IN THE HIGH COURT OF JUDICATURE FOR RAJASTHAN AT JAIPUR BENCH JAIPUR

1. D.B.PIL Petition No.2774/2012
Justice I.S.Israni (Retd.) & anr. V/s Union of India & Ors.

2. D.B.PIL Petition No.8697/2012
Pearl Green Acres Owners Welfare & Maintenance Society V/s Union of India & Ors.

3. D.B.Civil Writ Petition No.17867/2012
Cellular Operators Association of India and ors. V/s State of Rajasthan & ors.

4. D.B.Civil Writ Petition No.18304/2012
Association of Unified Telecom Services Providers of India & ors. V/s State of Rajasthan & Ors.

Reportable Date of order :- 27.11.2012

PRESENT

Hon'ble the Chief Justice Mr.Arun Mishra
Hon'ble Mr.Justice Narendra Kumar Jain-I

Mr.Prateek Kasliwal)for petitioners in petition no.2774/12.
Mr.Tanveer Ahmed)

Mr.Rajendra Soni, Amicus Curiae in petition no.2774/12.

Mr. Vinayak Joshi for petitioner in petition no.8697/12.

Mr.Arvind Kumar Arora)
Mr.Sandeep Taneja)-for intervenors in
Mr.Kapil Gupta) petition no.2774/12
Mr.Amod Kasliwal)
Dr. Ram Kishan Sharma)
Mr. Mahesh Gupta)
Mr. Ajay Tyagi)

Mr. B.L. Sharma, Senior Counsel assisted by
Mr. Lokesh Atrey and Mr.Vikram Singh for respondent TAIPA in petition no.2774/12.

Mr. Gopal Subramanium, Senior Counsel assisted by
Mr. Naveen Chawla, Mr. Devansh Mohta, Mr. Ravi Chirania,
Mr. Sandeep Singh Shekhawat for Cellulor Operators Association of India (petitioner in petition no.17867/12 and respondent no.21 in petition no.2774/12).

Mr. Sudhir Gupta, Senior Counsel assisted by

Mr. Anuroop Singhi and Mr. Ankit Shah for petitioner in petition no.18304/12.

Mr. Kamlakar Sharma, Senior Counsel) for respondent
with Ms.Alankrita Sharma) no.15 in petition
no.2774/12

Mr. Virendra Lodha, Senior Counsel assisted by Mr. Ankit Jain for the respondent no. 10 in petition no.2774/12

Mr.R.K.Agarwal, Senior Counsel)
Mr.Nisheeth Dixit for respondents no.11, 13, 18 and 19 in petition no.2774/12 and respondent no.7 in petition no.8697/12).

Mr. S.S. Raghav, Additional Solicitor General for Union of India.

Mr. Dinesh Yadav, AAG with
Mr.Subhash Kuntal, Mr. Amit ojha, Mr. Vikram Yadav and Mr. Ram Gopal Khhinchi for the State of Rajasthan.

Mr.Sanjay Srivastava for respondent no.8 in petition no.2774/12.

Mr.Akhil Simlot for respondent no.9 & 12 in petition no.2774/12.

Mr.R.A.Katta for respondent no.6 in petition no.2774/12.

Mr. M.P. Singh for respondent no. 17 in petition no.2774/12

Mr. Indresh Sharma for respondent no. 16 in petition no.2774/12

Mr.Saurabh Saraswat for respondent no.4 in petition no.2774/12.

Mr.T.P.Sharma for respondent No.20 in petition no.2774/12.

"ORAL ORDER"

Per Hon'ble Chief Justice Arun Mishra

Since common questions of law and facts are involved in all these writ petitions, they were heard together and are being decided by common order.

D.B.PIL Petition No.2774/2012
Justice I.S.Israni (Retd.) & anr. V/s Union of India & Ors.

The said writ petition has been filed in the public interest by the petitioners-Justice I.S.Israni (Retd.) and Smt.Nirmala Singh praying for the relief that the Central Government as well as the State Government and their instrumentalities be directed to formulate regulatory body in relation to emission of radio frequency and electro magnetic radiations emitted by or likely to be emitted by mobile towers and for monitoring emission from these towers; prayer has also been made to stop the respondents from increasing capacity and further, no license to operate towers in the residential areas should be granted to the respondents-companies at the risk of health and life of people; prayer has also been made to direct the respondents to remove the towers from the hospitals, schools and residential areas so as to minimize the environmental and noise pollution.

D.B.PIL Petition No.8697/2012
Pearl Green Acres Owners Welfare & Maintenance Society V/s Union of India & Ors.

The said writ petition has been filed by the petitioner-Pearl Green Acres Owners Welfare & Maintenance Society with the prayer to direct the respondent no.7- M/s A.T.C. Limited not to raise construction or erect the mobile tower on the land khasra no.168, Mangyabas, Tehsil Sanganer, Mahesh Nagar, Jaipur; prayer has also been made that respondents-authorities be directed not to issue any license in favour of respondent no.7 for erecting mobile tower and operation and installation of

Base Station Antennas in the residential area should not be granted.

D.B.Civil Writ Petition No.17867/2012
Cellular Operators Association of India and ors. V/s State of Rajasthan & ors.

In the said writ petition filed by Cellular Operators Association of India and ors., prayer has been made for quashment of impugned Bye-laws made by the State Government and the order dated 31.8.2012 including Bye-laws framed/to be framed by any of the respondents-Municipalities in compliance of the order dated 31.8.2012 issued to various municipalities/local authorities to implement the Bye-laws prohibiting the erection of mobile towers on the hospitals, school buildings, play grounds and within range of 500 meters from jail premises; prayer has also been made for quashment of communication dated 4.7.2012 issued by the respondent no.2 Dy.Director (Secondary), Secondary Education, Rajasthan Bikaner; prayer has also been made to quash the communication dated 13.9.2012 issued by the State of Rajasthan, Local Self Department; prayer has also been made to restrain the respondents no.1 and 2 from removing or hampering the working of mobile towers/antennas installed by the petitioners in the State of Rajasthan.

D.B.Civil Writ Petition No.18304/2012
Association of Unified Telecom Services Providers of India & ors. V/s State of Rajasthan & Ors.

In the said writ petition filed by the petitioners-

Association of Unified Telecom Services Providers of India & ors., prayer has been made to quash the Bye-laws framed by the State Government on 31.8.2012; similar prayers have been made as made in Writ Petition No.17867/2012 filed by Cellular Operators Association of India and ors.

It was clearly stated by Mr.Gopal Subramanyam, learned Senior Counsel appearing on behalf of Cellular Operators Association of India that though the writ petitions have been filed for quashment of Bye-laws made by the State Government, but the main petition is PIL Petition No.2774/2012 in which all questions are involved.

In the public interest litigation No.2774/2012 which has been preferred by the petitioners-Justice I.S.Israni (Retd.) and Smt.Nirmala Singh, it is submitted that the Central Government as well as the State Government are bound to observe social welfare laws in view of the provisions contained in Article 21 of the Constitution which assures the right to live with human dignity, free from exploitation and health hazard.

It is further averred in the petition that cell phone technology has revolutionized the tele-communication scenario in India; it has grown exponentially in the last decade; there are more than 40-50 crore cell phone users and nearly 4.4 lakh cell phone towers to meet the communication demand; the numbers of cell phones and towers are increasing without giving due respect and credence to its disadvantages; in all over the world,

people have been debating about health risk due to EMF radiation from cell phones and towers; EMF radiation effects are divided into thermal and non-thermal effects; thermal effects are similar to that of cooking in the microwave oven; non-thermal effects are not well defined, but they are 3 to 4 times more harmful than thermal effects.

It is further averred that cell phone transmits 1 to 2 watt of power in the frequency range of 824-849 MHz (CDMA), 890-915 MHz (GSM 900) and 1710-1780 MHz (GSM 1800). It is further averred that in USA, Specific Absorption Rate (SAR) limit for cell phones is 1.6 W/kg which is actually for 6 minutes per day usages; a person should not use cell phone for more than 18 to 24 minutes per day; such information is not furnished to the people in India; crores of people are using cell phones for more than an hour per day without realizing its health hazard.

It is further averred that various cell tower antennas transmit the aforesaid frequency and 3 G technology has also been deployed in which base station antenna transmits in the frequency range of 2110-2170 MHz. It is also stated at bar that now 4G technology has also been deployed.

It is further averred that mobile phone operators divide a region in large number of cells and each cell is divided into number of sectors; the base stations are normally configured to transmit different signals into each of these sectors; majority of towers are mounted near the residential and office buildings to

provide good mobile phone coverage to the users; these towers emit radiation 24x7 so people living within 10 meters of towers will receive ten thousand to one crore times stronger signal than required for mobile communication; crores of people reside within these high radiation zones; mobile companies operate GSM network in all parts of the countries providing 2G or 3 G services depending upon the country of operation; for installing mobile towers, no permission has been sought from any authority and they have been installed in contravention of the law in the house adjoining to plot no.J.54 Prithviraj Road, Jaipur and in the house adjoining to plot no.A-319 Govind Marg, Prince Road, Vidhyut Nagar (West) Ajmer Road, Jaipur; the said towers are the source of harmful and hazardous radiations and becoming a concern for the health and safety of all the residents of the locality; petitioners have filed complaint and also sent notice on 28th November, 2010, but no action has been taken on it; there is imminent danger by emission of harmful radiations; they may cause injury to health and life of people.

It is further averred that communication towers are erected at prominent locations as well as near hospitals and schools; young children are more prone to the electro magnetic radiations as their immune power is far less than a normal adult; the experts say that amount of radiation emitted from these towers in a day, is equivalent to putting one's body in an oven for 19 minutes. It is further submitted that exposure to RF

fields is likely to lead to an increase in cancer, fatigue, sleep disturbances, dizziness, loss of mental attention, reaction times and memory retentiveness, headaches, malaise, tachycardia (heart palpitations) and disturbances to the digestive system; it is also harmful for aged, pregnant women and children; it also causes impotency, cataract, heart disease and affects kidney; petitioners have referred to report of Prof.Girish Kumar, Engineer of IIT Bombay as to radiation norms adopted in different countries. It is further averred on the basis of said report that scientist claimed that radiations emitted from the cellular towers could lead to blood brain barrier, risk to children and pregnant women, irreversible infertility, calcium ion release from cell membranes, DNA damage, effects on stress proteins, effects on skin, tinnitus and ear damage, effects on eye/uveal melanoma, salivary gland tumor, melatonin reduction, sleep disorders, neuro degenerative diseases, increase in cancer risk; epidemiological studies in various countries indicate that there is adverse effect on birds, animals and environment, effect on honey bees, effect on birds, effect on mammals and amphibians, effect on plants; even the organizations like WHO, ICNIRP, FCC etc. have not recommended stricter safe radiation guidelines whereas several countries have adopted EMF radiation norms at much less values based upon their studies.

It is further submitted that cell phone industry is

becoming another cigarette industry, which kept claiming that smoking is not harmful and now there are millions of people who have suffered from smoking; as a matter of fact, cell phone/tower radiation is worst than smoking and its effect on health is noted after a long period of exposure; majority of people are casual towards these aspects; ignorance and non-awareness adds to the misery and they are absorbing the slow poison unknowingly.

It is further submitted that Article 21 of the Constitution assures right to live with human dignity, free from exploitation; State is under constitutional obligation to see that there is no violation of fundamental right of any persons, especially when they belong to weaker sections of the community and unable to battle against the strong and powerful opponent, who is exploiting them; mobile tower companies are unable to protect constitutional and fundamental right of the citizen. It is further submitted that towers in the vicinity should be removed forthwith. Thus, petition has been filed.

In the return filed by the respondent no.1-Union of India Department of Tele-communication, it is contended that radiation from mobile phones and BTSs falls under non-ionizing category which is not considered to be harmful because it cannot break molecular bonds; various studies undertaken by WHO, ICNIRP and other international organizations have shown that there is no direct evidence proving cause effect

relationship between radiation exposure from mobile towers and hazardous effect on human being; WHO in 2006 has concluded that "Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF Signals from base stations and wireless networks caused 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 based stations"; WHO has recommended that "National authorities should adopt international standards to protect their citizens against adverse levels of RF fields. They should restrict access to areas where exposure limits may be exceeded"; WHO has referred to the International Exposure Guidelines developed by International Commission on Non-Ionizing Radiation Protection (ICNIRP); ICNIRP in its report of 1998 has prescribed levels limiting EMF emission from Base Transceiver Stations (BTSs) as safe for general public, details of which have been given in the return.

It is further contended that in India, the cellular GSM services are being operated at 900 MHz and 1800 MHz frequency band; for 900 MHz, permissible power density is 4.5 W/Sqm, whereas for 1800 MHz, permissible power density is 9 W/Sqm. The Government of India has adopted the ICNIRP guidelines for basic restriction and limiting reference levels of electro magnetic radiation from mobile towers; vide letter dated 8th

April, 2010 (Annex.R/1/1 to the return), DoT has directed all CMTS/UAS licensees to make compliance of the reference limits/levels prescribed by ICNIRP by way of self certification of their Base Transmitting Stations (BTS) for meeting the EMF radiation norms.

It is further contended that if the site fails to meet the EMF radiation criterion, there is provision of levying a penalty of Rs.5 lakhs per BTS per service provider; service providers must meet the criterion within one month of the report of TERM cell in such cases, after which the site will be shut down.

It is further contended that with respect to EMF radiation from mobile handsets, ICNIRP has prescribed the values for Specific Absorption Rate (SAR); DoT vide letter dated 1.9.2008 (Annex.1/2 to the return) has 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 localised for head and trunk in the frequency range of 10 MHz to 10 Ghz; laboratory has been set up for testing of SAR value of mobile handsets imported/manufactured in India.

It is further contended that considering the media reports and public concerns, an Inter-Ministerial Committee (IMC) consisting of officers from DoT, Indian Council of Medical Research (Ministry of Health), Department of Biotechnology and Ministry of Environment and Forest was constituted on 24.8.2010 to examine the effect of EMF Radiation from base

stations and mobile phones. The said Inter-ministerial Committee has examined the environmental and health related concerns and adjudicated 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 phones is not known yet with certainty.

It is further contended that the Inter-ministerial Committee has examined 90 international and national studies/reference papers related with the EMF radiation before finalizing the report. The recommendations made by the Inter-ministerial Committee have been "accepted" and issued vide letter dated 17.11.2011, a copy of which has been filed as Annexure R/1/3 to the return. The action has been taken by DoT for implementation of the recommendations of the Inter-Ministerial Committee; norms for exposure limit for the Radio Frequency Field (Base Station Emissions) has been reduced to 1/10th of the existing limits prescribed by ICNIRP and directions in this regard has been issued to Mobile Operators vide letter dated 30.12.2011 (Annex.R/1/4 to the return); these directions are effective from 1.4.2012; RF network is required to be readjusted to meet the quality of services parameters; the effects of revised EMF exposure limit, if any, on wider exclusion zone and reduction in mobile coverage area are being examined

by DoT; the date of implementation of reduced EMF norms has now been extended to 1.9.2012 and letter in this regard has been issued on 10.4.2012, a copy of same has been filed as Annex.R/1/5 to the return. SAR level for mobile handset has been revised from 2 watt per kg. to 1.6 watt per kg. and directions in this regard including other recommendations related to mobile handset have been issued to mobile handset manufacturers vide letter dated 25.1.2012 (Annex.R/1/6 to the return). The other recommendations made by IMC vide letter dated 17.11.2011 are also under process of implementation.

It is further submitted that for implementation of some of the other recommendations made by IMC, a Committee was constituted in DoT to examine the issues relating to mobile base station towers on the following aspects:

"(i) Uniform guidelines on setting up of BTS towers.

(ii) Structural safety for towers on roof-tops.

(iii) Identification of location for installation of mobile towers in master plan.

(iv) In building solutions for the future expansion of telecom network in the country."

The said Committee has submitted its report on 31.5.2012 and the recommendations of the Committee have been placed on the DoT website for comments of the stake holders by 16.8.2012. It is further contended that some of the salient recommendations of the Committee are as follows:

"(i) Installation of base station antennas within the premises of schools and hospitals may be avoided in future installations because children and patients may likely to be more susceptible to electro-magnetic fields. Indoor building solution of low wattage may be deployed.

(ii) Base station antennas to be away from nearby buildings and above the ground and roof to ensure compliance to the prevailing radiation limits.

(iii) Access to base station antenna site to be prohibited for general public by suitable means such as wire fencing, locking of the door to the roof etc.

(iv) The traditional BTSs are to be augmented with micro, pico and femto cellular solutions for better and ubiquitous mobile coverage."

It is further submitted that after finalization and acceptance of the recommendations of the Committee, guidelines shall be forwarded to all the State Governments.

It is further submitted that WHO in its fact sheet no.193 of June 2011 has stated to conduct a formal risk assessment of all studied health outcomes from radio frequency fields exposure by 2012. The sitting clearance (SACFA Clearance) is issued by WPC from the point of view of interference with other wireless users, aviation hazards and obstruction to any other existing microwave links. Various departments are members of SACFA. It is significant to mention that the sitting clearance

(SACFA Clearance) is issued by WPC without prejudice to applicable bye-laws, rules and regulations of "local bodies such as Municipal Corporation/Gram Panchayat etc." Accordingly, the telecom service providers have to obtain the necessary permission from the concerned local authorities/municipal corporation/Gram Panchayat etc. for installation of tower.

