

**GOVERNMENT OF INDIA  
COMMUNICATIONS AND INFORMATION TECHNOLOGY  
LOK SABHA**

UNSTARRED QUESTION NO:1767

ANSWERED ON:03.12.2014

IMPACT OF RADIATION FROM MOBILE TOWERS

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**Will the Minister of COMMUNICATIONS AND INFORMATION TECHNOLOGY be pleased to state:**

- (a) the number of Mobile Towers functioning in the country as on date, State/UT-wise;
- (b) whether Government has conducted any study on the impact of radiation generated by mobile towers/mobile handsets on humans and animals;
- (c) if so, the details and outcome thereof and if not, whether the Government proposes to conduct such Official study in future;
- (d) whether the Government has issued any guidelines to the Telecom Service Providers and mobile manufacturing/importing companies on emission norms of Electro Magnetic Field (EMF) radiation and installation of mobile towers near residential/public places; and
- (e) if so, the details thereof and the action taken/proposed to be taken by the Government on the erring telecom service providers and manufacturing units for violation of these guidelines, company-wise?

**Answer**

THE MINISTER OF COMMUNICATIONS AND INFORMATION TECHNOLOGY (SHRI RAVI SHANKAR PRASAD)

(a) Madam, the telecom licenses are issued Licensed Service Area (LSA) wise and accordingly the information is maintained LSA-wise. Number of mobile base transceiver station (BTS) functioning in the country, LSA-wise, as on 30.09.2014 is provided as Annexure-A.

(b) & (c) Government on 24.08.2010, has constituted an Inter-Ministerial Committee (IMC) consisting of officers from Department of Telecommunications (DoT), Indian Council of Medical Research (Ministry of Health), Department of Biotechnology and Ministry of Environment and Forest to examine the effect of Electro Magnetic Field (EMF) Radiation from base stations and mobile phones. The Inter-Ministerial Committee (IMC) in its report, has examined the environmental and health related concerns and has indicated that most of the laboratory studies were unable to find a direct link between exposure to radio frequency radiation and health; and the scientific studies as yet have not been able to confirm a cause and effect relationship between radio frequency radiation and health. The effect of emission from cell phone towers on human health is not known yet with certainty.

In addition, a joint initiative has been launched by Science and Engineering Research Board, a statutory body under Department of Science & Technology and Department of Telecommunication to study possible impact of EMF radiation exposure from mobile towers and handsets in the non-ionizing band (300MHZ to 3 GHZ) on life. i.e. Humans, Living Organisms, Flora & Fauna and Environment. A committee comprising of various experts from Medical & Engineering Institutes, has short listed research proposals for further consideration which will be supported for funding in campaign mode.

Further, World Health Organization (WHO) in its Fact Sheet No. 304, May 2006 on Electro Magnetic Fields (EMF) and Public Health (Base Stations and Wireless Technologies) has concluded that "considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak Radio Frequency (RF) Signals from base stations and wireless networks cause adverse health effects." "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)". Further, WHO has referred to approximately 25,000 articles published around the world over past 30 years, and based on an in-depth review of scientific literature, has concluded: "current evidence does not confirm the existence of any health consequences from exposure to EMF radiation"

(d)&(e) Department of Telecom (DoT) has issued guidelines to the Telecom Service Providers on emission norms of Electro Magnetic Field (EMF) radiation. As per the present guidelines, the limits for EMF radiations from Base Station in India are as below -

Frequency Range	E-Field Strength (Volt/Meter (V/m))	H-Field Strength (Amp/Meter (A/m))	Power Density (Watt/Sq.Meter (W/Sq.m))
400MHz to 2000MHz	$0.434f^{\frac{1}{2}}$	$0.0011f^{\frac{1}{2}}$	$f/2000$
2GHz to 300GHz	19.29	0.05	1

(f is frequency in MHz)

The above limits for EMF radiations from Base Station in India are ten times stricter than the internationally prescribed standards by International Council for Non-Ionizing Radiation Protection (ICNIRP) and are applicable for all areas, including residential.

DoT has also issued guidelines to the mobile manufacturing/ importing companies on Specific Absorption Norms (SAR), measuring the radiation emitted by a cell phone radiation. As per the present guidelines, in India the SAR Value for Mobile Handset has been fixed as 1.6 Watts per Kg averaged over a mass of 1 gram human tissue.

Regarding installation of mobile tower, Department of Telecom (DoT) has issued advisory guidelines for state governments on 23.08.2012 for issue of clearance for installation of mobile towers. The above said guidelines have been further revised with effect from 01.08.2013. These guidelines list documents to be submitted by Telecom Service Providers/Infrastructure providers for obtaining clearances from State Government / Local Bodies for installation of mobile towers and also suggested actions to be taken by State Government / Local Bodies. These documents include actions to ensure safety norms and procedures, SACFA clearance, submission to TERM Cell, structural stability, fire safety along with others.

In order to ensure compliance to the prescribed EMF radiation limits from mobile tower in India, self-certificates are required to be submitted by telecom service providers as per the guidelines issued by DoT. To cross check these, audit of base transceiver station (BTS) sites is carried out by Telecom Enforcement Resource & Monitoring (TERM) field units of DoT. This is regularly done by TERM units for the purpose of monitoring that the EMF radiation exposure is within prescribed norms. In case, any BTS site is found to violate the EMF norms, as per the prescribed procedure, actions are taken by imposing a penalty of Rs. 10 lakh per BTS per incidence.

The details of penalty imposed on different Telecom Service Providers on account of non- compliance of these guidelines, company-wise, are provided as Annexure-B.