :

- Managing the human exposure to EMFs (regulatory practices).
- Guidelines for the assessment of human exposure exposure based on existing ITU-T Recommendations and standards produced by other standards development organizations (SDOs).

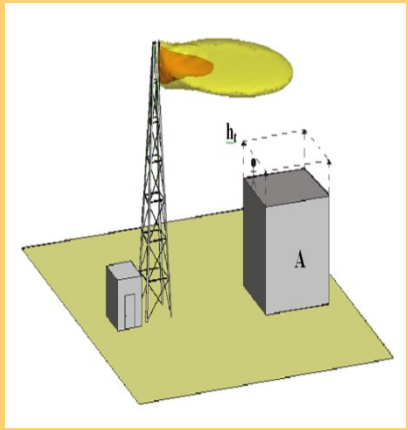
Ways

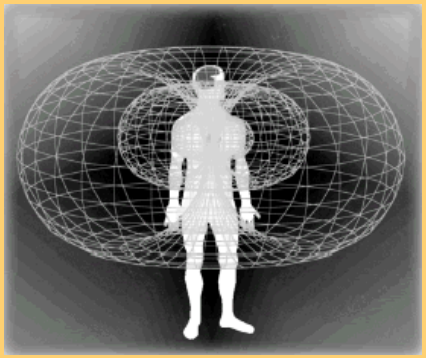
- Measuring techniques
- Procedures
- Numerical modeling for evaluating the electromagnetic field due to telecommunication systems and radio terminals.

Question 7/5

Main Study Area:

- Real site measurements and modeling of the multiple sources operating on different frequencies and transmitting antennas;
- Determine the validity of electromagnetic field predictions;
- Procedures and guidance on numerical modeling of EMFs in the areas around telecommunication transmitting antennas and various systems;
- Guidance based on existing SAR measuring and calculating procedures, techniques and protocols for evaluating EMF due to ICT equipment;
- Handbook to answer frequently questions about human exposure to EMF.





Question 7/5

Main Tasks:

- Develop Recommendations for the telecommunication sector;
- Work on activities specified in Resolutions;
- Collaboration with other standardization bodies (IEC, CENELEC, WHO) in order to avoid duplication of work;
- Maintenance and enhancement of the existing Recommendations.

Question 7/5

Examples of deliverables:

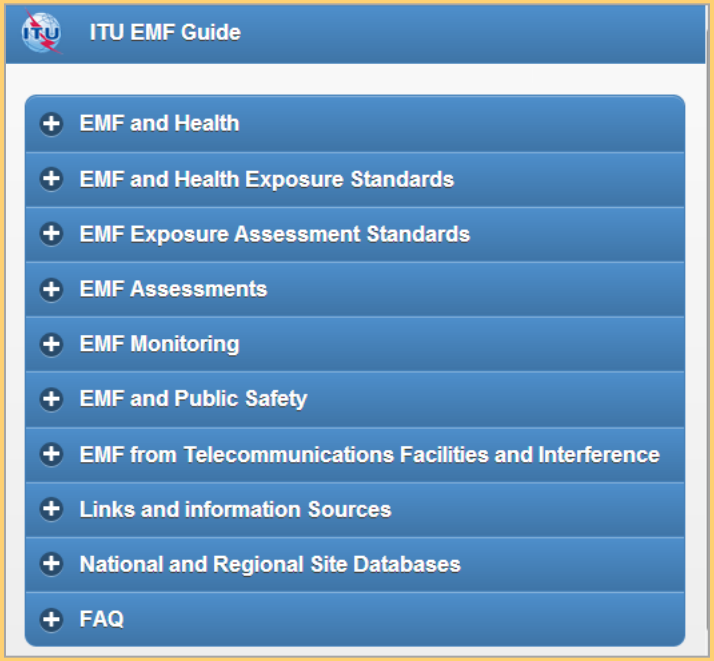
- **ITU-T K.91** - Guidance for assessment, evaluation and monitoring of the human exposure to radio frequency electromagnetic fields
- **ITU-T K.83** - Monitoring of the electromagnetic field levels
- **ITU-T K.70** - Mitigation techniques to limit human exposure to EMF's within vicinity of radiocommunication stations
- **ITU-T K.52** - Guidance on complying with limits for human exposure to electromagnetic fields
- **ITU-T K.61** - Guidance to measurement and numerical prediction of electromagnetic fields for compliance with human exposure limits for telecommunication installation
- **Handbook** on human exposure to EMF

EMF Guide (Handbook):

Objective: answer the common questions on EMF asked by the public, and to address related concerns;