It is further submitted that instances have been seen that use of mobile phones has been prohibited in hospitals, however, that prohibition is to reduce the risk of interference with electro medical equipments/implants in hospitals/patients. Some of the airlines also announce for not using the mobile phones while take off and landing, which is to avoid the interference with navigational systems. These restrictions/prohibitions have nothing to do with the effect of radiation on human health or patients or children. The immune power of children is nothing to do with electro magnetic radiation from mobile phone tower. There is no scientific evidence as on date which proves that EMF radiation from mobile BTS are harmful for children/patients.

It is further submitted that TERM Cells test upto 10% of BTS sites randomly at their discretion; the testing is done as per procedure prescribed by Telecommunication Engineering Centre (TEC) for which instrument is provided by service providers and fee of Rs.10,000/- is prescribed. There is no positive material to establish the averment that EMF radiation is harmful and

causes various life threatening diseases.

With respect to manufacturer's mobile handset booklet, it is submitted in the return that following safety precautions have to be taken:-

"a. Use a wireless hands-free system with a low power bluetooth emitter.

b. Make sure the cell phone has a low SAR.

c. Keep your calls short or send a text message (SMS) instead. This advice applies especially to children, adolescents and pregnant women.

d. Use cell phone when the signal quality is good.

e. People having active medical implants should preferably keep the cell phone at least 15 cm away from the implant.

VIII. List of SAR values of different mobile phones shall be uploaded on DoT/TEC website."

It is further contended that if the site fails to meet the EMF radiation criterion on testing, there is a provision for levying a penalty. Effect of emission from cell phone towers is not known yet with certainty.

The respondent no.21-Cellular Operators Association of India has filed counter affidavit supporting the stand taken by DoT and additionally contending that Electro Magnetic Fields (EMF) produced from the mobile handsets and BTS are relatively low end of electro magnetic spectrum and are non-ionizing

radiation i.e. the energy carried by them are unable to break chemical bonds in molecules; it has also been stated by WHO in its fact sheet no.193 of 2011 that radio frequency waves are electromagnetic fields and unlike ionizing radiation such as X-rays or gamma rays, can neither break chemical bonds nor cause ionization in the human body; reliance has also been placed on the fact sheet of WHO of May 2006 to contend that the level of RF exposure from base stations and wireless networks are so low that the temperature increases are insignificant and does not affect human health; strength of RF fields is greatest at its source and diminishes quickly with distance; RF exposure is below international standards; radio and television broadcast stations have been in operation for the past 50 or more years without any adverse health consequences being established; media or anecdotal reports of cancer cluster around mobile phone base stations have heightened public concern; such cluster cancers are found merely by chance near mobile base stations; reported cancers in these clusters are often a collection of different types of cancer with no common characteristics and hence unlikely to have a common cause; the reports in this regard have been placed on record as Annex.R/1 to the counter affidavit.

It was further contended that recently international health conference was organized by the Associated Chambers of Commerce and Industry of India (ASSOCHAM) in collaboration

with the Ministry of Science and Technology and Ministry of Environment and Forests, Government of India on 8.2.2012 in which several experts participated and they were of the view that the existing limits of emissions recommended and endorsed by global bodies are designed to protect against all established adverse effects in human beings associated with Radio Frequency (RF) exposure and that no adverse health effects have been confirmed below the current international RF Safety Guidelines or exposure standards; DoT has also issued Press Note regarding limits and within the limits, there is no health hazards from EMF radiation from mobile towers; standards prescribed are being observed and in case of violation, penalty is provided and even license can be revoked. The Press Note has been placed on record as Annex.R/3.

It has been further contended that Union of India has set up an Inter Ministerial Committee which has submitted the report and the DoT vide communication dated 17.11.2011 accepted the said report of the Committee and decided to lower exposure limit for the Radio Frequency Field (Base Station Emissions) to 1/10th of the existing exposure level and norms have been applied with effect from 1.9.2012. It has been further contended that none of the studies undertaken by WHO and other international organizations have correlated radiation from the mobile towers with harmful effect on public using mobile phones as well as residing near mobile towers;

level of EMF radiation from the towers is less than prescribed limits and thus, there is no danger; the issues raised as to health by certain sections of society had no scientific basis; causing of any diseases from EMF radiation has been denied; functioning of the mobile towers and mobiles have been detailed; towers are erected to provide sufficient height to the antenna installed in order to provide uninterrupted communication through out the licensed service area which is necessary to be observed; as number of users increase and their need for mobile communications results in higher traffic, it call for the increase in number of cells sites/BTSs/BSCs etc. thus increasing their density; communication dated 4.7.2012 issued by the Director of Education directing that mobile towers installed on roof tops of State/private schools be removed is not only arbitrary and whimsical but is also beyond jurisdiction and illegal; it is internal departmental communication between Education Department and State Government; the Dy.Secretary of the State Government had no jurisdiction to pass any order affecting tele-communication services which is subject matter covered by Entry 31 of List-I of Seventh Schedule of the Constitution; under the provisions of the Indian Telegraph Act, 1885 (hereinafter referred to as "the Telegraph Act"), it is within the exclusive domain of the Central Government to frame the rules governing the conditions and restrictions subject to which any telegraph line, appliance or apparatus for

telegraphic communication shall be established, maintained, worked, repaired, transferred, shifted, withdrawn or disconnected; there is causative relationship between increase in tele-communication penetration and GDP growth.

Additional affidavit has been filed by the respondent no.21 Cellular Operators Association of India contending that information sharing and e-learning is necessary; most of the calls of mobiles come from mobile phones; cell radius generally varies from 0.3 to 15 km depending upon typology of surrounding structures and the subscriber density; every BTS has a particular call handling capacity; service providers are under obligation to provide a minimum of 90% coverage and ensure a high quality service; standards prescribed by IEEE and ICNIRP have been relied upon; WHO in response to the query sent by Municipal Corporation of Delhi has also indicated that the level of RF exposure from base stations and wireless networks does not affect human health and hence, there is no harm health hazard as apprehended; various other reports have also been referred to in the additional affidavit; experts in the conference organized by the Associated Chambers of Commerce and Industry of India (ASSOCHAM) opined that reduction in limits to levels that are not based on scientific evidence would be arbitrary and unjustified; reduction in limits below prescribed norms, leads to increased proliferation of towers which can increase rather than allay concern; reduction in

emission levels from mobile towers will in some places result in a corresponding increase in emissions from mobile handsets; reduced limits from mobile towers will mean reduced power and will affect the level of service of customers; lower limits will, in urban areas, lead to a need for more towers, to ensure seamless service and could increase the overall EMF in the environment; this will also adversely impact the sharing of towers; copy of key messages and compendium of presentations have been filed by the respondent no.21 as Annexure-L to the additional affidavit; there are references made to other research works; report of Prof.Girish Kumar cannot be relied upon for the various reasons; he is misguiding the public at large with his so called studies, which is not based on scientific basis; even the State of Rajasthan appointed a Committee on 21.5.2012 in relation to mobile towers, a copy of which has been filed as Annexure-X to the additional affidavit; representatives of Cellular and Mobile Companies have been included as members of the Committee merely to ensure observance of principles of natural justice but as a matter of fact, the Committee refused to take into consideration their views and even final report of the Committee has not been shared with the Cellular Operators and /or the members of the Committee who had represented the Cellular Industry; there is no justification to prohibit installation of mobile towers/antennas in schools, colleges, play grounds and

hospitals as the EMF limits prescribed by international standard bodies and endorsed by WHO are safe for all segments of population including children and there is no convincing evidence that RF field exposure below guideline level causes health effects in adults or children; prohibition of mobile tower within 500 meters of jail premises is also arbitrary and unreasonable; jammers have already been installed for restricting the mobile connectivity within the jail premises; there is no reason why such mobile connectivity be prohibited in the adjoining locations and population living near the vicinity of jails be denied the right to coverage and connectivity, therefore, the conditions in the Bye-laws which have been framed by the State Government are arbitrary and illegal and liable to be set aside; neither the Dy.Director, Secondary Education, Rajasthan Bikaner nor the Rajasthan State Child Protection and Welfare Board shall have the jurisdiction to pass any order affecting tele-communication services which is a central subject covered under Entry 31 of List-I of Seventh Schedule of Constitution; reliance has also been placed on the provisions of the Telegraph Act.

It is further contended in the additional affidavit that Telecom Regulatory Authority of India (TRAI) is an expert body which has to carry out study and recommend not only the type of equipment to be used by the service providers but also to lay down standards of quality of service to be provided by the

service providers; there has to be balance that would have been drawn between two aspects as each restriction that is put on the technology would necessarily have an adverse effect on the quality of service; the State Government is not an expert and cannot usurp the function and power of the Union of India; there is encroachment on the power of TRAI by the State Government.

It is further contended that the petitioners have relied upon advisory dated 9.8.2012 issued by the Ministry of Environment and Forest (MOEF); the same is advisory and not enforceable in nature; in view of the WHO information sheet of Feb.2006, it cannot be relied upon.

Return has been filed by respondent no.9 M/s Tata Tele ervices Limited; similar stand has been taken.

Return has been filed by respondent no.11 M/s Sistema Shyam Tele services Ltd. in which in addition to what has been stated by the DoT and COAI, it has been submitted that respondent no.11 is carrying the business within the ambit of Rules and Regulations framed by the Central Government from time to time; Section 10 of the Telegraph Act has been relied upon; the policy decisions taken by the Board of Infrastructure Development & Investment (BIDI), Government of Rajasthan on 6.6.2000 and 20.7.2002 have been relied upon with the rider that they should obtain approval of Air Traffic Controller and Airport Authority of India; they shall be solely responsible for

any damage to the building and for public safety; they shall take special precautions for fire safety and lightening etc. As per TRAI, there is no conclusive evidence of health hazard; other facts have also been denied.

In the return filed by the respondents nos.18 & 19-ATC India Tower Corporation Pvt.Ltd. it is contended that they are engaged in the business of providing of Passive Telecom Site Infrastructure Service termed as "Infrastructure Service" to cellular mobile telephone operators and other licensed telecom operators in India and to establish and maintain the passive infrastructures for telecom services to be provided by mobile service providers who have been licensed under section 4 of the Telegraph Act; the services provided by them are covered under the Essential Services Maintenance Act, 1968; the location of towers/antennas may vary within a distance of 100 to 200 meters from one another based on actual availability of sites and the sites fall in commercial, semi commercial, residential and government/controlled areas; in case any restrictions are imposed on the locations for installation of antennas, answering respondents will not be able to provide quality service to the customers; towers are basic infrastructure which are required; Central Government has framed rules under section 7 of the Telegraph Act; reliance has been placed on Section 10 of the Telegraph Act and other provisions thereof.

The Rajasthan State Pollution Control Board-respondent

no.4 in its return contended that it does not have power to regulate or control electromagnetic radiations arising from the mobile towers; operation of the DG set attached to the tower could cause air and noise pollution which is to be taken care of by the Board; it has to control air and noise pollution which may cause by DG sets attached to mobile tower; consent has been granted subject to certain riders as to pollution; rest of the subject matter is not related to the Board.

In the return filed by the respondent no.15 M/s VIOM Networks Ltd. earlier named as M/s Wireless TT Info Services Ltd. it is contended that they are registered as Infrastructure Service Provider Category-I to establish and erect Infrastructure for the Mobile Cellular operators for operating telecommunication network infrastructure support services; they provide structural infrastructure of mobile towers/radio base stations to the mobile service providers; there cannot be any restriction on installation of antennas on the schools or hospitals or densely populated areas; such restriction cannot be sustained; EMF radiation produced from mobile handsets and BTS are low and does not cause harm to the human body; other averments have also been denied.

The respondent no.13 Vodafone Digilink Limited has also filed return; it has relied upon the provisions of the Telecom Regulatory Authority of India Act, 1997 (hereinafter referred to as “the Act of 1997”); TRAI has to make recommendations

under section 11(1)(a) of the Act of 1997; DoT has constituted a Committee on 30.3.2012 to examine the issues relating mobile based towers and to evolve uniform guidelines on setting up of BTS towers; structural safety for towers on roof-tops; identification of location for installation of mobile towers in master plan; the stakeholders have submitted their comments with the DoT. Thus, it is not for the State Government to make interference in the matter; other facts have also been denied in the return.

The respondent no.12 M/s Idea Cellular Limited has filed return adopting the reply filed by the Cellular Operators Association of India.

The State of Rajasthan and its instrumentalities-respondents nos.2, 3, 5 and 7 in their return have submitted that though Union of India is empowered to make laws in regard to telephones and other means of communication, as per Entry 31 of List-I of Seventh Schedule, but the State Government can also frame Bye-laws keeping in view the public health as regard to the public nuisance and placement of towers; the State Government constituted a Committee vide order dated 21.5.2012 for suggesting regulations/bye-laws, a copy of which has been placed on record as Annex.R-2/1 to the return; the Committee submitted its recommendations and after considering the recommendations and suggestions of the Committee and other materials, the State Government framed

the Bye-laws prohibiting installation of mobile towers on schools/colleges, play grounds, hospitals and places with 500 meters vicinity from jail premises, a copy of Bye-laws has been placed on record as Annex.R/2/3 to the return; the Bye-laws, which have been framed, were made applicable to all the local bodies, municipalities, municipal corporation, municipal councils and municipal boards and directions were issued to them that in case bye-laws have already been framed by any of them, the same be amended or after repealing the same, new bye-laws' in terms of model bye-laws framed by the State of Rajasthan be framed and till new bye-laws are framed, the model bye-laws framed by the State of Rajasthan be taken as policy decision. It was further submitted that with effect from 1.9.2012, the Central Government has also reduced the EMF radiation permissible limit of mobile towers by 90%; the DoT has also issued instructions on mobile towers and handsets and the same has been placed on record as Annex.R/2/4 to the return; the EMF radiation level by mobile towers is within the exclusive domain of Central Government and the Central Government has Telcom Enforcement, Resource and Monitoring (TERM) Cells in the State capitals to check the radiation emitted by the mobile towers; the functions of TERM Cells have been defined as mentioned in Annex.R-2/5 to the return; the State of Rajasthan has taken suitable steps to protect the life and limb of the citizens & residents of Rajasthan.

In the return filed by the respondent no.16-GTL Infrastructure Ltd., in addition to what has been stated by Cellular Operators Association of India and DoT and other contesting respondents, it was submitted that Indian Mobile Industry is a major contributor to the social and economic growth of the country; there is exponential growth of mobile subscribers; in case EMF radiation is kept within limit, there is no health hazard; there is economic policy issued; question of proportionality is also involved; development cannot be hampered; National Telecom Policy, 1999 and TRAI recommendations on infrastructure sharing have also been relied upon; with respect to environmental hazard, there is no conclusive evidence; the decision of Kerala High Court has been relied upon; persons standing directly in front of the antenna in high density zones will get higher exposures; there are two types of effects of electro magnetic waves; thermal and non-thermal, which includes electro physiological behavioural effects; these can be sleep disorders, cognitive disorders, memory disturbances, hearing disorders etc.; subjective symptoms such as sleep disorders, cognitive disorders, memory disturbances, hearing disorders etc. have been reported, however, the studies pertaining to base stations conducted by Santini R et al (2002), Bortkiewicz et al (2004) and Hutter & Kundi et al (2006) do not report any quantitative parameters related to health hazards; more objective research is needed

to quantify the effect on human health; National Authorities should adopt international standards as per WHO; the Committee, which was constituted, on the basis of the above findings, recommended that precautionary approach should be adopted; various datas have been referred to.

The respondent no.17-M/s Tower Vision India Private Limited in its return has taken similar stand as taken by the other contesting respondents; they are following the norms prescribed by ICNIRP and working within the parameters of the Environment Protection Rules, 2002; the answering respondent has filed Registration Certificate For Infrastructure Provider Category-I (IP-I) as Annex.1.

In the return filed by Tower and infrastructure Providers Association, in addition to the submissions made by other contesting respondents, it was contended that the answering respondent-Association was formed to promote, encourage and engage in such scientific and educational activities which lead to healthy growth of telecom infrastructure services; to ensure achievement of national goals in the telecommunication field; to maintain a forum for networking, collaboration and business development and other allied fields; location of towers is based on scientific survey requirements so as to provide appropriate signal strength to ensure proper connectivity in the areas; such matter does not require any interference by this Court as it is reserved for experts; the members of the answering

respondent-Association are different from service providers, they are called "infrastructure providers"; there is not much flexibility available as regards the location and number of BTSs/BSCs etc.; subscribers call from network area to another; continuous connectivity has to be ensured; considering the nature of emergent services rendered in hospital, better network services are necessary so as to ensure proper connectivity; any restriction of installation of mobile towers on roof tops of schools, hospitals, play grounds, densely populated areas etc. cannot be sustained being arbitrary; reliance has been placed on the decisions of Kerala High Court.

D.B.PIL Petition No.8697/2012
Pearl Green Acres Owners Welfare & Maintenance Society V/s Union of India & Ors.

