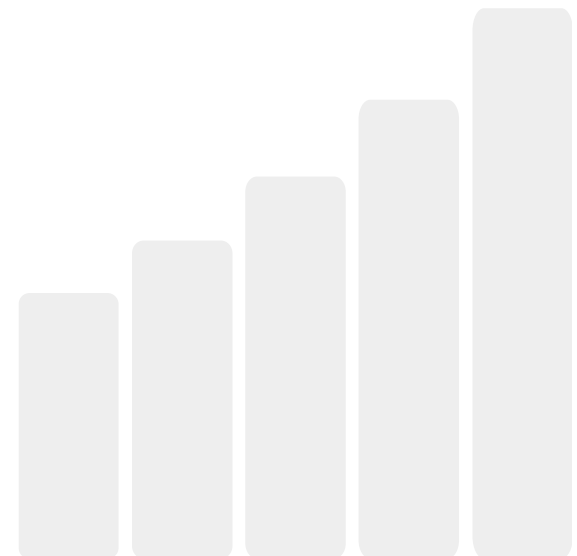
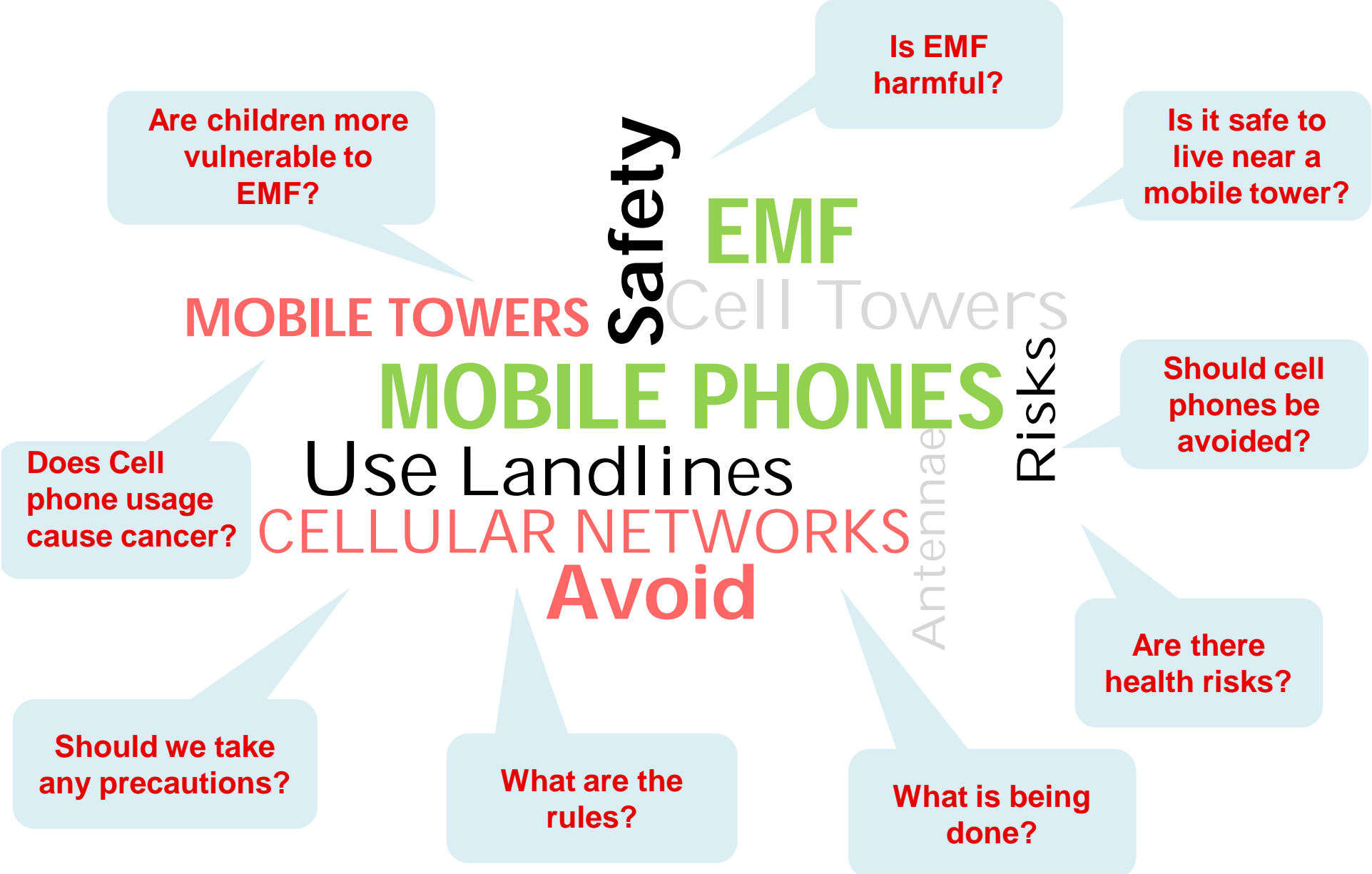