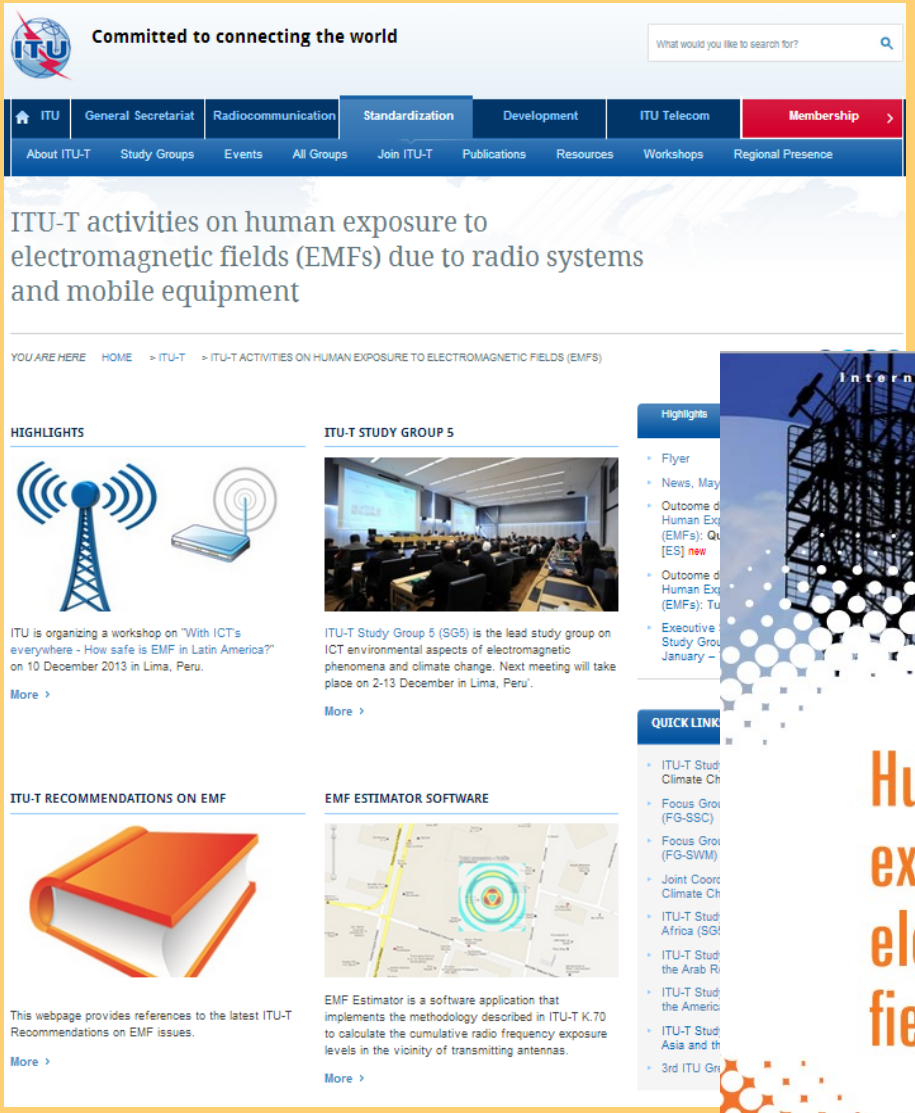
Provide education and information: promote EMF information and education resources suitable for all communities, stakeholders and governments;

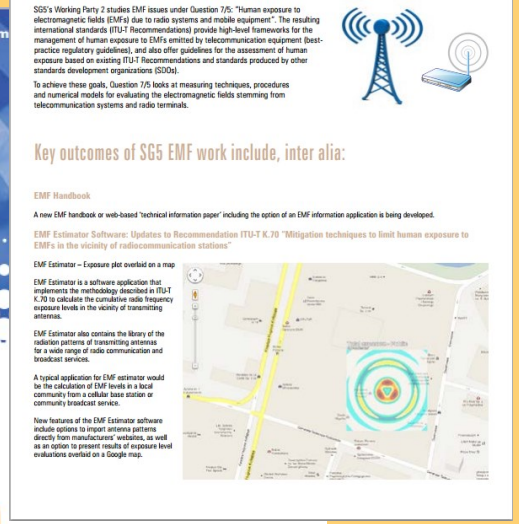
Support clarification of the science: referencing the WHO and other stakeholders providing information most useful in helping clarify scientific uncertainties e.g. in the areas of RF technology, infrastructure implementation, usage, and consequential EMF exposure.



EMF Guide will be online and designed for smart phones, tablets and desktop

EMF Brochure and Website





Shaping the Global Agenda

The way Forward

Workshop on Human Exposure to Electromagnetic Fields (Turin, 9 May 2013)

- Outcome document: **Turin Call to Action**
- Compliance with harmonized EMF Standards and addressing public concern regarding human exposure to electromagnetic fields (EMF) and possible health effects

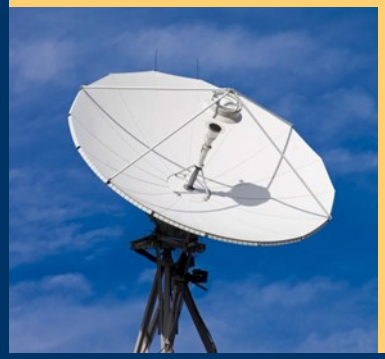
Raising Awareness in Latin America:

- Workshop on Human Exposure to Electromagnetic Fields (Quito, Ecuador, 14 August 2013)
- Workshop on "With ICT's everywhere - How safe is EMF in Latin America?"
  (Lima, Peru, 10 December 2013)

Collaboration among stakeholders (such as ITU, WHO…) is key!

Links and Additional Information

- ITU-T/SG5 "Environment & Climate Change"
  itu.int/ITU-T/studygroups/com05/
- ITU-T/SG5 Series K Recommendations (free of charge)
  itu.int/ITU-T/recommendations/index_sg.aspx?sg=5
- ITU-T and EMF
  itu.int/ITU-T/emf



Thank YOU
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