In the said writ petition, the petitioner-Pearl Green Acres Owners Welfare & Maintenance Society has prayed that respondent no.7- M/s A.T.C. Limited be directed not to raise construction or erect the mobile tower on the land khasra no.168, Mangyabas, Tehsil Sanganer, Mahesh Nagar, Jaipur; prayer has also been made that respondents-authorities be directed not to issue any license in favour of respondent no.7 for erecting mobile tower and operation and installation of Base Station Antennas in the residential area should not be granted.

It is averred in petition that Article 21 of the Constitution assures the right to live with human dignity, free from

exploitation; the State is under constitutional obligation to ensure that there is no violation of the fundamental right of any person, particularly when he belongs to the weaker section of the community and is unable to wage a legal battle against the strong and powerful opponent who is exploiting him. The mobile towers erected at prominent location nearby residential buildings are harmful and will cause injury to the residents as well as buildings and it will also adversely affect the life of public.

A return has been filed by the respondent no.7 M/s A.T.C. Limited contending inter-alia that location of telecom towers is based on scientific survey and on requirement such as strength of signal and connectivity by mobile phone user; non-adherence to the said network design will amount to non-adherence to quality standard parameters for which the Company is liable to DoT as well as TRAI; it will not be possible for the company to provide quality service to customers because of restrictions, if any, on location for installation of antenna and tower; similar grounds have been raised as taken by the other contesting respondents in similar petitions.

Apart from this, it was submitted by Shri Ravi Chirania, learned counsel appearing on behalf of respondent no.7 that the petitioner in petition no.8697/2012 has earlier filed civil suit and thereafter, withdrawn the same and then filed the present petition and thus, it was not maintainable.

D.B.Civil Writ Petition No.17867/2012
Cellular Operators Association of India and ors. V/s State of Rajasthan & ors.

In the said writ petition filed by the Cellular Operators Association of India, it is averred that the Bye-laws framed by the State Government on 31.8.2012 and order dated 4.7.2012 issued by the Dy.Director (Secondary), Secondary Education, Rajasthan, Bikaner are bad in law; procedure for framing bye-laws has not been following as provided in the Municipalities Act, 2009 (hereinafter referred to as "the Act of 2009"); during pendency of PIL, it was not appropriate to issue directions; telecom is central subject as per entry 31 of List I of Seventh Schedule of the Constitution; provisions of Telegraph Act and Indian Wireless Telegraphy Act, 1933 have been relied upon.

It is further submitted that TRAI is expert statutory authority under the Telecom Regulatory Authority of India Act, 1997; its powers and functions have been defined in Section 11 of the Act of 1997; if any restriction is imposed by the State Government that will have adverse effect upon the recommendations made by the TRAI with respect to quality of service; attempt has been made by the State Government to encroach upon the power conferred upon TRAI under section 11 of the Act of 1997; licensee requires provision for coverage, connectivity and seamless service, as such, if towers are removed from particular place, it would result in violation of condition of license granted under the provisions of the

Telegraph Act.

It is further submitted in petition that telecom is an important tool for economic growth; similarly it has been explained as to how mobile service operates; it is further submitted that objective of National Telecom Policy is to deliver world class infrastructure at affordable prices and thus, no further riders can be put considering the affordable prices, that is one of the considerations for handling infrastructure and consumer interest; India is becoming IT superpower as well as to provide a balance between the provision of universal service to all uncovered areas including the rural area and the provisions of high level services capable of meeting the needs of country's economy.

It is further submitted in petition that the mobile towers are the backbone of mobile network; for maintenance of quality of service, it is imperative for the Cellular Operators to install tower at various places within the service area. Thus, there cannot be any restriction where they cannot be placed. It is further submitted that the State Government recognizes the importance of mobile towers; decision of BIDI taken in 2003 has been referred to; other earlier decisions of BIDI have also been relied upon.

It is further submitted in petition that no health hazard as alleged from EMF radiation would be caused; reports of harmful effects of radiation emitted by the mobile towers are wholly

misconceived; India has adopted WHO endorsed EMF exposure limits in 2008; Inter-Ministerial Committee recommended and Government accepted lower EMF limits on precautionary basis; report of Inter-Ministerial Committee indicates that there is no conclusive scientific evidence of ill-effects of EMF radiation on human health; uniform guidelines for installation of towers are being formulated by the Central Government; model Bye-laws formulated by the State Government are illegal, impinge upon the power of the Central Government and run contrary to the Central guidelines; they are issued in a non-transparent manner disregarding views of stake holders; they have not been published in the official gazettee; they seek to impose exorbitant and disproportionate fees; they are impracticable, unreasonable and arbitrary; if Bye-laws are introduced, it will result in various problems in practical implementation and will affect the entire network; once EMF limits have been laid down and public access is restricted, the need to additionally and separately prescribe safe distance is unfair, unjustified and incorrect; requirement of minimum width of road and area of the building is also unreasonable and arbitrary; many localities in Rajasthan are congested and do not have 30 feet roads; condition of term of license as 5 years is also unreasonable; there is arbitrary and uncanalized power to order removal of mobile tower/antenna; there cannot be any restriction to install antenna and tower in schools, colleges, hospitals, play

grounds etc.; the circular dated 4.7.2012 issued by the Dy.Director(Seconday), Secondary Education, Rajasthan, Bikaner is also without jurisdiction; Bye-laws are contrary to Section 340 of the Act of 2009; unreasonable restriction has been imposed to carry on business; they are violative of Article 19(1)(g) of the Constitution and the Act of 2009; other grounds are similar as raised in the PIL.

In the return filed by the State of Rajasthan (respondents no.1 and 2), it is contended that Entry-31 of List I of the Seventh Schedule of the Constitution does not come in the way nor the provisions of the Telegraph Act; Telegraph Authority cannot exercise the powers in respect of those properties which are under the control and management of local authority without seeking permission from the said local authority; Rajasthan Municipalities Act, 2009 confers power upon the State Government and Municipalities with respect to building as defined in section 2(a) of the Act of 2009; Section 340 of the Act of 2009 confers power to frame Bye-laws; State Government has power to issue requisite directions for framing of Bye-laws and can also issue orders; installation of tower at a particular place is within the domain of local authority of the State; in the matter of health, public safety, inconvenience etc., State can regulate installation of towers; reasonable condition can be imposed and it does not amount to encroaching upon the central subject and transgressing the

provisions of the Telegraph Act. Reliance has been placed upon the decision of the Apex Court in *State of West Bengal V/s Porvi Communication Pvt.Ltd.* ((2005) 3 SCC 711) to contend that Cable Television Networks (Regulation) Act 1995 did not fetter the legislature power or competence of the State to levy tax on luxuries including taxes among entertainment, betting and gambling falling under the State List.

It is further submitted by State in its return that no person has right to seek installation of tower at any particular place; it can be subject to reasonable restriction; there is no over lapping in jurisdiction of TRAI and State Government and its instrumentalities.

Additional affidavit has been filed by the Cellular Operators Association of India to bring on record certain subsequent developments; this Court has not passed any order for removal of towers as reflected in the communication Annex.-A; under the statement recorded in order, notification has been issued for removal of tower from the hospital etc.; certain electricity connections have been disconnected; the action taken by the State Government is contrary to the guidelines and policy issued by the Central Government; certain communications inter-se State Government as well as Government of India have been placed on record with respect to interpretation of policy and guidelines framed by the State Government with respect to which Shri Gopal Subramanyam,

learned Senior Counsel appearing on behalf of COAI has clearly submitted that it would be better to decide the matter by looking at the policy decisions only and he has fairly submitted that the court need not go into the correctness of the administrative communications which have been issued between various authorities of the Central Government and the State Government as to interpretation of policies.

D.B.Civil Writ Petition No.18304/2012
Association of Unified Telecom Services Providers of India & ors. V/s State of Rajasthan & Ors.

In the said writ petition filed by the Association of Unified Telecom Services Providers of India, validity of the Bye-laws framed by the State Government on 31.8.2012 has been questioned and similar grounds and prayers have been made as in writ petition no.17867/2012 filed by COAI.

In the public interest litigation, an application has been filed by Shri Sudhir Kasliwal that his two brothers Pramod Kasliwal and Sanjay Kasliwal suffered brain tumor due to EMF radiation and one brother Pramod Kasliwal unfortunately died but another brother is still suffering from brain tumor.

We are not narrating the facts in detail as it was clearly submitted by Shri Gopal Subramanyam appearing on behalf of COAI that COAI will look into the grievance raised in the application, as such, we are not deciding the said application and keeping it alive. Let the application be separated from the petition and listed alongwith S.B.Civil Writ Petition No.2666/12

Sudhir Kasliwal V/s State.

There are various communications which have been received by this Court complaining of difficulties being faced by various citizens due to mobile towers; several of such complaints, which have been received, are placed on the record of public interest litigation.

Submissions

Mr.Rajendra Soni, Mr.Prateek Kasliwal, Mr.Tanveer Ahmed and Mr.Vinayak Joshi, learned counsel appearing on behalf of the petitioners submitted that recommendations made by the Inter-Ministerial Committee clearly prohibit the installation of mobile towers at schools, colleges, hospitals, densely populated area, play grounds etc.; the report of the Inter-Ministerial Committee has been accepted by the Government of India; DoT has also nowhere disagreed with the report; MOEF has also issued advisory on the basis of the report of Inter-Ministerial Committee which prohibits the installation of the mobile towers at places like schools, colleges, hospitals, densely populated areas etc.' the State Government has formed Committee in which members of Operators/Infrastructure Providers have participated and thereafter, the State Government has framed the Model Bye-laws and has directed the Municipal Councils/Municipal Boards/Municipal Corporations to adopt the same and frame the bye-laws and till such time bye-laws are framed, model Bye-laws are to be taken as policy

of the State to be complied with by all of them.

It was further submitted that Inter-Ministerial Committee in its report has referred to various reports indicating that in case of higher EMF radiation level, it will cause health hazard and likely to cause cancer, fatigue, sleep disturbances, dizziness, loss of mental attention, reaction times and memory retentiveness, headaches, malaise, tachycardia (heart palpitations) and disturbances to the digestive system; it is also harmful for aged, pregnant women and children;

The learned counsel for the petitioners have placed reliance on the judgment dated 4th February 2009 of Versailles Court of Appeal, French Republic In the name of the French People in which considering the various decisions, directions have been issued to remove the transmission station and not only to make payment of compensation, but company has been sentenced to pay seven thousand euros in compensation for the psychological distress caused to them and after a period of four months counting from the announcement of the decision, the penalty that accompanies the sentence to remove the installation pronounced by the Crown Court is fixed at a sum of five hundred euros per day of delay' in addition, company was sentenced to pay to the respondents the sum of six thousand euros in accordance with article 700 of the code of civil procedure.

Reliance has been placed by the learned counsel for the

petitioners on the decision of the Italian Supreme Court dated 12.10.2012 in ICEMS Vs ICNIRP; Hardell vs Interphone where compensation has been granted to incumbent due to suffering with brain tumor; the Italian Supreme Court affirmed the tumor risk from long term use of a cell phone.

It was further submitted by the learned counsel for the petitioners that reports which have been filed and relied upon by the Cellular Operators Association of India and other Infrastructure Service Providers simply lay down conditionally that in case EMF radiation level is kept below the level prescribed, there is no confirming studies that it would cause health hazard; studies are not conclusive to negate even with respect health hazard being caused by low level EMF radiation. They have relied upon the Inter-Ministerial Report to contend that in case radiation level is kept higher, in case there is violation of norms and as there is no continuous monitoring available so as to find out whether EMF radiation level is being kept at the prescribed level; even for checking of 10% done by TERM, instrument is provided by the service providers for which fee of Rs.10,000/- has been provided; merely because penalty of Rs.5 lacs and closing down of service after one month in case of non-compliance is provided, it cannot be said to be enough to set at naught precautionary approach in case of violation, even otherwise EMF radiation is adversely affecting the human beings and in some of the hospitals also, use of mobile phone

has been stopped; imposition of fine and cancellation of license cannot be said to be enough; no right can be claimed by the service providers to install the towers and antenna at the place of their choice; there can be regulation to provide a place where towers can be installed; mobile towers and antennas are dangerous as the safeguards which have been laid down, are by and large not being followed and people are not informed of them and level of EMF radiation is more near the antennas and thus, the State Government has rightly decided by enacting Bye-laws as a precautionary approach not to install tower on schools, colleges, hospitals, play grounds and within 500 meters from jail premises; several crimes are being committed from jail by using mobile phones for which separate PIL is pending before this Court; crimes from jail have been recently reported at Jodhpur as well as Ajmer by using mobile phones; jammers are not working effectively; they are not successful to prohibit use of mobile by accused from jail premises and thus, the State Government has rightly taken the decision to remove the towers within vicinity of 500 meters from jail premises; the decision has been taken to ensure safety, prevention of crimes and law and order; Bye-laws have been framed considering the health hazard being caused by EMF radiation from mobile towers and thus, they are in public interest.

The learned counsel for the petitioners have also

submitted that inbuilt facility can be provided in the hospital etc. without providing tower as is being done by five star hotels etc. where tower is not being raised; they have also submitted that in Singapore, mobile towers are not being erected and new technology has been developed, whereas in India, the technology used is obsolete one.

It was also submitted by the learned counsel for the petitioners that with respect to mobile phones also, the directions, which have been issued, are not being complied with nor the efforts are being made by the respondents to educate the people with respect to risk of using the mobile for more than prescribed limit as well as with respect to tower and antennas. Thus, proper directions need to be issued by this Court. No case is made out so as to interfere with the Bye-laws framed by the State Government.

Mr.Arvind Kumar Arora, Sandeep Taneja, Kapil Gupta, Amod Kasliwal, Ram Kishan Sharma, Mahesh Gupta and Ajay Tyagi, learned counsel appearing on behalf of the intervenors have supported the petitioners.

Mr.Gopal Subramanyam, learned Senior Counsel with Mr.Naveen Chawla, Mr.Devansh Mohta, Mr.Ravi Chirania and Mr.Sandeep Singh Shekhawat appearing on behalf of Cellular Operators Association of India has submitted that the Bye-laws framed by the State Government are illegal; procedure for framing such Bye-laws has not been adhered to; similar PIL

being Writ Petition (Civil) No.453 of 2012 *Centre of Public Interest Litigation V/s Union of India* was filed before the Hon'ble Supreme Court raising similar grounds of health concerns from radiation emitted by the mobile antennas/towers and the Hon'ble Supreme Court was pleased to dismiss the said petition vide order dated 1.11.2012; though learned Senior Counsel has conceded that it is not res judicata for a petition under Article 226 of the Constitution, but at the same time when radiation level has been reduced, no case for interference is made out at this stage.

Mr.Gopal Subramanyam, learned Senior Counsel has further submitted with regard to allegation of health hazard, the electro magnetic spectrum can be divided into two parts; non-ionizing and ionizing. Non-ionizing part cannot lead to tissue damage whereas ionizing radiation can cause cancer. The learned Senior Counsel has relied upon ICNIRP report recognized by WHO consisting of experts and standards laid down for EMF radiation are being followed globally; he has heavily relied upon the level of EMF radiation prescribed by WHO and observations made by it in the fact sheets of December, 2005 and May, 2006 and submitted that the level of RF exposure from base stations and wireless networks are so low which does not in any manner affect human health; as per WHO, recent survey indicated that EMF radiation exposures from base stations and wireless technologies in publicly accessible areas including schools and

hospitals are normally thousands of times below international standards. The learned Senior Counsel has also relied upon various other reports which will be discussed later on laying down in case EMF radiation level is kept at the level below the prescribed limit, it would not cause any health hazard, however, if EMF radiation level is higher than prescribed limit, it is not disputed that it may cause damage to the health.

The report of Prof.Girish Kumar cannot be relied upon as it is not based on any scientific studies, it is procured; he has misguided the public at large for vested interest; he was having interest in the company-NESA in which his daughter Ms.Neha is proprietor/partner. Hence, no reliance can be placed on the report of Prof.Girish Kumar.

The Inter-Ministerial Committee recommended lowering the emission norms for mobile towers to 1/10th of the limits presently in force, however, the said reduction was not recommended on any scientific basis, rather the measures were recommended for building public confidence. Merely to build public confidence and without any scientific reason, the Inter Ministerial Committee recommended imposition of restrictions on installation of mobile towers near high density residential areas, schools, playgrounds and hospitals. It was further submitted that the Government of India did not accept the recommendation and DoT has issued fresh guidelines reducing emission level standards to be met by mobile towers. He has

relied upon various decisions and submitted that there was no reason for the State Government to frame the impugned Bye-laws prohibiting installation of towers on schools, colleges, playgrounds, hospitals etc. as there was no material before the State Government to frame the impugned Bye-laws; counsel has also adversely commented upon the communication of MOEF dated 9.8.2012, such advisory cannot be said to be binding; Ministry of Communication has responded to the said advisory vide letter dated 3.10.2012 and cleared the doubts raised by MOEF.