No Health Hazard from Mobile Tower Radiation

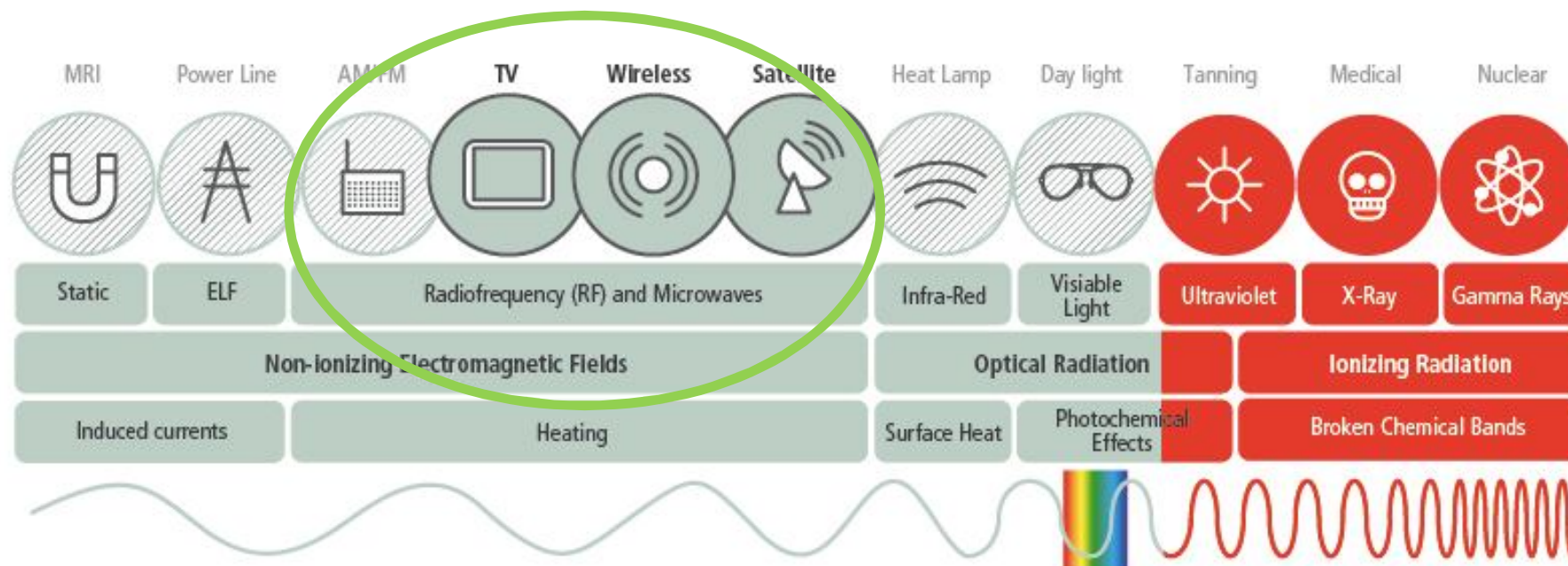
April 2015



General Questions in mind



RADIO SIGNALS ARE A FORM OF EM ENERGY: IMPORTANCE OF STANDARDS



Radio signals are not X-rays.

