INDIA - National report 2016-17
Department of Telecommunications
Government of India

i. General research activities in your country related to EMF health:

Department of Telecommunications and Department of Science and Technology (Government of India) are jointly supporting Nineteen research proposals on possible impact of EMF Radiation exposure from mobile tower and handset on life (humans, living organism, flora & fauna and environment). These research have already been initiated.

ii. New policies and legislations regarding EMF exposure:

Government of India had adopted the International Commission on Non Ionizing Radiation Protection (ICNIRP) guidelines in the year 2008 for basic restriction levels of Electromagnetic radiation from Mobile towers and inserted the additional clause in the Access Service Licenses. In April, 2010, Department of Telecommunications (DoT) directed all licensees of access services for compliance of the reference limits/ levels prescribed by ICNIRP by way of self-certification of their Base Transmitting Stations (BTS) for meeting the EMF radiations norms. As per these directions all BTSs should be ICNIRP guidelines compliant and all BTSs should be self-certified as meeting the radiation norm. Self-certification is submitted to respective Telecom Enforcement Resource & Monitoring (TERM) Cells of DoT. All new BTS sites starts radiating commercially only after self-certificate has been submitted to relevant TERM Cells. TERM Cell tests up to 10% of total BTS sites randomly. Additionally, the BTS sites against which there are public complaints are also tested by TERM Cell. The testing is done as per procedures prescribed by Telecom Engineering Centre (TEC) from time to time. If a site fails to meet the EMR criterion, there is provision of levying a penalty of Rs. 10 lakh per BTS per service provider and also of shutting down the site, if violation persists.

Further, based on the recommendations of an Inter-Ministerial Committee (IMC), as a measure of abundant precaution, the norms for exposure limit for the Radio Frequency Field (Base Station Emissions) have been made further stringent and reduced to $1/10^{th}$ of the existing limits prescribed by ICNIRP. The present limits/level are reproduced as detail below:

(f =	**Frequency Range**	**E-Field Strength (Volt/Meter)**	**H-Field Strength (Amp/Meter)**	**Power Density (Watt/Sq.Meter)**
	400MHz to 2000MHz	**0.434f ½**	**0.0011f ½**	**f/2000**
	2GHz to 300GHz	**19.29**	**0.05**	**1**

frequency in MHz)

Keeping the precautionary EMF safe exposure limits for the Radio Frequency Field (Base Station Emissions) which is 10 times more stringent than the safe limits prescribed by ICNIRP for all areas in India, eliminates the need for fixing lower limits for specific areas like schools, hospitals, residential premises, children playgrounds; a segregation of which is impractical in densely populated localities. Based on the limits provided by ICNIRP, DOT, in the year 2008, had notified for compliance of Mobile Handsets being manufactured in India as well as the handsets being imported to conform to SAR limit of 2 W/kg (averaged over a mass of 10 gm tissue) localised for head and trunk in the frequency range of 10 MHz to 10 GHz. Further, based on the recommendations of an Inter-Ministerial Committee (IMC), in the year 2012, it has been revised to 1.6 Watt per Kg averaged over a mass of one gram human tissue.

iii. Areas of public concern and national responses:

Public concerns have been raised on possible health effects from Electromagnetic Field Radiation (EMR) exposure from diverse EMR sources especially Mobile BTS antennae and mobile handsets. These are being raised in forms of Court cases, questions/discussions in Parliament, Media reports etc. To address these concerns, DoT has taken up various steps at national and regional level to improve public awareness on the issue of EMF emissions.

Several High Courts viz Hon'ble High Courts of Delhi, Punjab & Haryana, Madras, Kerala, Gujarat and Allahabad in the court cases related to issue of effects of the radiation from cell phone towers have given judgements whereby they have dismissed petitions, where the mobile tower installations were challenged in various localities, including residential, on grounds of health effects of EMF radiations.

iv. New public information activities:

i. DoT has initiated a nation-wide Awareness Programme on EMF Emissions & Telecom Towers to build a direct bridge of engagement between different stakeholders and to fill the information gap with scientific evidence. Six such programmes held in Dehradun on 30 June, 2016, in Hyderabad on 13 July, 2016, in Mumbai on 23 August, 2016, in Chandigarh on 21 October, 2016 in Jaipur on 17 December, 2016 and in Guwahati on 24 January, 2017, helped in bringing lot of clarity on this issue and were appreciated by all participants including the Chief Secretaries of Uttarakhand, Telangana, Maharashtra, Punjab, Haryana, Rajasthan and Assam, Senior Officers of State Governments and representatives of local bodies & RWAs.

ii. Detailed information on EMF related issues and steps taken by Government of India in this regard have been made available on DoT website www.dot.gov.in in section "A Journey for EMF".

iii. DoT has issued an informative guide on 'Mobile Communications-Radio Waves and Safety' and the same is available on DoT website. The document covers basic introduction to radio waves, various terminologies, clarification of various myths regarding deployment, use of Radio waves / Safety Standards and frequently asked questions relating to Mobile phones & Human health.

iv. DoT has been continuously engaging with Telecom Service Providers (TSPs) associations for organizing workshops/seminars to create awareness on this issue. Recently 18 different teams comprised of DoT Officers, Doctors & Industry representative have been conducting awareness campaign in different States.

v. Pamphlets/ Information Brochures on various topics related to EMF have been published and distributed in various regional languages.

vi. Renowned international speakers have participated in International workshops held at New Delhi and Kochi.

vii. Advertisement for ensuring safety from radiations of Mobile Towers & handsets has been issued by DoT which has been published in National & Regional Newspapers**.**

viii. DoT has launched "Tarang Sanchar", a web portal for Information sharing on Mobile Towers and EMF Emission Compliances, with a view to generate confidence and conviction with regard to safety and harmlessness from mobile towers, clearing any myths and misconceptions. The portal can be accessed at www.tarangsanchar.gov.in. The EMF Portal provides a public interface where an easy map-based search feature has been provided for viewing the mobile towers in vicinity of any locality. By click of a button, information on EMF compliance status of mobile towers can be accessed. Detailed information about any tower site, if requested, will be sent on email to the users. Additionally, any person can request for EMF emission measurement at a location by paying a nominal fee of Rs 4000/- online. Local Telecom Enforcement Resource and Monitoring (TERM) field unit of DoT will conduct the test and the test reports will be provided. The portal also has 'EMF Overview' and 'Learn' Sections, which provide numerous articles, booklets and videos, to further educate the citizens about EMF and coverage of telecom services. Public can also access the 'DoT Initiatives' section which has information on various leaflets, articles and Frequently Asked Questions. The portal has the complete collated technical details of over 14.5 lakh base stations (BTSs) spread across the country of all technologies (2G, 3G, 4G etc.) and of all Telecom Service Providers (TSPs).

ix. DoT has issued Broad guidelines to all State Governments for issue of clearances for installation of Mobile. These guidelines, inter-alia, mentions formation of State Level Telecom Committee (STC) and District Level Telecom Committee (DTC) with representatives of various stake holders to effectively address issues related to telecom infrastructure including Public Concerns.

These efforts of engagement between general public at large, DoT and other stakeholders of the Telecom Sector has helped to bridge the information gap by bringing forth the right scientific facts on the issue of health effects of EMF emission from mobile towers & handsets.

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