The learned Senior Counsel has also questioned the legality of the communication dated 4.7.2012 issued by the Dy.Director (Secondary), Secondary Education, Rajasthan, Bikaner and also questioned letter dated 16.5.2012 issued by the Rajasthan State Child Welfare and Protection Commission contending that they are illegal and without jurisdiction; they have no competence to pass any order in such matter which is reserved under Entry 31 List I of Seventh Schedule of the Constitution. He has relied upon the provisions of the Telegraph Act to contend that the matter is reserved for the Central Government, as such, the State Government could not have framed the impugned Bye-laws. He has further submitted that impugned model Bye-laws framed by the State Government could not have been adopted by the concerned Municipal Body as they have not been framed in accordance with the provisions

of the Municipalities Act, 2009; the matter falls within the exclusive jurisdiction of the Central Government and thus, there cannot be any encroachment on the power of the Central Government by the State Government. The learned Senior Counsel has relied upon Sections 10 and 12 of the Telegraph Act; he has also referred to condition no. 28 of the License which provides that licensee shall ensure quality of service and to adhere to such standards and provide timely information as required and there is also sharing of infrastructure as provided in condition no. 33 and thus, if any restriction is put in the matter of installation of tower, it would not be possible to cover other areas as per terms and conditions of the license. The State Government cannot impose such restriction. The Bye-laws are arbitrary, whimsical and without jurisdiction.

The learned Senior Counsel has also made attempt to explain how the mobile network operates; cellular services involve carriage of voice data of subscribers from one to another network and for that, service provider is required to establish cellular mobile network; the voice of subscriber is transmitted through airwaves to the BTS, then BTS transmits the voice to BSC on airwaves/cables, BSC in turn transmits the said voice to MSC on airwaves/cables and then MSC verifies and validates the authenticity of the subscriber and upon such verification, switches the voice of subscriber to the called party, the voice is again carried from MSC to BTS to the called

party's handset/telephone instrument, on airwaves. He has tried to explain the functioning of cellular mobile network with the diagram. He has further submitted that cell radius generally varies depending upon typology of surrounding structure and the subscriber density; every BTS has a particular call capacity and since number of users increase and their need for mobile communication results in higher traffic, it requires increase in number of cell sites/BTSs/BSCs etc. The cellular towers are backbone of the mobile telephony, as such, installation of tower at a particular place should not be restricted; it is necessary that policies in the matter of installation of towers should not act as impediment to the growth of cellular mobile services, but facilitate growth of national telecom infrastructure.

The learned Senior Counsel has further submitted that the objective of National Telecom Policy is to deliver world class infrastructure at affordable prices and thus, there should not be any hurdle in the installation of tower at a particular place which may hamper in providing quality service and growth of telecom infrastructure; cellular operators are under obligation to provide quality service at affordable prices and if any restriction is put in the installation of tower, it would be difficult for them to fulfil the obligation of providing quality service/coverage as per condition of license.

The learned Senior Counsel further submitted that fear of health hazard is not based on any rational or research work;

mobile connectivity is essential in the present scenario; to ensure proper and efficient services, connectivity and coverage, towers are required to be installed at a particular place and if any restriction is imposed in the installation of tower, it would affect quality of service causing inconvenience to the consumers; it is essential to have mobile tower near hospital to ensure better connectivity; health care services are made more effective with the help of mobile technology.

The learned Senior Counsel has further submitted that the State Government has issued the Bye-laws in non-transparent manner disregarding views of stake holders; order has not been published in the official gazette as required under section 337 of the Municipalities Act of 2009; objections were not invited. He has further submitted that the Bye-laws impose exorbitant and disproportionate fees; when no services are being rendered, disproportionate and exorbitant fees cannot be imposed. He has further submitted that Bye-laws are impracticable, unreasonable and arbitrary; if the restriction is put, it would make the mobile services costlier; there are many localities which require mobile facilities and it would not be possible to provide them services if Bye-laws are implemented; the prohibition to install tower near old and heritage building is also illegal.

Shri B.L.Sharma, learned Senior Counsel with Mr.Lokesh Atrey and Mr.Vikram Singh appearing on behalf of the

respondent-Towers and Infrastructure Providers Association has made attempt to distinguish between the Mobile Tower Infrastructure Company and Mobile Service Providers Company. The Infrastructure Company provides network infrastructure by installing communication tower and related equipment; tower is merely a structure made to facilitate the placing of Base Transreceiver Station (BTS) of the service provider at a particular height and direction; the location of tower is based on scientific survey requirement. The cellular services provided by the service providers involve carriage of voice and data from one to another network; cellular networks consist of cell and each antenna of BTS cover a cell in its direction; towers are erected in order to provide sufficient height to the antenna installed in order to provide uninterrupted communication through out the licensed service area; signals are transmitted from one site to another and when the subscriber moves from one network area to another, the network hands over the call to the next Base Station and so on.

The learned Senior Counsel has relied upon Article 246 and Entry 31 of List-I of Seventh Schedule of the Constitution; Article 254 has also been referred to; he has also referred to Article 73 to contend how executive power of Union has to be exercised; he has also referred to Article 77 to contend that the executive action taken by the Government of India shall be expressed in the name of the President; he has also submitted

that power under Articles 141 & 142 is different than the power under Article 226 of the Constitution; this Court cannot issue direction to the State Government to frame policy; he has referred to Articles 162 and 166 so as to contend that the decision taken by the State Government is not appropriate and in accordance with law. He has relied upon the Telegraph Act to contend that the State Government could not have framed the Bye-laws nor could have taken the policy decision; he has also referred to the provisions of the Indian Wireless Telegraphy Act, 1933 and the Act of 1997 so as to contend that TRAI has jurisdiction in such matter; the public interest litigation which has been filed is not based on any research work, therefore, this Court cannot issue any direction as prayed in the PIL; in the matter of expert, the court does not interfere; the court loathe to interfere in the matter to be considered by the experts.

The learned Senior Counsel has placed reliance on Wednesbury principles and contended that the action of the State Government is wholly irrational, unreasonable and arbitrary. While exercising the power of judicial review, the Court cannot substitute its judgment to that of legislature. He has further submitted that the averment that EMF radiation is harmful to the human is not based on any scientific study and proof; EMF radiation produced from mobile handsets and BTS are found at relatively low end of electro magnetic spectrum and non-ionizing. The learned Senior Counsel has relied upon

the decisions of the Apex Court in *Vishakha and ors. V/s State of Rajasthan & ors.* ((1997) 6 SCC 241) and *Vineet Narain and ors. V/s Union of India & anr.* ((1998) 1 SCC 226) and contended that this Court cannot interfere and issue any guidelines. He has also relied upon the decision of the Apex Court in *Divisional Manager Aravali Golf Club & anr. V/s Chander Hass & anr.* ((2008)1 SCC 683) and submitted that this Court cannot direct the legislature to make a particular law. He has also relied upon the decision of the Apex Court in *P.Ramachandra Rao V/s State of Karnataka and ors.* ((2002) 4 SCC 578) and contended that this Court while exercising the power of judicial review in such matter cannot dictate the decision of the statutory authority that ought to be made in the exercise of discretion in a given case; the court cannot direct the statutory authority to exercise the discretion in a particular manner not expressly required by law. He has also relied upon various decisions to contend that this Court cannot interfere in such matter and cannot grant relief in the public interest litigation.

The learned Senior Counsel has further submitted that the Government must act in accordance with the rules of business; the Government of India has not issued any order in terms of Article 77; he has also referred to the business of the Government of India called "Government of India (Transaction of Business) Rules, 1961"; Rule 3 of the said Rules provides that

subject to the provisions of these Rules, all business allotted to a Department under the Rules shall be disposed off by or under the general or special directions of the Minister-in-Charge; the said Business Rules are mandatory and have not been followed and thus, the consequent action of the State Government is nullity in the eye of law.

Shri K.K.Sharma, learned Senior Counsel with Ms.Alankrita Sharma, Shri R.K.Agarwal, learned Senior Counsel with Mr.Nisheeth Dixit, Shri Sudhir Gupta, learned Senior Counsel with Mr.Anuroop Singhi and Mr.Ankit Shah and other learned counsel appearing on behalf of the respondents-Service Providers have also submitted that the impugned Bye-laws have not been framed in accordance with law; procedure as provided under the Municipalities Act, 2009 has not been adhered to. They have reiterated more or less the same submissions as made by Shri Gopal Subramanyam, learned Senior Counsel appearing on behalf of COAI and Shri B.L.Sharma, learned Senior Counsel appearing on behalf of Infrastructure Providers Association, hence, they are not being repeated.

Shri S.S.Raghav, learned counsel appearing on behalf of the Union of India has submitted that Central Government has accepted the recommendations of the Inter-Ministerial Committee and thereafter, fresh guidelines have been issued by the DoT reducing emission level; considering the reduced level of emission, it is not necessary to remove the towers from the

schools, colleges, hospitals, playgrounds etc.; in case the level of EMF radiation is within the limits prescribed, it would not cause health hazard; in case of violation, there is provision of penalty and even license can be revoked; the recommendations of MOEF are advisory and the guidelines issued by DoT are appropriate; the State Government has framed Bye-laws, which are in contravention of the guidelines issued by the DoT reducing emission level; it was not necessary to frame the Bye-laws by the State Government, in view of the reduced level of EMF radiation. He has further submitted that the matter may be decided on the basis of policy decision and not on the basis of communication which has taken place between Government of India and State Government at Secretary level etc.; this Court should not go into such communications as they are interpretative of policy decisions; policy decisions themselves be seen for proper adjudication of the matter.

Shri Dinesh Yadav, learned Additional Advocate General with Mr.Subhash Kuntal appearing on behalf of the State of Rajasthan and its instrumentalities has supported the Bye-laws imposing restriction for installation of towers near schools, colleges, play grounds, hospitals etc. and within 500 meters from jail premises. He has relied upon Entry 1, 4, 5, 6 and 12 of List-II of Seventh Schedule of the Constitution and submitted that the State Government was competent to frame the Bye-laws and there was no encroachment made on the power of the

Central Government; considering the health hazard from EMF radiation, restriction was put on the installation of towers near schools, colleges, hospitals, play grounds etc.; Entry 1 of List-II of Seventh Schedule of the Constitution relates to public order, Entry 4 pertains to prisons, Entry 5 relates to local government, Entry 6 relates to public health and sanitation; hospitals and dispensaries and Entry 12 pertains to ancient and historical monuments and considering these Entries, the action of the State Government framing bye-laws was within the framework of law and no encroachment was made on the legislative competence of the Central Government under Entry 31 of List I of Seventh Schedule of the Constitution.

The learned Additional Advocate General has further submitted that Section 10 of the Telegraph Act does not rule out the role of local authority with respect to building, ownership or management or control of local bodies and appropriate fee can be realized; even in the policy and guidelines of the DoT, installation of tower has been left subject to local laws, rules and regulations made by the State Government or local bodies, similar is the return of Union of India; there is no conflict between the recommendations of the Inter-Ministerial Committee, DoT and Bye-laws framed by the State Government.

The learned Additional Advocate General has also relied upon the bye-laws framed by the Municipal Corporation, Jaipur

in the year 2011; bye-law 8(a) provides that no tower/pole antenna shall be permitted to be erected upon ancient and heritage monuments and similarly, bye-law 8(b) provides that no tower/pole antenna shall be permitted to be installed on school, hospital. These bye-laws have not been questioned; there are similar bye-laws framed by various municipal corporations etc. and they have not been questioned; now the State Government has framed the model Bye-laws and directions have been issued to all local bodies/ municipal corporations/municipal councils/municipal boards that in case bye-laws have already been framed by any of them, the same be amended to bring them in tune with model bye-laws or after repealing the same, new bye-laws' in terms of model bye-laws framed by the State of Rajasthan be framed and till new bye-laws are framed, the model bye-laws framed by the State of Rajasthan be adopted as policy decision; the decision of the State Government does not violate in any manner the subject matter reserved for the Central Government under Entry 31 of List I of Seventh Schedule of Constitution and the guidelines and recommendations of Inter-Ministerial Committee and DoT.

The learned Additional Advocate General on behalf of State Government has further submitted that no case for interference is made out with respect to schools as order of this Court has already attained finality, that part of petition stands disposed off and since order has not been interfered with by the

Supreme Court and SLP preferred by the Cellular Operators Association of India has been dismissed by the Supreme Court, on the parity of same reasoning, the impugned bye-laws are liable to be upheld; there will be health hazard in case the towers are permitted on the hospitals, play-grounds etc.; from the schools, towers have already been removed in compliance of the order issued by this Court and this fact has not been disputed at bar even by the learned Senior Counsel appearing on behalf of COAI and other respondents; there is public concern regarding health hazard being caused by reckless erection of mobile towers in a haphazard manner and EMF radiation from such mobile towers; there are reports of public unrest due to health hazard caused by EMF radiation from mobile towers and handsets; it has been observed by the Inter Ministerial Committee that in case level of EMF radiation is higher, it would cause health hazard in various manner; hospital is a sensitive place where infants, newly born children, pregnant women, patients of various diseases are treated, they are vulnerable and they require protection from EMF radiation from mobile tower and thus, if towers are not removed from hospitals, it would enhance the agony of the patients taking treatment of various diseases in the hospitals; EMF radiations are more harmful for infants and pregnant women; even taking of mobile is not permissible in some of the hospitals and thus, decision of the State Government restricting installation of tower on the

hospital is just, proper and reasonable and in the public interest. Similarly, the decision of the State Government restricting installation of mobile tower within 500 meters from jail premises is also to ensure public safety and law and order as there are many instances which show that accused makes conspiracy and commits offence from jail by using the mobile handsets; though jammers are installed, but they are not successful and failed to provide the requisite insulation. Thus, the decision taken by the State Government restricting installation of mobile towers on the schools, colleges, hospitals, play grounds and the place within 500 meters from the jail premises is in the public interest, safety and to ensure law and order; the action cannot in any manner be said to be illegal or arbitrary. Apart from this, there is no restriction to carry on business; erection of tower can be regulated; COAI and Infrastructure Providers cannot claim any vested right to install tower at a particular place; they can carry on business effectively by erecting the tower at the place permissible and provide coverage.

The learned counsel appearing on behalf of the Pollution Control Board has submitted that the Board is concerned with the pollution being caused by the generator sets only and they are ensuring that pollution is kept at a particular level.

Report of Inter-Ministerial Committee/DoT/MOEF/Research work

Before adverting to the rival submissions of the parties,

we deem it appropriate to take notice of the report of the Inter Ministerial Committee on EMF radiation; it was consisted of (i) Advisor (Technology), (ii) Sr.DDG(BW), DoT, (iii) Scientist ICMR, Ministry of Health, (iv) Advisor, Department of Bio-Technology, (v)Scientist 'E' MOEF, (vi)DDG (R) TEC, DoT, (vii) Jt.Wireless Advisor, WPC, DoT and (viii) DDG(CS), DoT; it was multi-facet body and majority of incumbents are from the Department of Tele-communication.

The terms of the references of the Committee were (i) effect of RF radiation emitted by cell phone towers and mobile hand-sets on human health at levels below the existing standards; (ii) proliferation of electromagnetic field on environment; (iii) examination of the scientific evidence and research on the effect of electromagnetic radiation exposure from cell phone tower and from mobile handsets conducted by Medical Council or other bodies in India and abroad; (iv) adoption of reference levels for power density from base stations in mobile frequencies of IMT bands for limiting electromagnetic field exposure in telecom sector in India; (v) adoption of safety limits for exposure to radio frequency energy produced by mobile hand-sets i.e. Specific Absorption Rate (SAR) levels of exposure from a mobile hand set and disclosure of information for the handset.

The proceedings conducted indicate that various research works were taken into consideration and various meetings were

held; representatives of Telecom Equipment Manufacturers Association (TEMA), Cellular Operators Association of India (COAI), Telecom Users Group of India (TUGI), Consumer Care Society (CCS), Bangalore and Prof.Girish Kumar, IIT Bombay have also presented their views; the Ministry of Environment and Forests (Wild Life Division) has also constituted a committee to assess the level of possible impacts of growth of mobile towers in urban, sub-urban and even rural/forest area on the population of birds and bees and to suggest appropriate mitigative measures on 30.8.2010 and the scientists assisting in the said committee also attended the meeting of Inter Ministerial Committee on 25.11.2010.