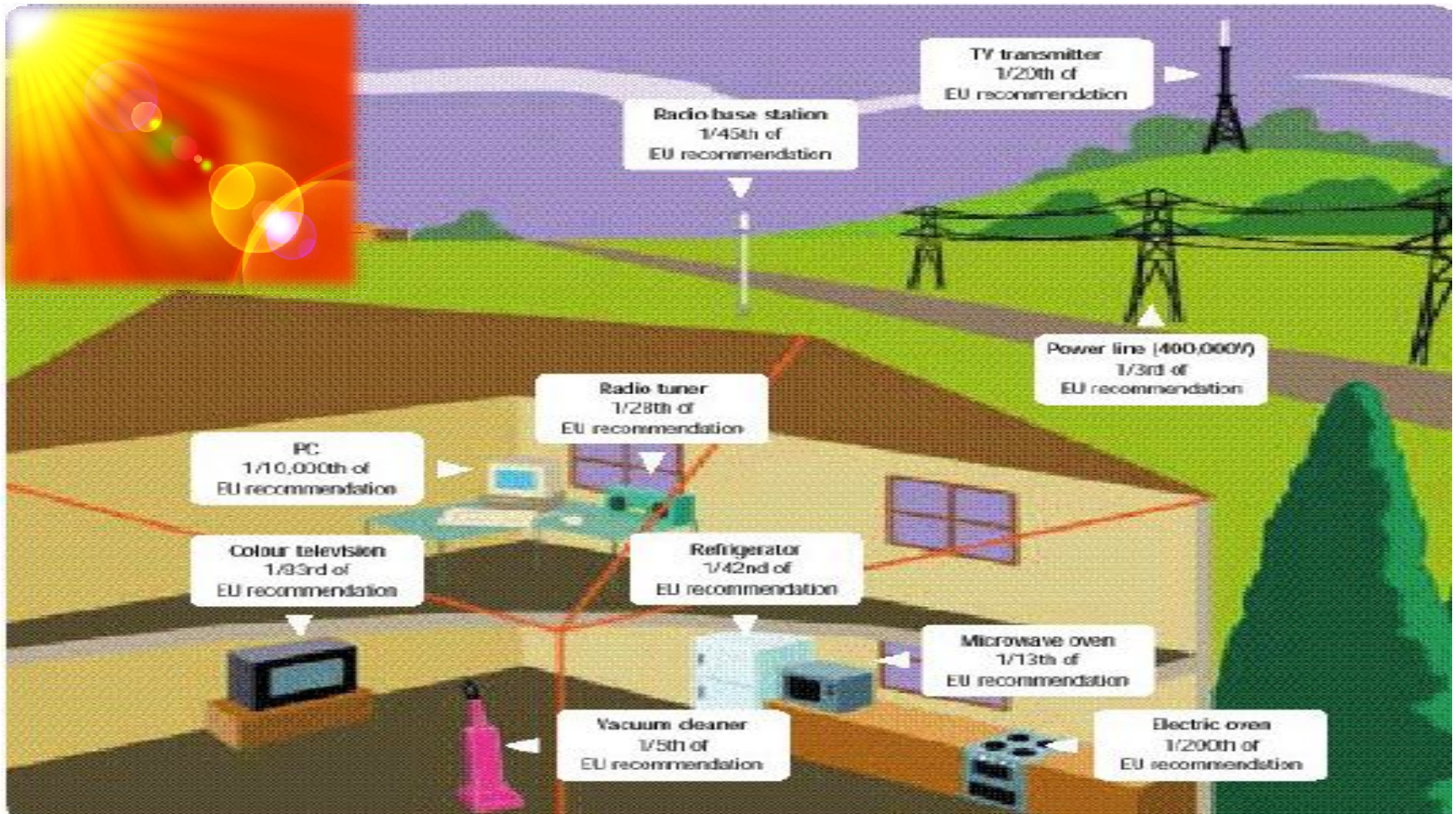
Non-ionizing signals: Do not have energy to cause genetic damage