The Inter-Ministerial Committee has taken into consideration that in India, "there is no restriction on the location of towers" leading to a situation of jumble of towers/antennas all throughout; there is "mushroom growth" of mobile tower infrastructure seen which is contrary to the practice in developed countries; the Committee has also taken note of the fact that quite a number of law suits and writ petitions have been filed by individuals/groups alleging health effect of radiation; there is a need to evolve alternative means to deploy mobile telecom network based on best International practices and for a National Policy and guidelines on EMF radiation for telecom towers; the Committee has also considered the effect on human health and growing public

concern of possible adverse health effect due to EMF radiation, which is emitted continuously and more powerful close to BTS. Para 2.4 of the report of the Inter-Ministerial Committee is quoted below:-

> *"2.4 There have been growing public concern of possible adverse health effects due to EMF Radiation. The area of concern is the radiation emitted by the fixed infrastructure used in mobile telephony such as base stations and their antennas, which provide the link to and from mobile phones. This is because, in contrast to mobile hand sets, it is emitted continuously and is more powerful at close quarters. The field intensities drop rapidly with distance away from the base of the antenna because of the attenuation of power with the square of distance. Following the enormous increase in the use of wireless telephony, mobile phone radiation and health concerns are being raised from time to time.*

Para 2.5 of the report of the Inter Ministerial Committee mentions that the effect of EMF radiation can be studied in two ways; bio effects and health effects; health effects are the changes which may be short term or long term; these effects stress the system and may be harmful to human health. Thereafter, thermal effects have been considered and it was observed that one effect of microwave radiation is dielectric in which any dielectric material is heated by rotation of polar molecules induced by the electromagnetic field; thermal effect has been largely referred to the heat that is generated due to absorption of EMF radiation. Non-thermal effects have also been considered in para 2.5; people who are chronically exposed to low level wireless antenna emissions and users of mobile hand sets have reported several unspecific symptoms

during and after its use ranging from burning and tingling sensation in the skin of the head, fatigue, sleep disturbance, dizziness, lack of concentration, ringing in the ears, reaction time, loss of memory, headache, disturbance in digestive system and heart palpitation etc. Para 2.5 containing the aforesaid facts is quoted below:-

> *"2.5 The effects of EMF radiation can be studied in two ways i.e. bio effects and health effects:-*
>
> *(i) Bio effects are measurable responses to a stimulus or to a change in the atmosphere and are not necessarily harmful to our health.*
>
> *(ii) Health effects are the changes which may be short term or long term. These effects stress the system and may be harmful to human health.*
>
> *There are two distinct possibilities by which the Radio Frequency Radiation (RFR) exposure may cause biological effects. There are thermal effects caused by holding mobile phones close to the body, Secondly, there could be possible non-thermal effects from both phones and base stations.*
>
> *a) Thermal Effects*
>
> *One effect of microwave radiation is dielectric heating, in which any dielectric material, (such as living tissue) is heated by rotation of polar molecules induced by the electromagnetic field. <u>The thermal effect has been largely referred to the heat that is generated due to absorption of EMF radiation.</u> In the case of a person using a cell phone, most of the heating effect occurs at the surface of the head, causing its temperature to increase by a fraction of a degree. The brain blood circulation is capable of disposing the excess heat by*

increasing the local blood flow. However, the cornea of the eye does not have this temperature regulation mechanism. The Thermal effect leads to increase in body temperature.

b) Non-Thermal Effects-

The communication protocols used by mobile phone often result low frequency pulsing of the career signal. The non-thermal effect is reinterpreted as the normal cellular response to an increase in temperature. The Non-thermal effects are attributed to the induced electromagnetic effects inside the biological cells of the body which is possibly more harmful. People who are chronically exposed to low level wireless antenna emissions and users of mobile handsets have reported feeling several unspecific symptoms during and after its use, ranging from burning and tingling sensation in the skin of the head, fatigue, sleep disturbance, dizziness, lack of concentration, ringing in the ears, reaction time, loss of memory, headache, disturbance in digestive system and heart palpitation etc. There are reports indicating adverse health effects of cell phones which emit electro-magnetic radiation, with a maximum value of 50% of their energy being deposited when held close to the head." (emphasis added by us)

It has been noted in para 2.6 that the research work has not so far separated these systems from electromagnetic radiation hence all the above symptoms can also be attributed to stress. It has been mentioned in para 2.7 that considering the hot tropical climate of country, Indians as compared to European countries, are under risk of radio frequency radiation

adverse effect. Para 2.7 is quoted below:-

> *"2.7 Member Scientist, ICMR has indicated that the hot tropical climate of the country, low body mass index (BMI), lot fat content of an average Indian as compared to European countries and high environmental concentration of radio frequency radiation may place Indians under risk of radio frequency radiation adverse effect."*
>
> *(emphasis added by us)*

Considering the effect on environment, it has been mentioned in the report of Inter Ministerial Committee that some studies reported that mortality of communication towers over 200 ft. may be a threat to the healthy population of birds and electromagnetic radiation from cell phone towers may probably be the reasons for the vanishing butterflies, bees, insects and sparrows. Paras 3.2 and 3.3 of the report in this regard are quoted below:-

> *"3.2 Some Studies reported that mortality of communication towers over 200 ft. may be a threat to the healthy population of birds and electromagnetic radiation from cell phone towers may probably be the reasons for the vanishing butterflies, bees, insects and sparrows. Some other Studies have also shown that there seems to be effects on birds exposed to the electromagnetic field radiation and losing navigational ability. They get disoriented and begin to fly in different direction. (Gavin, Karen and Gerald 2000; Joris and Dirk 2007: Andrews, 2007). However, the Committee notes that these studies were unable to find a direct link of*

exposure of EMF radiation to adverse effects on birds.

3.3 The Ministry of Environment & Forests (Wild Life Division) has constituted a committee on 30th August 2010 to assess the level of possible impacts of growth of mobile towers in Urban, Sub-urban and even rural/forest area on the population of birds and bees and to suggest appropriate mitigate measures to address to the problem."

Thereafter, scientific evidence and various research works have been considered by the Inter-Ministerial Committee and considering the various reports, adverse effect of EMF radiation (RFR) on human health has been mentioned in Para 4.1 of the report, which is quoted below:-

"4.1 Member Scientist ICMR referred to some of the studies of adverse effect on human health as below:

(i) Clearly et al (1990a) carried out series of experiments on cell proliferation and cell kinetic studies under continuous wave Radio Frequency Radiation (RFR) exposures and reported increased proliferation. They also observed similar effects in human peripheral lymphocytes (Cleary et al 1990 b).

(ii) RFR has been shown to down-regulate gap-junctional intercellular communication, which plays an essential role in regulation of cell growth, differentiation and wound healing (Chiang, 1998).

(iii) RFR have been reported to affect a variety of ion channel properties, such as decreased rates channel porotein formation, decreased frequency of single channel opening and increased rates of rapid burst-like firing (Reparcholi, 1998). Even Ca release from cell 2+ release from cell membrane has been reported (Dutta et

al 1984; Bawin et al 1975). An increase in calcium dependent protein kinase C has been noted in developing rat brain indicating that this type of radiation could affect membrane bound enzymes associated with cell signaling, proliferation and differentiations (Paulraj & Behari 2004).

(iv) RFR have been shown to affect the kinetics of conformational changes of the protein beta-lacto-globulin and it can accelerate conformational changes in the direction towards the equilibrium state, which applied both for the folding and the unfolding process (Bohr & Bohr, 2000).

(v) In experimental animals an increase in the blood brain barrier permeability in response to exposure to RFR has been reported in a number of studies (Albert 1977; Oscar & Hawkins, 1977; Fritze et al 1997). Resting blood pressure has been reported to increase during exposure to RFR emitted from cell phones (Braune et al 1998). The RFR emitted from cell phones are also reported to decrease significantly the slow brain potentials (SP) which is very important to the stage of information processing related to getting ready or prepared for an activity to reach a particular goal (Gabriele et al 2000).

(vi) DNA rearrangement in cells from brain and testis were reported under RFR exposure at low intensity in mice (Sarker et al, 1994, 1996).

(vii) Increased dominant lethal mutations in the offspring of exposed male mice and abnormal sperm were also reported in mice (Verma et al, 1976; Verma & Traboulay, 1976; Goud et al, 1982) but such effects were not seen at rats (Berman et al, 1980) and C3H mice (Saunders et al, 1983, 1988).

(viii) While increased chromosomal aberrations have been reported in large number of studies (Yao and Jiles, 1970; Chen et al, 1974; Garaj Vrhovac et al, 1991, 1992; Khalil et al, 1993; Maes et al 1993, 1995; Tice et al 2002), some other studies did not find such aberrations (Meltz et al, 1987; Kerbacher et al, 1990). Occurrence of increased micronuclei, which is another indirect indicator of DNA damage, has been reported in large number of studies (Antipenko and Koveshinkova 1987; Maers et al, 1993; Haider et al 1994; Balode 1996; Garaj Vrhovac 1999).

(ix) Robinette et al (1980) reported increased frequency of blood cancer and brain cancer in US naval personnel exposed to RFR (wireless, other radio-communication) during Korean War and followed for about twenty years.

(x) Garland et al (1990) reported a link between leukemia in US navy personnel and exposure to higher intensity of magnetic fields.

(xi) Grayson (1996) reported brain cancer in US Air Force personnel and found that non ionizing radiation particularly microwave exposure had statistically significant association.

(xii) Thomas et al (1987) reported an increased risk of brain tumor death in men ever employed in an electronic occupation.

(xiii) Tynes et al (1996) reported increased breast cancer risk among female radio and telegraph operators.

(xiv) Leukemia mortality was found to be higher than expected near a high power radio transmitter in a peripheral area of Rome (Michelozzi et al, 1998).

(xv) A cluster of six cases of testicular cancer was reported among traffic policemen using microwave generators (Davies and Mostofi 1993).

(xvi) Hayes et al (1999) reported excess risk of testicular cancer among Military personnel who self reported exposure to microwaves and radio waves.

(xvii) Karolinska Institute, Stockholm reported increased risk of developing acoustic neuroma in peoples using cell phone for more than 10 years (EIRIS, 2005).

(xviii) Lennart Hardell et al (2001, 2005, 2006, 2007 & 2009) conducted number of epidemiological studies as well as case control studies on use of mobile phones for more than 10 years. They reported that the use of mobile phones for more than 10 years give a consistent pattern of increased risk for acoustic neuroma and gliaoma. The risk is highest for ipsilateral exposure. They further reported that longer follow up is needed and an increased risk for other type of brain tumors cannot be ruled out.

(xix) Goldoni (1990) compared the hematological finding in 25 male air traffic control technicians working at a distance from microwave sources and reported that radar exposed workers had significantly lower levels of leukocytes and red cells than the electronic technicians.

(xx) Electrocardiographic abnormalities were detected significantly more frequently in workers exposed to electromagnetic field than in non-exposed subjects (Bortkiewicz et al, 1997).

(xxi) RF fields are also reported to triggered immune system response similar to those resulting from thermal stress (OPHA, 2003). Adverse effects on the immune system can indirectly predispose to infection to cancer (RSC, 1999).

(xxii) Inconclusive results have indicated a possible change in the blood brain barrier permeability under the influence of RF field changes in the brain electric activity, in the release of neurotransmitters, in melatonin secretion, and in the retina, iris and corneal endothelium have been reported in animals (OPHA, 2003). The effects on nervous system include behavioral, cognitive (Hermann & Hossmann, 1997) Neurochemical (Mausset et al, 2001) and neurological (Beason & Semn 2002) effects in human and laboratory animals (Hamblin & Wood, 2004, Tatteresall et al., 2001).

(xxiii) Kowalczuk et al (1983) reported reduction in male fertility coupled well with reduced pregnancy rate in male mice exposed to RFR for 30 min. On the other hand Beechey et al (1986) and Dasdasi et al (1999) did not observe any decrease in sperm count and also no difference in sperm morphology in rates exposed to RFR emitted by cell phone. However Dasdag et al (1999) found significant changes in testicular histopathology (reduction in seminiferous tubul diameter)(and increase

in rectal temperature in those rates.

(xxiv) Semen analysis of military personal associated with potential RFR exposure showed lower sperm count than control group (Danulescu et al, 1996; Weyandt et al, 1996; Schrader et al, 1998). Differences in semen quality and hormone levels have also been observed in RFR dielectric heater operator (Grajewsk et al, 2000)."

(emphasis added by us)

Impact of "cell phone towers" has been mentioned in para 4.2 of the report, which is quoted below:-

"4.2 Studies reported impact of cell phone towers:
(xxv) Santini et al (2002) reported significant health effects on people living within 300 meters of mobile phone base stations in Paris particularly in relation to depressive tendency, fatigue, sleeping disorder and difficulty in concentration.

(xxvi) Netherlands Organization for Applied Scientific Research, TNO, (2003) studies the effects of Global Communications System Radio-Frequency Fields on Well Being and Cognitive Function of Human Subjects with and without Subjective Complaints and reported significant effects on well being of the people i.e., headaches, muscle fatigue/pain, dizziness etc. from 3 G mast emissions. Those who had previously been noted as 'electro-sensitive' under a scheme in that country were shown to have more pronounced ill-effects, though others were also shown to experience significant effects.

(xxvii) Spanish: Oberfeld Gerd et. al. (2004) from Spain

reported significant ill-health effects in those living in the vicinity of two GSM mobile phone base stations. The strongest five associations found were depressive tendency, fatigue, sleeping disorder, difficulty in concentration and cardiovascular problems.

(xxviii) Israel: Ronni Wlf & Danny wWolf (2004) from Israel, based on medical records of people living within 350 meters of a long established phone mast, reported in fourfold increased incidence of cancer in comparison with the general population of Israel. They also reported a tenfold increase specifically among women, compared with the surrounding locality further from the mast.

(xxix) Germany (November 2004): The bases of the data used for the survey were PC files of the 1000 patient's case histories between the years 1994 and 2004. The authors reported that the proportion of newly developing cancer cases was significantly higher among those patients who had lived during the past ten years at a distance of upto 400 meters from the cellular transmitter site, which has been in operation since 1993, compared to those patients living further away, and that the patients fell ill on average 8 years earlier.

(xxx) Austria 2005: When Electro sensitive men (3) and women (9) were exposed to RFR emitted from a shielded cell phone bfase station in phase manner all of them reported sysmpoms like buzzing in the head, palpitations of the heart, un-wellness, lightheadedness, anxiety, breathlessness, respiratory problems etc. This study shows significant changes of the electrical currents in the brain by a cell phone base station at a distance of 80

meters.

The Committee notes that most of the laboratory studies were unable to find a direct link between exposure to RFR and the incidence of cancer. However, growing scientific evidences of bio effects and adverse health effects like DNA rearrangement in cells or chromosomal damage is reported. (Sarkar et al 1997; Sarkar and Selvamurthy 2001). Even the biological effects could not be established as caused by Radio Frequency Radiation, due to complex interaction of the different exposure parameters i.e. mass, shape and size of the body (age, gender, activity level, body insulation etc.) and the environmental conditions (Ambient temperature, air velocity, humidity)."

(Emphasis added by us)

It is mentioned in the report that mobile towers may cause headaches, muscle fatigue/pain, dizziness, depressive tendency, sleeping disorder, difficulty in concentration; there are fourfold increased incidence of cancer in those who are living near mobile towers in comparison with the general population ; report of Germany also indicates that cancer cases were significantly higher among those patients who had lived during the past ten years at a distance of upto 400 meters from the cellular transmitter site, as compared to those patients living further away from towers.

The Inter-Ministerial Committee in para 4.3 of the report has mentioned the studies being conducted in India; the Committee has also considered the reports of ICMR and Guru

Nanak Dev University which also speak that chronic exposure to radiations may cause double strand DNA brakes in sperm cells; exposures to radio frequency radiations may affect physiological, neurological, cognitive and behavioral changes Para 4.3 of the report is quoted below:-

"4.3 Studies being conducted in India:

(i) Indian Council of Medical Research (ICMR) supported an animal study (2005-08) entitled "Microwave radiations effects on reproductive systems of male rats" under Prof.J. Behari, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi. Ante oxidative changes were noticed in reproductive pattern of male rates and increase in the level of CAT activity. The result obtained showed that the chronic exposure to these radiations cause double strand DNA breaks in sperm cells. This study also shows that the microwave radiation exposure can cause statistically significant decreased in the sperm count and testes weight.

(ii) To study the adverse effects of cell phone the ICMR has just initiated (June, 2010) a study in Delhi to examine whether use of cell phone create risk of neurological disorders and reproductive dysfunctions. Measurement of specific absorption rate (SAR) from various types of cell phones and power density, wave length and frequency of RFR emitted from cell phone towers is also under study. These physical characteristics of RFR will be correlated with the clinical & laboratory findings.

(iii) Studies conducted in Guru Nanak Dev University, Amritsar has found correlation between mobile phone use (exposure to radio frequency radiations) and DNA and

chromosomal damage in lymphocytes of individual using mobile phones which may have long term consequences in terms of neoplasia and/or age-related changes (Gandhi & Anita, 2007). Exposure to radio frequency radiations has been reported to affect physiological, neurological, cognitive and behavioral changes. (Gandhi et al. 2005).

(iv) GIMER, Chandigarh, has conducted a study (Panda et al, 2010) and recommended following criteria's for the release of harmful rays from mobile phones

- *Mobile phones should not be used continuously for more than one hour in a day.*
- *Hands free technology to be used where excessive use of the mobile phone is unavoidable. This includes use of microphones and bluetooth so that the handset remains away from the ear and thus avoids the direct impact of harmful electromagnetic radiations on the ear and the brain.*
- *People to avoid long talks and discussions on mobile phones as far as possible."*

(Emphasis added by us)

While considering EMF exposures limits from mobile base stations, ICNIRP guidelines endorsed by WHO, international exposure standards, international exposure limits for RF fields (1800 MHz), reference levels for the general public at 900 & 1800 MHz, National guidelines, precautionary approaches, the Inter-Ministerial Committee decided that to establish rational standards that will make future safer, the RF exposure limits in

India may be lowered to 1/10th of the existing reference level. The relevant portion in this regard is contained in para 5.7 of the report, which is quoted below:-

> *"5.7 The field measurement undertaken by the Cellular Operator Association of India in Metro cities like Delhi, Chennia and Mumbai have show that the measured values are hundred of time lower than that of the prescribe reference level. It is important that safety standard be rational and avoid excessive safety margins. To establish rational standards that will make future safer, the RF exposure limits in India may be flowered to 1/10th of the existing reference level."*

The Inter-Ministerial Committee has also considered the exposure limits for mobile handsets in paras 6.1 to 6.12 of the report and the same are quoted below:-

> *"6.1 Specific Absorption Rate (SAR) is a measure to know the levels of exposure to electromagnetic fields from mobile handsets. It the rate at which human body absorbs electromagnetic power radiated from mobile phones.*
>
> *6.2 India has adopted the following ICNIRP guidelines as standard for safety limits of exposure to radiofrequency energy produced by mobile handsets :*

	Whole-body average SAR (W/kg)	*Localized SAR head and trunk (W/Kg)*	*Localized SAR limbs (W/kg)*
General public Exposure	*0.08*	*2*	*4*

> *Note: - SAR values are averaged over a 6 minutes period*

using 10 gram average mass.

6.3 In the USA, the FCC has set a SAR limit of 1.6 watt per kg averaged over a volume of 1 gram of tissue, for the head. In Europe the limit is 2 watt per kg, averaged over a volume of 10 gram of tissue. SAR values are heavily dependent on the size of the averaging volume.

6.4 The cell phones and other wireless communication devices are regulated according to their emissions, which define the amount of power absorbed into the body. The metric for measurement is Specific Absorption Rate (SAR) expressed in Watts/ Kg of tissue.

6.5 Each body has a characteristic resonant frequency, depending upon the length of the long axis. For the same level of incident exposure the average SAR is dependent upon the length of the body. Thus the average body SAR is size and frequency dependent.

6.6 The standards adopted in US are most stringent which is prescribed by the Federal Communication Commission (FCC) of United States. The permissible SAR levels at or below 1.6 W/kg taken over a volume containing a mass of 1 gm of tissue, whereas for general public exposure the localized SAR value as per ICNIRP guidelines standard adopted in India is 2 W/kg, averaged over a 6 minute period and use a 10 gm average mass. With higher SAR values of mobile handset the public could potentially receive much higher radio frequency exposure.

6.7 As the costs of mobile phone technology have fallen, their use has increased dramatically and the overall

levels of exposure of the population as a whole have therefore increased drastically. Keeping in view of the fact, the high population density, body mass index of a common Indian is lower that the European countries, and the fat content of an average Indian is also lower as compared to these countries, Indians are more susceptible towards the EMF radiation. Further when the handset operates at full transmitter power because of a long distance to the next base station, the local SAR values are reported to be in the range of 1 watt / kg. Hence we may consider adopting stringent standards in India i.e. the absorption of radio frequency radiation limited to 1.6 Watt/Kg with in 1 gram of human tissue as per the FCC norms of United States.

6.8 Presently the SAR data information of the mobile hand sets are found on the manufacturer's web site or in the manufacturer's handset's manual and is not available on the mobile handsets. Information on SAR values for mobile handsets should be readily available to the consumer at the point of sale so that one can make sure of the SAR value of the handset while buying a cell phone. Hence we may consider that the SAR value information be embossed on the handsets.

6.9 Mobile hand set manufactured and sold in India or Imported from other countries should be checked for compliance of SAR limit and no hand sets of SAR value above the prescribed standard adopted in India should be manufactured or sold in the country. The Department of Telecom has requested BIS to frame standards for mobile phones so that import /manufacture of substandard mobile handsets can be regulated.

6.10 For making mandatory provisions and to regulate the SAR value of mobile handsets Government may consider amendment of Indian Telegraph Act 1885 and rules notified there-under and necessary legislations if any so that only mobile handset satisfying security standards should be permitted for import / manufacture or sold in the country.

6.11 Awareness of exposure can be accomplished by the use of warning levels or by education through appropriate means. The mobile handset booklet should contain the following for safe use :

• Use a wireless hands-free system (headphone, headset) with a low power Bluetooth emitter to reduce radiation to the head.

• When buying a cell phone, make sure it has a low SAR.

• Either keep your calls short or send a text message (SMS) instead.

This advice applies especially to children and adolescents.

• Whenever possible, only use your cell phone when the signal quality is good.

• People having active medical implants should keep their cell phone at least 30 cm away from the implant at times.

• Using a mobile phone in a open area, not inside a vehicle so that the phone receives a good signal and transmits at lower level.

• Not using a mobile phone when a normal wired phone is available.

6.12 The SAR value information should be made available on the government website and the concerned regulatory agency with the list of SAR values of different mobile

handsets."

Considering the growing public concern of adverse effect of EMF radiation on health, the Inter-Ministerial Committee has suggested certain measures for building confidence of general public. It was suggested that use of low power transmitter with in-building solutions as provided in western countries may be considered in place of trend of using high powered transmitter over high rise towers; public education programme needs to be undertaken besides providing testing/measuring centres; steps need to be taken to conduct the long term scientific research related to health aspect of EMF radiation exposure and associated technologies in the areas (i) health effect of RP exposure in children (ii) health effect of RF exposure in foetus, mothers and elderly person (iii) Combined electromagnetic field radiation effect exposure from multiple antennas of a shared infrastructure sites, as mentioned in para 7.1 of the report. In para 7.,2, the Committee recommended for minimization of cell phone uses, limitation of use by children, adoption of cell phone and micro cell with ALARA (as low as reasonably achievable) levels of radiation, use of hands free and ear phone technologies such as blue tooth handsets, adoption of maximum standards of exposure, RF field intensity and distance of base stations antennas from human habitation and so forth. Finally, recommendations have been made with respect to mobile handsets and they are as follows:-

"Mobile Handsets:-

1. Adoption of SAR level for mobile handsets limited to 1.6 Watt/Kg, averaged over a 6 minutes period and taken over a volume containing a mass of 1 gram of human tissue as per the FCC norms of United States.

2. SAR value information is to be embossed and displayed in the handset.

3. Information on SAR values for mobile handsets should be readily available to the consumer at the point of sale so that one can make sure of the SAR value of the handset while buying a cell phone.

4. Government may consider amendments in the Indian Telegraph Act 1885 & rules notified thereunder and necessary legislations if any so that only mobile handset satisfying radiation standards should be permitted for import/manufacture or sold in the country.

5. Mobile hand set manufactured and sold in India or Imported from other countries should be checked for compliance of SAR limit and no hand sets of SAR value above the prescribed standard adopted in India should be manufactured or sold in the country.

6. SAR data information of the mobile handsets should be available on the manufacture' web site and in the manufacturer's handset's manual.

7. To bring awareness, the manufacturer's mobile handset booklet should contain the following for safe use:

a. Use a wireless hands-free system (headphone, headset) with a low power Bluetooth emitter to reduce radiation to the head.

b. When buying a cell phone, make sure it has a low SAR.

c. Either keep your calls short or send a text

message (SMS) instead. This advice applies especially to children, adolescents and pregnant women.

d. Whenever possible, use cell phone when the signal quality is good.

e. People having active medical implants should keep their cell phone at least 30 cm away from the implant.

8. The information is made available on Government website with list of SAR values of different mobile phones."

With respect to mobile base stations, recommendations have been made by the Inter-Ministerial Committee that RF exposure limits in India be lowered to 1/10th of the existing level. In recommendation no.13, it has been stated that restrictions on installation of mobile towers near high density residential areas, schools, playgrounds and hospitals be imposed. Recommendations no.9 and 13 of the Inter-Ministerial Committee are quoted below:-

"9. The RF <u>exposure limits</u> in India may be <u>lowered to 1/10th of the existing level</u> keeping in view the data submitted by COAI/AUSPI during presentation made to the committee and trend adopted by other developed countries.

<u>13. Impose restrictions on installation of mobile towers near high density residential areas, schools, playgrounds and hospitals</u>."

(Emphasis added by us)

Other recommendations relating to mobile base stations are with respect to providing of static continuous testing/measuring centres, self-certification, creation of national data base, use of low power micro cell transmitters and to conduct long term scientific research related to health aspects of EMF radiation exposure and associated technologies in India in the areas with respect to children, foetus, mothers, elderly persons etc. References have also been made of the matters which have been taken into consideration with from effect from 1970 to 2010, thus, various research works & studies of 40 years have been taken into consideration.

The Government of India, Ministry of Communication & Information Technology, Department of Telecommunication has placed on website a Journey for EMF and the same has been placed on record as Annex.R by the respondent no.21-Cellular Operators Association of India alongwith additional affidavit and it has been mentioned in Annex.R that report of the Inter-Ministerial Committee has been accepted by the Government and directives have been issued revising the norms for exposure limits of RF base stations and SAR of mobile handsets. It has also been mentioned in Annex.R that before installation of towers the telecom service providers are required "to obtain necessary permission from the local bodies and the local body authorities" shall ensure compliance of guidelines before they issue permissions for installation of

towers. Broad guidelines have been issued for clearance of installation of mobile towers. Thus, it is apparent that local bodies permission has to be obtained besides other clearance, NOC from building owner; location has to be informed; base station antennas in narrow lanes (≤ 5 mt.) have to be avoided; in respect of roof top towers with multiple antennas, the roof top usage desirable to be totally restricted; in case of both ground based towers & roof top towers, there shall be no nearby buildings right in front of the antenna with height comparable to the lowest antenna on tower at a distance threshold as specified. Thus, the role of State Government and Local Bodies was not ousted from the recommendations & guidelines made by DoT; DoT has not adversely commented upon the recommendation no.13 with respect to imposition of restriction on installation of mobile towers near high density residential areas, schools, playgrounds and hospitals made by the Inter-Ministerial committee, in which majority of the members were of the Department of DoT itself, The relevant portion of the DoT recommendations permitting the role of Local Bodies is quoted below:-

> *"The Cellular phones are an integral part of modern telecommunications. Base Station, the transmission tower and their antennas provide the link to and from mobile phones and fall in the category of life-line installations. Before installation of towers the telecom service providers are required to obtain necessary permission from the local bodies."*

There are guidelines issued from time to time by the DoT; precautionary guidelines for mobile users have also been issued by DoT; in myths and facts, it has been mentioned that it is the antenna from which we should keep distance not from tower and that too if we are positioned facing antenna at comparable height. At the ground level, the intensity of RF radiation from base station is much less. With respect to radiation level by a mobile tower, it has been observed thus every antenna on cell phone tower radiates electro-magnetic power and power level near towers is higher and it reduced with distance. The relevant portion in this regard is quoted below:

> *"Radiation level by a mobile towers*
> *Every antenna on cell phone tower radiates electro magnetic power. Cell phone tower is being used by a number of operators, more the number of antennas; more is the power intensity in the nearby area. The power level near towers is higher & as we move away, it reduces with distance. It is reduced to ¼ when the distance from antenna doubles, and 1/9 when distance is tripled and so on."*

With respect to electromagnetic risks and safety measures, It has been mentioned that we should take precautionary steps to minimize our body exposure to electromagnetic radiation. Following is the relevant portion of the advice contained in Annex.R issued by DoT:-

"Electromagnetic Radiation Risks

There are many types of radiation, both natural and man-made, to which we are exposed in our daily life. Everyone is exposed to small amount of radiation everyday from naturally occurring radio waves. This radiation is called background radiation.

International research has not yet established any adverse health effect in the short or long term of Radio Frequency radiation exposure from mobile phones/towers. As there is no scientific evidence to prove that the mobile telephony system can lead to adverse health effects, we should take precautionary steps to minimize our body exposure to Electromagnetic radiation.

Safety Measure-Reduce the Exposures

Electromagnetic radiation from a source spreads in a surrounding area and creates Electro-magnetic Field (EMF). The intensity of EMF is strongest at the source and becomes weaker and weaker as distance increases. Thus the distance plays a vital role. Time is also a key factor towards how much exposure a person receives. "

(Emphasize supplied)

The guidelines for issuance of clearance for installation of mobile towers issued by DoT are quoted below:-

"GUIDELINES FOR ISSUE OF CLEARANCE FOR INSTALLATION OF MOBILE TOWERS

[Single Window Clearance can be provided to telecom service provider /infrastructure provider after following

points are verified by the local body / State Government. This will ensure issuance of faster clearances]

1. Copy of Access Service License / IP Registration Certificate from Department of Telecommunications.

2. Copy of SACFA clearance for the said location issued by WPC Wing of Department of Telecom.

3. Other clearance at State / Local authority level:

i) Copy of clearance from Pollution Control Board for DG Sets.
ii) Copy of clearance from Fire Safety Department, if applicable.
iii) Copy of clearance from State Environment & Forest Dept. where necessary.
iv) Copy of NOC from Building Owner.
v) Nominal one time Administrative Fee as may be decided by the Local body to recover its costs on the issue of permission for installation of Tower.
vi) Electricity connection may be provided to BTS site on priority.

4. BTS Tower Details:
i) Data Sheet

a. Name of Service/Infrastructure Provider
b. Location
c. Tower Reference:

i) Height, ii) Weight iii) Ground/Roof Top, iv) Number of antennas planned on tower.
ii) Copy of structural stability certificate for ground based BTS.

OR

In case of roof top BTS towers, structural stability certificate for the building based on written approvals of authorized Chartered Structural Engineer (local bodies), Central Building Research Institute (CBRI), Roorkee or reputed Engineering College like IIT, NIIT etc.

iii) Avoid Base Station Antennas in narrow lanes (≤ 5 mt.)

iv) In respect of roof top towers with multiple antennas, the roof top usage desirable to be totally restricted.

v) In case of both ground based towers & roof top towers, there shall be no nearby buildings right in front of the antenna with height comparable to the lowest antenna on tower at a distance threshold as specified below:

S. No.	Number of Multiple antennas	Building/Structure distance from the antenna (safe distance) (in mtrs)
1	2	35
2	4	45
3	6	55
4	8	65
5	10	70
6	12	75

5. Formation of State and District Telecom Committees.

Keeping public interest in view, there is a need of regular interactions between TERM Cell of DOT and State / District administration. Hence it is proposed to Set-up State and District Telecom Committees for review of all Telecom Infrastructure related issues at State/ District Level."

The "precautionary guidelines" for mobile users issued by DoT are also quoted below:-

"Precautionary Guidelines for mobile users

Mobile users are advised to take precautionary measures while using a mobile handset as:

1. Keep distance - Hold the cell phone away from body to the extent possible.
2. Use a headset (wired or Bluetooth) to keep the handset away from your head.
3. Do not press the phone handset against your head. Radio Frequency (RF) energy is inversely proportional to the square of the distance from the source -- being very close increases energy absorption much more.
4. Limit the length of mobile calls.
5. Use text as compared to voice wherever possible.
6. Put the cell phone on speaker mode.
7. If the radio signal is weak, a mobile phone will increase its transmission power. Find a strong signal and avoid movement - Use your phone where reception is good.
8. Metal & water are good conductors of radio waves so avoid using a mobile phone while wearing metal-framed glasses or having wet hair.
9. Let the call connect before putting the handset on your ear or start speaking and listening - A mobile phone first makes the communication at higher power and then reduces power to an adequate level. More power is radiated during call connecting time.
10. If you have a choice, use a landline (wired)

phone, not a mobile phone.
11. When your phone is ON, don't carry it in chest/breast or pants pocket. When a mobile phone is ON, it automatically transmits at high power every one or two minutes to check (poll) the network.
12. Reduce mobile phone use by children as a younger person will likely have a longer lifetime exposure to radiation from cell phones.
13.People having active medical implants should preferably keep the cell phone at least 15 cm away from the implant.
While Purchasing a Mobile Handset check the SAR value of the mobile phone."

The "precautionary approach" has been recommended even by DoT; mobile users have been advised to keep the mobile phone away from the body to the extent possible, to keep the handset farther from head, to use wired headset, to limit the length of mobile call; reduce mobile phone use by children as a younger person will likely to have a longer lifetime exposure to radiation from cell phones; people having active medical implants should preferably keep the cell phone at least 15 cm away from the implant. It is also mentioned in Annex.R that radiation emitted from BTS (mobile towers) is of long duration, but its intensity is low.

It is also apparent from the guidelines issued by DoT that it has nowhere disagreed with the recommendations of the Inter-Ministerial Committee and has recommended precautionary approach; it has also recommended that multiple antennas than prescribed should not be there and other recommendations have been made regarding mobile handsets

and BTSs; permission from the local bodies is necessary to be obtained. Thus, role of local bodies is not ousted by DoT itself. On anxious consideration, we find absolutely no contradiction between the recommendations made by the Inter-Ministerial Committee, which have been accepted by the Government of India and none of the recommendations made by the DoT is even towards deviating from what has been recommended by the Inter-Ministerial Committee, rather DoT has endorsed those very recommendations and has issued advisory; it is not open to DoT to ignore recommendation of Inter-Ministerial Committee accepted by Government of India; apart from that in case DoT would have rejected the recommendation no.13 of the Inter-Ministerial Committee with respect to imposition of restriction on installation of mobile towers near high density residential areas, schools, playgrounds and hospitals, it would have mentioned so in its recommendation, on the contrary it has been mentioned that recommendations have been accepted by the Government and directives have been issued revising the norms for exposure limit of RF base stations and SAR of mobile handsets. Its own committee has made similar recommendation. We find no departure from the recommendations made by the Inter-Ministerial Committee as sought to be contended by the learned Senior Counsel appearing on behalf of respondents COAI and Infrastructure Service Providers. Moreover, there is nothing to discard well considered report of Inter-Ministerial Committee

when DoT itself was party to it. It cannot be ignored or overlooked or by-passed or superseded having been accepted by Government of India nor it can be diluted by formation of new committee, the same is based on scientific material.