Bond-breaking processes involve a transition with a single photon of sufficient frequency (or energy), and a million photons of sub-threshold frequency cannot cause the transition. For e.g., if there is a cannon that could shoot a cannonball to a distance of 1 km, 10 cannons will not allow to hit a target that is 10 km away. Cannon ranges do not add.

- a recent article by Prof. Vasant Natarajan, Department of Physics, Indian Institute of Science, Bangalore

ELECTROMAGNETIC FIELDS (EMF) in our daily lives

Electromagnetic Fields (EMF) occur in nature and thus have always been present on earth.



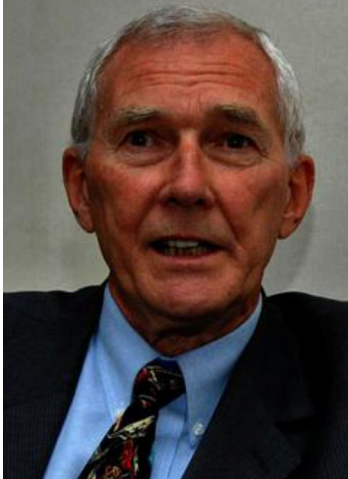
Tele Vision Tower Transmits **1000** **times** more

MODEL	Working band	DIGITAL OUTPUT POWER in Watt (rms)
DBTV 500	VHF	750
DBTV 700	VHF	1000
DBTV 1000	VHF	1500
DBTV 1400	VHF	2000
DBTV 2500	VHF	3500
DBTV 5000	VHF	7000
DBTV 10000	VHF	14000

**GSM Mobile Tower transmit s < 40 Watt i.e. Power from 40 W Electric Bulb.
It can never cause cancer or any health hazard.**

Sun Radiation

- Sun radiates up to **1300 Watt** over 1 square meter surface area during noon time. Can we live without Sun?
- All 7 types of sun rays ranging from 10^{13} Hz to 10^{14} Hz (Light) are **essential for life**.
- Lower than 10^{13} Hz (Infra Red)- Not harmful and is used for heating body joints suffering from pain.
- Higher than 10^{14} Hz (Light spectrum) - Ultra Violet (UV) rays are harmful- Developed countries provide **UV index** information with weather forecast. Hole in Ozone Layer and measures for Environment protection are talked of.



Prof. Michael Repacholi



Dr. Rajesh Dikshit



Dr. Vijayalaxmi



Prof. Vasant Natarajan



Dr. Rakesh Jalali

**EMFs from mobile phones &
towers do not cause ill
effect on human health**



Dr. Bhavin Jankharia

INDIAN GOVERNMENT NORMS ON NON-IONIZING EMF EXPOSURE FROM BTSs

1. The Department of Telecommunications (DoT), Government of India adopted **ICNIRP (International Commission on Non-Ionizing Radiation Protection) Guidelines in 2008**
2. In **Sep 2009**, DoT finalized the **Test Procedure for Measurement** of EMF from Base Station Antennas
3. An **Inter-ministerial committee** (IMC) was constituted in **January 2011** to examine the effect of EMF radiation on human health. The **IMC recommended** lowering of emission **norms to 1/10th of the existing ICNIRP exposure levels** for “**abundant caution**”. This regulation came into effect on September 1, 2012. The DoT also lowered SAR levels for mobile phones to 1.6 W/kg
4. Consequently, the **TSP license agreements were modified** vide Amendment 1 of 2013 dated **January 10, 2013**
5. Government specifically chose not to accept IMC recommendation to remove/limit the BTSs from schools, hospitals etc. Government represented that revised levels were set at low enough levels to protect all citizens in all locations.