The MOEF has also issued advisory and the same has been placed on record by the petitioners as Annex.5 to the additional affidavit raising concern about ill-effect of EMF radiation on birds, bees & wildlife. The advisory has been issued on 9th August, 2012 pursuant to the report submitted by another expert committee constituted on 30th August, 2010 to study the possible impact of Communication Towers on wildlife including birds and bees. The Scientists assisting the said expert Committee also attended the meeting of the Inter-Ministerial Committee on 25.11.2010. It has been mentioned in the advisory that the Electro Magnetic Radiations from the communication towers may have varying negative impacts on wildlife especially birds and bees. Accordingly, the information on the impacts related to different forms of wild life as well as humans, should be provided to the concerned agencies for regulating the norms for notification of standards for safe limits of EMR taking into consideration the impacts on living beings. It has also been mentioned in Para-II (3) of advisory that before according permission for construction of towers, ecological impact assessment and review of installation sites will be essential in wildlife and/or ecologically important areas. The

Forest Department should be consulted before installation of cell phone towers in and around protected areas and zoos. Following actions have been recommended:-

"I. Ministry of Environment and Forests:

1. The Electro Magnetic Radiations from the communication towers may have varying negative impacts on wildlife especially birds and bees. Accordingly, the information on the impacts related to different forms of wildlife as well as humans, should be provided to the concerned agencies for regulating the norms for notification of standards for safe limits of EMR taking into consideration the impacts on living beings.

II. State/Local Bodies:

1. Regular auditing and monitoring of EMR should be conducted in urban localities/ educational/ hospital/industrial/residential/recreational premises and especially around the Protected Areas (PAs) and ecologically sensitive areas w.r.t. notified norms of Department of Telecommunications. Problematic towers from EMR point of view should be got suitably relocated/removed.

2. Bold signs and messages on the dangers of cell phone towers and associated radiations are displayed in and around the structures of the towers. In addition to these signs, use of visual daytime markers in areas of high diurnal raptor or waterfowl movements, should also be promoted.

3. Before according permission for construction of towers, ecological impact assessment and review of installation sites will be essential in wildlife and/or ecologically important areas. The Forest Department should be consulted before installation of cell phone

towers in and around Pas and zoos.

III. State Environment and Forest Departments:

1. Regular awareness drive with high level of visibility through all forms of media, and in regional languages should be undertaken by the State Governments and concerned Departments to make people aware about various norms and standards with regard to cell phone towers and dangers of EMR from the same. Such notices should also be placed in all wildlife protected areas and zoos by the Forest Department.

IV. Department of Telecommunications:

1. To prevent overlapping of high radiation fields, new towers should not be permitted within a radius of one kilometre of the existing towers. Sharing of passive infrastructure if made mandatory for Telecom Service Providers can minimize need of having additional towers. If new towers must be built, these should be constructed with utmost care and precautions so as not to obstruct flight path of birds, and also not to increase the combined radiations from all towers in the area.

2. The location and frequencies of cell phone towers and other towers emitting EMR, should be made available in public domain. This can be at city/district/village level. Location-wise GIS mapping of all cell phone towers should be maintained which would, inter alia, help in monitoring the population of birds and bees in and around the mobile towers and also in and/or around wildlife protected areas.

3. There is an urgent need to refine the Indian standard on safe limits of exposure to EMR, keeping in view the available literature on impacts on various life forms. Till such time the Indian standards are reformed, a precautionary approach shall be preferred to minimize

the exposure levels and adopt stricter norms possible, without compromising on optimum performance of the networks.

V. All concerned agencies:

1. Security lighting for on-ground facilities should be minimized, and as far as possible, point downwards or be down-shielded to avoid bird hits.

2. Any study conducted on impact of EMF radiation on wildlife needs to be shared with Forest Department and Department of Telecommunications to facilitate appropriate policy formulations."

The report of MOEF Committee on possible impacts of communication towers on wildlife including birds and bees, which has been placed on record as Annex.4 by the petitioners alongwith additional affidavit, also mentions negative impact on human, birds, bees etc. and it has been mentioned thus:

"Impact on birds and bees: Of the non-human species, impacts on birds and bees appear to be relatively more evident. Exposure to EMR field is shown to evoke diverse responses varying from aversive behavioural responses to developmental anomalies and mortality in many of the studied groups of animals such as bees, amphibians, mammals and birds (Zach and Mayoh 1982; Zach and Mayoh 1982; Batellier et al. 2008; Nicholls and Racey 2007; Bergeron 2008; Copplestone et al. 2005; Sahib 2011). Honey bees appear to be very sensitive to EMF (Ho 2007; Sharma and Kumar 2010; Ho 2007) and their behavioural responses, if scientifically documented, could be used as an indicator of EMF pollution.

**Impacts on other wildlife: Other wildlife such as*

amphibians and reptiles also appear to be at high risk with possible interference of EMF with metamorphosis and sex ratios where temperature dependent sex determination is operational. Several investigations into environmental effects of EM fields are covered in some of the unpublished /grey literature and impact assessments submitted to various regulatory government agencies (Bergeron 2008a; Bergeron 2008b; Cleveland, Fields, and Ulcek 1999; Copplestone et al. 2005; G. Kumar 2010; Hutter et al. 2006). Such reports are either not in the public domain, or scattered and often difficult to access.

**Impacts on Human: Since its inception, there have been concerns about the ill-effect of the mobile towers and mobile phones. Despite being a relatively newly acknowledged form of pollution, EMRs and their negative impacts on biological systems and environment have already been reported by several studies. However most of the available scientific literature on the negative environmental effects of electromagnetic fields reports the results of experimental and epidemiological studies examining the impact on various aspects of human health (Tanwar 2006; Savitz 2003; Preece et al. 2007; Oberfeld et al. 2004; Navarro et al. 2003; Lönn et al. 2005; Kundi and Hutter 2009; Hardell et al. 2007; Kapdi, S. Hoskote and Joshi 2008; Hallberg and Johansson 2002).*

Present scenario: At present, there could be more than 5 billion mobile phone subscribers globally (www.who.ilt/mediacentre/factsheets/fs193/en).
Recently, in May 2011, the WHO's International Agency for Research on Cancer (IARC) has classified electromagnetic fields from mobile phones and other

sources "possibly carcinogenic to human" and advised the public to adopt safety measures to reduce exposures, like use of hand-free devices or texting. For details please see Press Release No. 208, dated 31 May 2011 on IARC-WHO (http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf). Their findings were published in the July 2011 issue of the medical journal Lancet. Later, WHO clarified that some of the findings published in Lancet were not reported properly in the media and the risk is not as great as made out in the media. Some of the cell phone manufactures have objected to these findings (For example see www.Physorg.com). Some earlier investigators also have contended that there is no measurable risk of reproductive failure and birth defects from EMF exposures in humans (Brent et al. 1993), while several others do not agree with that conclusion (Gandhi 2005; Kapdi, Hoskote and Joshi 2008; Pourlis 2009; G. Kumar 2010). Studies carried out on the RF levels in North India, particularly at the mobile tower sites at Delhi have shown that people in Indian cities are exposed to dangerously high levels of EMF pollution (Tanwar 2006)." *(Emphasis added by us)*

From the report of expert committee of MOEF, it appears that there may be adverse effect on the human, birds and bees and it is not disputed that in case high level of EMF radiation is caused, various kind of diseases may take place. Thus, it has been rightly suggested by Inter-Ministerial Committee, DoT & MOEF that precautionary approach has to be taken in such case.

It is apparent from the report of the Inter-Ministerial

Committee, which has been accepted by the Central Government, recommendations and guidelines/advisory of DoT, report and advisory of MOEF that adverse effects on health from mobile towers, antennas and handsets are not ruled out in case EMF radiation is of higher level; with respect to low level also, there are reports, which are not conclusive as further research work is on.

Shri Gopal Subramanyam, learned Senior Counsel appearing on behalf of COAI has referred to various reports; first report is of WHO and the same has been filed as Annex.F to the additional affidavit. It has been mentioned in the report of WHO Annex.F that the strength of RF fields is greatest at its source and diminishes quickly with distance; with respect to health concerns and under the head 'cancer', it has been mentioned that media or anecdotal reports of cancer cluster around mobile phone base stations have heightened public concern. It should be noted that geographically, cancers are unevenly distributed among any population. Given the widespread presence of base stations in the environment, it is expected that possible cancer cluster will occur near base stations merely by chance. Moreover, the reported cancers in these clusters are often a collection of different types of cancer with no common characteristics and hence unlikely to have a common cause. Following is the relevant portion of WHO report with respect to cancer:-

"Cancer: Media or anecdotal reports of cancer clusters around mobile phone base stations have heightened public concern. It should be noted that geographically, cancers are unevenly distributed among any population. Given the widespread presence of base stations in the environment, it is expected that possible cancer clusters will occur near base stations merely by chance. Moreover, the reported cancers in these clusters are often a collection of different types of cancer with no common characteristics and hence unlikely to have a common cause.

Scientific evidence on the distribution of cancer in the population can be obtained through carefully planned and executed epidemiological studies. Over the past 15 years, studies examining a potential relationship between RF transmitters and cancer have been published. These studies have not provided evidence that RF exposure from the transmitters increases the risk of cancer. Likewise, long-term animal studies have not established an increased risk of cancer from exposure to RF fields, even at levels that are much higher than produced by base stations and wireless networks. "

It is apparent from the WHO report that reported cancers in the clusters are often a collection of different types of cancer, but it is not stated or ruled out in the said report that EMF radiation could not be the cause of some of cancers found; it talks of maintaining of level by base stations and wireless networks and it does not say what would be the effects and measures to be taken if EMF radiation level is not maintained

by concerned incumbents. With respect to other issues, WHO says that there is no consistent evidence of altered sleep or cardiovascular function. It does not rule out that the evidence is available, but it says that it is not consistent and it has ultimately recommended that since wireless network produce generally lower RE signals than base stations, no adverse effects are expected from exposure to them. The question before us is that if EMF radiation signals are increased, what are precautionary measures. The report of WHO cannot be said to be putting it beyond reasonable doubt that there are no adverse effects of EMF radiation if it is above the prescribed standard limit. Even Shri Gopal Subramanyam, learned Senior Counsel has fairly admitted that in case EMF radiation level is higher than the prescribed limit, it will be hazardous to health, as mentioned in various reports. However, he has submitted that various reports indicate that if revised level is maintained in India, there is no threat to health hazard. He has referred to various reports of international bodies and they are as follows:-

1. U.K. Independent Expert Group on Mobile Phones (IEGMP) (2000)
   - IEGMP, "Mobile Phones and Health," Independent Expert Group on Mobile Phones," c/o National Radiological Protection Board, Chilton, Didcot," Oxon, UK. www.iegmp.org.uk
     - "The balance of evidence to date suggests that exposures to RF radiation below NRPB and ICNIRP guidelines do not cause adverse health effects to the general population..." (p. 3).

2. World Health Organization (2000)

- Fact Sheet N193
  http://www.who.int/docstore/peh-emf/publications/facts_press/efact/efs193.html
  - "Cancer: Current scientific evidence indicates that exposure to RF fields, such as those emitted by mobile phones and their base stations, is unlikely to induce or promote cancers."
  - "Other health risks: Scientists have reported other effects of using mobile phones including changes in brain activity, reaction times, and sleep patterns. These effects are small and have no apparent health significance."
  - "None of the recent reviews have concluded that exposure to the RF fields from mobile phones or their base stations causes any adverse health consequence."

3. Japanese Ministry of Public Management, Home Affairs, Posts and Telecommunications (MPHPT) (2001)
   - Interim Report by Committee to Promote Research on the Possible Biological Effects of Electromagnetic Fields (30 January 2001), MPHPT Communications News, Vol. 11, No. 23. http://www.soumu.go.jp/joho_tsusin/eng/Releases/NewsLetter/Vol11/Vol11_23.pdf
     - "Research into the effects of radio waves on the human body has been conducted for more than 50 years in countries around the world, including Japan. Based on voluminous findings from those studies, exposure guidelines including the Japanese guideline of the 'Radio Radiation Protection Guidelines for Human Exposure to Electromagnetic Fields' has been developed with a safety margin enough to protect human health from adverse effects of radio waves." (summary point 1, p. 3)

4. Singapore Health Sciences Authority (2002)
   - Pulse@HSA (Health Sciences Authority), Frequently Asked Questions about EME & Mobile Phones
     http://www.hsa.gov.sg/docs/fullversion.pdf
     - "Up to the present time, all international and national committees that have evaluated this whole body of evidence have reached the same conclusions: that there are no established health effects from EMF exposures below the international guidelines limits." (p. 12)

5. Australian Government, Australian Radiation Protection and Nuclear Safety Agency, Committee on Electromagnetic Energy Public Health Issues (2003)
   - Fact Sheet EME Series No 1 "Electromagnetic Energy and Its Effects" http://www.arpansa.gov.au/pubs/eme_comitee/fact1.pdf
     - "The weight of national and international scientific opinion is that there is no substantiated evidence that exposure to low level RF EME causes adverse health effects."
6. French Environmental Health and Safety Agency (AFSSE) (2003)
   - AFSSE Statement on Mobile Phones and Health http://afsse.fr/upload/bibliotheque/994597576240248663335826568793/statement_mobile_phones_2003.pdf
   - "With regard to the risk of cancer, we can accept that with the levels of power used in mobile telephony, radiation does not have an effect on our cells' genes (it is not 'genotoxic'). Work carried out on animals using long-term exposure does not indicate a risk of cancer; it shows neither an actual 'initiator' effect nor a promoter' effect for cancers caused by carcinogenic agents." (p.4)
   - "At present, the scientific data available does not indicate that children are particularly susceptible to radiation caused by telephones nor do they have a higher exposure in comparison to adults." (p. 5)
7. U.K. National Radiological Protection Board (NRPB), Advisory Group on Non-Ionizing Radiation (AGNIR) (2004)
   - "Review of the Scientific Evidence for Limiting Exposure to Electromagnetic Fields (0 – 300 GHz)," Documents of the NRPB, Vol. 15, No. 3, NRPB, Chilton, Didcot, Oxfordshire, U.K. http://www.hpa.org.uk/radiation/publications/documents_of_nrpb/abstracts/absd15-3.htm
   - "Overall, AGNIR concluded that, in aggregate, the research published since the IEGMP[1] report does not give cause for concern and that the weight of evidence now available does not suggest that there are adverse health effects from exposures to RF fields below guideline levels" (p. 8).

     IEGMP: U.K. Independent Expert Group on Mobile Phones (see first item on page 1)
8. World Health Organization (2004)
   - Electromagnetic Fields (EMF). Summary of health effects http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html

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1 EGMP: U.K. Independent Expert Group on Mobile Phones (see first item on page 1)

- "Conclusions from scientific research
  In the area of biological effects and medical applications of non-ionizing radiation approximately 25,000 articles have been published over the past 30 years. Despite the feeling of some people that more research needs to be done, scientific knowledge in this area is now more extensive than for most chemicals. Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields. However, some gaps in knowledge about biological effects exist and need further research."

9. Health Council of the Netherlands (2004)
   - Electromagnetic Fields Committee. Mobile Phones and Children: Is Precaution Warranted? Bioelectromagnetics 25:142-144.
     - "The Health Council therefore sees no reason to recommend limiting the use of mobile phones by children." (p. 142)

10. U.S. Department of Health and Human Services, Centers for Disease Prevention and Control (2005)
    - CDC Fact Sheet: Frequently Asked Questions about Cell Phones and Your Health http://www.cdc.gov/nceh/radiation/factsheets/cellphone_facts.pdf
    - "In the last 10 years, hundreds of new research studies have been done to more directly study possible effects of cell phone use. Although some studies have raised concerns, the scientific research, when taken together, does not indicate a significant association between cell phone use and health effects." (p. 1)

11. European Cancer Prevention Organization (2005)
    - During annual symposium on Cell Phones and Cancer in Blankenberge, Belgium on November 4-5, 2005, a consensus statement was developed about the health effects of electromagnetic fields from cell phones. http://www.ecpo.org/
    - The consensus statement includes the conclusion that "The European Cancer Prevention Organization states that, in 2005 there is insufficient contemporary proof with regard to increased cancer risk to change mobile phoning habits."

12. German Research Centre Jülich, Programme Group Humans, Environment, Technology (MUT) (2005)

- This program brought together 25 leading experts from Germany and Switzerland in a risk dialogue to assess the results of recent scientific studies on mobile phones and base stations http://www.fz-juelich.de/portal/index.php?index=721&jahr=2005&cmd=show&mid=288
- Dr. Peter Wiedemann, head of the Jülich MUT Programme Group, concluded that "The scientific studies examined in the risk dialogue do not support suspicions that mobile telephony has harmful effects on health."