GoI REGULATORY REGIME ON EMF

November 2008	DoT adopted the world class ICNIRP standards for EMF exposure	Spectrum	ICNIRP Limit
		900 MHz	4.5 W/m ²
		1800 MHz	9.2 W/m ²
		2100 MHz & 2300MHz	10 W/m ²
February 2011	IMC was set up to review EMF standards in India		
September 2012	DoT adopted 1/10 th of ICNIRP standards as precautionary measure for all locations and segments of society without exception	Spectrum	India standards
		900 MHz	0.45 W/m ²
		1800 MHz	0.9 W/m ²
		2100 MHz & 2300MHz	1 W/m ²

- The limits for EMF emissions from mobile tower antennas already incorporate a **significant safety margin** for general public **exposure covering all locations and classes of people** including children, pregnant women, etc., as prescribed by WHO and ICNIRP.

MONITORING OF EMF EXPOSURE BY TERM CELLS

1. So far more than 2 lakh BTS sites have been randomly audited by TERM cells for the compliance of EMF exposure limits all over the country.

Total Base Stations tested by TERM cells till Feb 2015: **200076**

2. Few cases were found violating the safe EMF Radiation Exposure limits initially and penalties have been imposed.

No. of Base Stations tested by TERM cells during the financial year 2014-15 :
70798 (Till Feb'15)

3. Number of BTSs audited in Rajasthan: **4000 (approx.)**

No BTS has been found violating EMF radiation norms during 2014-15.

DoT INITIATIVES

1. National guidelines for Issue Of Clearance For Installation Of Mobile Towers

Guidelines were issued by DoT on August 1, 2013. It is a uniform set of guidelines for grant of permission by States (State Governments) & Union territories for setting up of BTS towers.

2. New EMF Penalty Norms by DoT

DoT, on November 20, 2013, issued the circular providing clarity on various EMF reporting issues and EMF Penalties. The Field Units of DoT (TERM Cells) carry out audits and impose **Penalty for violation of EMF norms from BTS towers by TSPs has been increased from 5L to 10Lakhs/BTS/incidence/Operator.**

3. Participation in Regional Workshops for mutual understanding between DoT/ TERM Cells and the industry.

4. Notification by DoT on February 27, 2014 conveying the decision on the Report of the Committee constituted in compliance to the directions of Hon'ble High Court, Allahabad, Lucknow Bench.

i. **Government departments like DoT, Health, Environment etc. shall spread public awareness on EMF.**

ii. **DoT will create National EMF web Portal** to provide public access to the status of Compliance, of the EMF norms, of all BTSs/mobile towers in the country.

GOVERNMENT'S SAFETY NORMS ON EMF

The Safety norms specified by the Government for EMF from antennae on mobile towers and mobile handsets are one of the **safest in the world and protect all segments of society without exception.**

13th March 2015: Shri Ravi Shankar Prasad has stated in the Rajya Sabha that **fears of mobile towers being hazardous to health are not true, adding that reports from the World Health Organisation do not substantiate the claim.**

"For infrastructure, we need towers, if we don't have permission to install towers, then infrastructure will not improve."



7th July 2014: Shri Ravi Shankar Prasad, Hon'ble MoC&IT, while responding to a related question in the Parliament stated –

"From all evidence accumulated so far, no adverse short or long term health effects have been shown to occur from the RF Signals produced by base stations (mobile phone towers)".

Please refer to the link:

<http://164.100.47.132/LssNew/psearch/QResult16.aspx?qref=26>

COURT VERDICTS ON EMF SAFETY NORMS

1. 5th March 2015: The Hon'ble Madras High Court in the recent judgment

refused to order stalling of growth of mobile phone towers stating that **in the absence of evidence to prove health hazards** from mobile phone towers, courts cannot pass any order.

"...There being no materials, at least as on date, which can finally suggest any health hazards from these towers, the court would not venture into uncharted territory of technical expertise to determine the area where towers should be installed," stated the **first bench comprising Chief Justice Sanjay Kishan Kaul and Justice M M Sundresh.**

COURT VERDICTS ON EMF SAFETY NORMS

2. **5th Sep 2014**: The Hon'ble Gujarat High Court in the C/SCA/5548/2014 vide its judgment directed that:

“the State Government and the Centre to create public awareness that they have no reason to fear the emission of radioactive waves from mobile tower.”

“the concerned authorities should, by way of communication through T.V., Radio etc. bring it to the notice of the people at large that there is no reason for them to fear the erection of the Base Transceiver Station, known as the Wi-Fi Mobile Tower. The reason why we are saying so is that the impression in the mind of a common man is that the Wi-Fi Mobile Towers erected all over the State has the potential to cause health hazard due to the emission of radio active waves from the said tower.”

COURT VERDICTS ON EMF SAFETY NORMS

3. **9th July 2013**: The Hon'ble Kerala High Court in the W.P. (C) No. 24569 of 2012 vide its judgment held that:

“Whether the commissioning of a telecommunication tower would affect the health of the people of the area is an issue which is still being debated among the scientist communities all over the world. This Court has, in two decisions, held that **there is no evidence that the same will affect the health of the people.**

Whether it will affect the health of the people or not, it is an undisputed fact that we are bound to live for the rest of our lives with mobile phones in our pockets. The statute prescribes certain licenses and permits for erecting telecommunication towers. All what we can ensure is that such requirements are complied with in the erection and operation of the tower. In the above circumstances, **if the petitioner has obtained necessary permits and licenses, nobody can prevent them from erecting and commissioning telecommunication towers.**”

COURT VERDICTS ON EMF SAFETY NORMS

4. **27th February 2014**: The report submitted by an Expert Committee* constituted by the DoT as per the Allahabad High Court Order dated January 10, 2012 has observed that –

There is no cause of alarm with regard to possible ill-effects on human health by electromagnetic field (EMF) emission from cellphone towers and cellphones because the safety limits adopted in India take into account all biological effects of radiation.

On the actions taken by the DoT in view of the accepted recommendations of the IMC, the committee observed that the ***DoT has taken adequate steps to improve stricter precautionary limits for EMF emission from mobile towers as well as from the mobile phones.***

**Members of the committee include professors from IIT-Kharagpur, IIT-Kanpur, IIT-Delhi, IIT-Roorkee and experts from ICMR, AIIMS, Department of Science and Technology and Indian Institute of Toxicology Research, besides representatives from DoT.*

COURT VERDICTS ON EMF SAFETY NORMS

5. 27th Nov 2012 : Hon'ble Rajasthan State High Court Ordered against Government and all operators ordering removal of towers from schools and hospitals.

COAI has appealed against the Rajasthan High Court's order on EMF issues in the Supreme Court

The case regarding EMF issues is pending in the Hon'ble Supreme Court.
The decision of the Rajasthan HC is in variance with specific representations on EMF safety by both the DoT and the industry.

The judgement is based on the misguided premise that recommendations of the IMC on location of towers which were not expressly rejected by DoT have been deemed as accepted.

THE GOVERNMENT AND ALL TELECOM OPERATORS ARE DEEPLY COMMITTED TOWARDS THE PROGRESSIVE GROWTH OF MOBILE SERVICES IN THE COUNTRY CONSISTENT WITH PROTECTING THE HEALTH OF OUR CITIZENS AND SPREADING AWARENESS AMONGST THEM. PLEASE HAVE NO PANIC AS MOBILE TOWER RADIATION IS NOT AT ALL HAZARDOUS TO HEALTH. HOWEVER, BE BEWARE OF VESTED INTEREST GROUPS TRYING TO CREATE PHOBIA.

Thank You