13. Swedish State Radiation Protection Authority (SSI) (2006)
    - Recent Research on EMF and Health Risk, Fourth annual report from SSI's Independent Expert Group on Electromagnetic Fields http://www.ssi.se/ssi_rapporter/pdf/ssi_rapp_2007_4.pdf
    - Mobile phone: "Recently published studies on mobile phone use and cancer risk do not change the earlier overall assessment of the available evidence from epidemiological studies. In particular an extended follow up of a cohort study from Denmark does not alter the conclusions. Currently available evidence suggests that for adult brain tumours there is no association with mobile phone use for at least up to, say, ten years of use. For longer latency the majority of the evidence also speaks against an association, but the data are still sparse. The same conclusion holds for short-term use and acoustic neuroma. However, for long-term use and acoustic neuroma there is a concern, and more information is required." (p. 5)
    - Base station: "The overall conclusion is that exposure from transmitters is unlikely to be a health risk." (p. 36)

14. Australian Communications and Media Authority (2006)
    - Mobile Phones, Your Health and Regulation of Radiofrequency Electromagnetic Energy http://emr.acma.gov.au/mobile_phone_health.pdf Mobile phone: "The weight of national and international scientific opinion is that there is no substantiated evidence that using a mobile phone causes harmful health effects. Although there have been studies reporting biological effects at low levels, there has been no indication that such effects might constitute a human health hazard, even with long-term exposure...The general consensus of scientific opinion is that, provided mobile phones do not exceed the limits of recognised standards, there will be no harmful effects." (p. 8)
    - Base station: "The weight of national and international expert opinion is that there is no

substantiated evidence that there are adverse health effects resulting from the emissions of mobile phone towers or base stations." (p. 9)

15. Health Canada (2006)

    It's Your Health, Safety and Safe Use of Mobile Phones http://www.hc-sc.gc.ca/iyh-vsv/prod/cell_e.html

    "There is no firm evidence to date that RF emissions from cell phones cause ill health."

16. U.S. Federal Communications Commission (2006)
    - Mobile Phones and Health Concerns http://ftp.fcc.gov/cgb/consumerfacts/mobilephone.html
    - "There is no scientific evidence that proves that wireless phone usage can lead to cancer or a variety of other problems, including headaches, dizziness or memory loss."

17. UK Institution of Engineering and Technology, Biological Effects Policy Advisory Group on Low-level Electromagnetic Fields (2006)

    The Possible Harmful Biological Effects of Low-Level Electromagnetic Fields of Frequencies up to 300 GHz http://www.theiet.org/publicaffairs/bepag/postat02final.pdf

    - o"…the balance of scientific evidence to date does not indicate that harmful effects occur in humans due to low-level exposure to electromagnetic fields ("EMF")." (p. 1)

18. New Zealand Ministry of Health, National Radiation Laboratory (2007)

    Safety of Cell Phones

    http://www.nrl.moh.govt.nz/faq/cellphonesandcellsites.asp

    - o "The balance of current research evidence suggests that exposures to the radiofrequency energy produced by cellphones do not cause health problems provided they comply with international guidelines. Reviews of all the research have not found clear, consistent evidence of any adverse effects."

19. Hong Kong, Office of the Telecommunications Authority (2007)

    "Know More about Radiofrequency Electromagnetic Radiation" http://www.ofta.gov.hk/en/freq-spec/radiation.pdf

o "Is it safe to use held-held mobile phones?"

"Many studies have concluded that there is no evidence that mobile phones bring hazards to health when used under normal operating conditions."

o "Is it safe to live close to radiofrequency transmitters?"

"Operators of radio stations are required to ensure that the levels of electromagnetic radiation of their radio transmitters including those on rooftops in residential areas are within the limits stipulated in the Code of Practice. Despite densely-packed transmitters on some rooftops in residential areas, therefore, the buildings are absolutely safe to live in."

20. Health Council of the Netherlands (2007)
    - "UMTS[2] and DECT[3] are systems for mobile communication. Some people wonder whether exposure to the radio waves of UMTS antennae or DECT base stations and handsets used at home may cause health problems. Recent research does not give any indications for this, however. This is the message of the Health Council of the Netherlands in its fourth Annual Update on Electromagnetic Fields…" http://www.healthcouncil.nl/pdf/Press%20release%20200706%20site.pdf

21. Ireland Expert Group on Health Effects of Electromagnetic Fields (2007) http://www.dcmnr.gov.ie/NR/rdonlyres/9E29937F-1A27-4A16-A8C3-F403A623300C/0/ElectromagneticReport.pdf

    "So far no adverse short or long-term health effects have been found from exposure to the RF signals produced by mobile phones and base station transmitters." (p. 3)

    "There are no data available to suggest that the use of mobile phones by children is a health hazard." (p. 3)

    "The ICNIRP guidelines provides adequate protection for the public from any EMF sources." (p. 4)

22. International Commission on Non-ionizing Radiation Protection (ICNIRP) (2007)
    - 'It is however the opinion of ICNIRP that present guidelines provide adequate protection against any adverse effect established so far."

    Paolo Vecchia, Chairman, ICNIRP, Scientific Rationale of ICNIRP Guidelines, Abstract, WHO/ICNIRP/EMF-NET Joint Workshop on Current Trends in Health and Safety Risk Assessment of Work-Related Exposure to EMFs, Milan, Italy, February 14-16, 2007 (http://www.icnirp.de/Joint/VecchiaAbstract.pdf)

23. European Commission Scientific Committee on Emerging and Newly Identified Health Risks

    Possible Effects of Electromagnetic Fields (EMF) on Human Health (2007) http://ec.europa.eu/health/ph_risk/committees/04_scenihr/docs/scenihr_o_007.pdf

    "RF field exposure has not convincingly been shown to have an effect on self-reported symptoms or well-being." (p.6)

    "In conclusion, no health effect has been consistently

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2 UMTS: Universal Mobile Telecommunications System (UMTS) is one of the third-generation (3G) mobile phone technologies

3 DECT: Digital Enhanced Cordless Telecommunication is a European Telecommunications Standard Institute standard for digital cordless phones

demonstrated at exposure levels below the limits of ICNIRP (International Commission on Non Ionising Radiation Protection) established in 1998." (p. 6)

24. States of Jersey (2007)

- Regarding emissions from mobile masts, "…it is equally clear that there is no scientific evidence to show that an actual risk exists." States of Jersey, Review into the perceived health effects of mobile phone masts (s.r.8/2007) – Response of the Minister for Economic Development, May 30, 2007. http://www.scrutiny.gov.je/view_doc.asp?panelid=0&reviewid=0&target=Reports&doc=documents/reports/S-260-48911-3052007.htm

25. Japan Ministry of Internal Affairs and Communications (2007)

- "Consequently, this committee cannot recognize that there is any firm evidence of effects on health, including nonthermal effects, from radio waves at strengths that do not exceed the policy for protection from radio waves." Committee to Promote Research on the Possible Effects of Electromagnetic Fields, Biweekly Newsletter of the Ministry of Internal Affairs and Communications (MIC), Communications News, Vol. 18(6), July 6, 2007.

http://www.soumu.go.jp/joho_tsusin/eng/Releases/NewsLetter/Vol18/Vol18_06/Vol18_06.html

26. Finland (2007)

- "No evidence of detrimental health effects were obtained in the studies on cell cultures, laboratory animals, voluntary persons, or theoretical modelling." HERMO - Health Risk Assessment of Mobile Communications, A Finnish Research Programme 2004-2007. Final report. November 30, 2007. http://www.uku.fi/hermo/english/Final_report.shtml

27. United Kingdom (2007)

- "The MTHR Programme was set up to resolve uncertainties identified by previous evaluations of the possible health risks associated with the widespread use of mobile phone technology. None of the research supported by the Programme and published so far demonstrates that biological or adverse health effects are produced by radiofrequency exposure from mobile phones…The Committee has recognized that, while many of the concerns raised by the Stewart Committee have been reduced by the Programme and work done elsewhere, some still

remain. It has therefore proposed a further programme of work to address these." Mobile Telecommunications Health Research (MTHR) Programme, Report 2007. See Report 2007 at http://www.mthr.org.uk/

28. European Commission, EMF-NET, Sixth Framework Programme (2007)

- "Overall, there is no convincing scientific evidence that acute or long-term exposure to low level RF fields can affect reproduction and development in mammals: where consistent effects have been reported they can be attributable to thermal insults induced by exposure and not to any field-specific effect unrelated to heating." EMF-NET: Effects of the exposure to electromagnetic fields: From science to public health and safer workplace. WP2.2 Deliverable report D4bis: Effects on reproduction and development, November 2007. http://web.jrc.ec.europa.eu/emf%2Dnet/reports.cfm

29. World Health Organization (2007)

- "Despite extensive research, to date there is no evidence to conclude that exposure to low level electromagnetic fields is harmful to human health." (Key Point #6) http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html
- "To date, all expert reviews on the health effects of exposure to RF fields have reached the same conclusion: There have been no adverse health consequences established from exposure to RF fields at levels below the international guidelines on exposure limits published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP, 1998)." Children and Mobile Phones: Clarification statement (second paragraph)

  http://www.who.int/peh-emf/meetings/ottawa_june05/en/index4.html
  - Fact Sheet #304: Electromagnetic fields and public health: Base stations and wireless technologies http://www.who.int/mediacentre/factsheets/fs304/en/index.html
- "Conclusions: Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects."

30. European Commission (2008)

Health and Consumer Protection Directorate-General, Scientific

Committee on Emerging and Newly Identified Health Risks (SCENIHR) (2008). Possible effects of electromagnetic fields (EMF) on human health -- opinion of the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR). Toxicology. 2008 (Apr 18) 246:248-250. http://ec.europa.eu/health/ph_risk/committees/04_scenihr/docs/scenihr_o_007.pdf

- "Since the adoption of the 2001 opinion extensive research has been conducted regarding possible health effects of exposure to low intensity RF fields, including epidemiologic, in vivo, and in vitro research. In conclusion, no health effect has been consistently demonstrated at exposure levels below the limits of ICNIRP (International Committee on Non Ionising Radiation Protection) established in 1998."

31. United Kingdom (2008).

Position Statement by The Institution of Engineering and Technology: The Possible Harmful Biological Effects of Low-level Electromagnetic Fields of Frequencies up to 300 GHz. (May 2008) www.theiet.org/factfiles

- "In summary, the absence of robust new evidence of harmful effects of EMFs in the past two years is reassuring and is consistent with findings over the past decade."

32. United Kingdom (2008).

Sense About Science. Making Sense of Radiation. A Guide to Radiation and Its Health Effects.www.senseaboutscience.org.uk/index.php/site/project/256/

- "A concern often raised by campaign groups is that mobile phones can have biological effects (affect our cells) despite being too weak to cause significant heating. Because non-thermal effects cover everything except heating it is a very broad term – it can refer both to cancer and insomnia – but there is no evidence that RF radiation causes harmful non-thermal effects."

33. UK Government (2008)

- "The published evidence for health effects of radiofrequency (RF) electromagnetic fields in general is reviewed in Health Effects from Radiofrequency Electromagnetic Fields: Report of an Independent Advisory Group on Non-ionising Radiation. The report found that, as a whole, the research published since the report of the Independent Expert Group on Mobile Phones does not give cause for concern. The weight of evidence now available does not suggest that there are adverse health effects from exposures to RF fields below guideline levels."

http://www.number10.gov.uk/output/Page14249.asp

34. Australian Radiation Protection and Nuclear Safety Agency, Committee on Electromagnetic Energy (2008). http://www.arpansa.gov.au/pubs/eme/fact1.pdf

- "The weight of national and international scientific opinion is that there is no substantiated evidence that exposure to low level RF EME causes adverse health effects."

35. U.S. National Cancer Institute (2008).

Fact Sheet on Cellular Telephone Use and Cancer Risk.http://www.cancer.gov/cancertopics/factsheet/Risk/cellphones

- "Studies have not shown any consistent link between cellular telephone use and cancer…"
- "Incidence data from the Surveillance, Epidemiology and End Results (SEER) program of the National Cancer Institute have shown no increase between 1987 and 2005 in the age-adjusted incidence of brain or other nervous system cancers despite the dramatic increase in use of cellular telephones…"

36. U.S. Food and Drug Administration (2008). Cell Phones. http://www.fda.gov/cdrh/wireless/health.html

- "The weight of scientific evidence has not linked cell phones with any health problems."
- "The scientific evidence does not show a danger to any users of cell phones from RF exposure, including children and teenagers."

37. WHO/IARC (International Agency for Research on Cancer) World Cancer Report 2008. http://www.iarc.fr/en/Publications/PDFs-online/World-Cancer-Report

- "Radiofrequency radiation emitted by mobile telephones has been investigated in a number of studies. There is some evidence that long-term and heavy use of mobile/cellular phones may be associated with moderate increased risks of gliomas, parotid gland tumours, and acoustic neuromas; however, evidence is conflicting and a role of bias in these studies cannot be ruled out." (p. 170)
- "With reference to radio frequency, available data do not show any excess risk of brain cancer and other neoplasms associated with the use of mobile phones." (p. 170)
- Concerning brain tumors: "After 1983 and more recently during the period of increasing prevalence of mobile phone

users, the incidence has remained relatively stable for both men and women." (p. 461)

38. Sweden SSI (2008) Recent Research on EMF and Health Risks- Fifth Annual Report from SSI: Independent Expert Group on Electromagnetic fields, 2007(Revised edition 15 April, 2008)

http://www.stralsakerhetsmyndigheten.se/Global/Publikationer/Rapport/Stralskydd/2008/ssi-rapp-2008-12.pdf

- Most of these studies have not demonstratedeffects of RF exposure on the studied outcomes, including also attempts to replicate the genotoxic effects observed in the REFLEX European programme.
- Six recent studies on carcinogenicity, some with higher exposure levels than previouslyused, consistently report lack of carcinogenic effects, and two studies on genotoxicity report no increase in micronuclei or DNA strand breaks after RF exposure.
- Most recent volunteer studies have investigated the effects of GSM mobile phone RFradiation on cognitive function, sleep, heart rate variability, blood pressure, and hypersensitivity. In general, the recent, methodologically more rigorous studies do not replicate the positive findings from smaller, less rigorous studies published a few years ago, but a few positive effects are reported.
- Two national Interphone publications are based on very small numbers and donot change the overall assessment, and two published meta-analyses provide little additional information.

39. European Commission (2009). Health Effects of Exposure to EMF. Opinion of the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR) (p. 4).
http://ec.europa.eu/health/ph_risk/committees/04_scenihr/scenihr_opinions_en.htm

- "It is concluded from three independent lines of evidence (epidemiological, animal and in vitro studies) that exposure to RF fields is unlikely to lead to an increase in cancer in humans"
- "…the conclusion that scientific studies have failed to provide support for an effect of RF fields on self-reported symptoms still holds."
- "There is some evidence that RF fields can influence EEG patterns and sleep in humans. However, the health relevance is uncertain… Other studies on functions/aspects of the nervous system, such as cognitive functions, sensory

functions, structural stability, and cellular responses show no or no consistent effects."

- "Recent studies have not shown effects from RF fields on human or animal reproduction and development. No new data have appeared that indicate any other effects on human health."

40. The Netherlands, Health Council (2009)

http://www.gr.nl/index.php

- Annual Update 2008: "The Committee further discusses the relationship between electromagnetic fields and brain activity and that between electromagnetic fields and health symptoms. In both cases the Committee concludes that there is no scientific evidence that exposure to environmental levels of radiofrequency electromagnetic fields causes health problems."

41. Isle of Man (2009)

http://www.gov.im/lib/docs/cso/mobilephonemastscominreport.pdf

- The Council of Ministers considered and accepted the Working Group's Report as the appropriate approach to the health impacts of mobile phone masts in the Island. The final recommendations of the Working Party for the government included endorsement of the ICNIRP guidelines.

42. Spain's Comité Cientifico Asesor en Radiofrecuencias y Salud (CCARS) (2009)

http://www.ccars.es/docs/informes/INFORME%20CCARS%202007-2008.pdf

- Report on radiofrequency and health (2007-2008). The committee concluded from a review of the literature that the use and exposure of adults to mobile phones over a period of less than 10 years is not associated with an increased risk of brain tumor, and that the results of recent scientific research do not justify changes in Spain's exposure limits [currently based on ICNIRP guidelines].

43. CNIRP (2009): "Exposure to high frequency electromagnetic fields, biological effects and health consequences (100 kHz-300 GHz)"

http://www.icnirp.de/documents/RFReview.pdf

- "The mechanisms by which RF exposure

heats biological tissue are well understood and the most marked and consistent effect of RF exposure is that of heating, resulting in a number of heat-related physiological and pathological responses in human subjects and laboratory animals. Heating also remains a potential confounder in *in vitro* studies and may account for some of the positive effects reported."

44.German Telecommunications Research Programme Final Report (2009):
http://www.emf-forschungsprogramm.de/abschlussphase/abschlusskonferenz.html

- "The DMF's findings give no reason to question the protective effect of current limit values."

45. Finland's Radiation and Nuclear Safety Authority (Stuk) (2009)

http://www.stuk.fi/julkaisut_maaraykset/fi_FI/katsaukset/_files/81811016537538837/default/taustakentat_engl_22_7_2009_lopullinen.pdf

- "There is no evidence so far on the health effects due to long-term exposure to radio frequency radiation but anyone can reduce one's own exposure easily."

46, ICNIRP (2009**):** ICNIRP statement on the "Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)"

http://icnirp.org/documents/StatementEMF.pdf

- "..it is the opinion of ICNIRP that the scientific literature published since the 1998 guidelines has provided no evidence of any adverse effects below the basic restrictions and does not necessitate an immediate revision of its guidance on limiting exposure to high frequency electromagnetic fields."

47. US National Institute of Environmental Health Sciences, National Toxicology Program (2009)

"Cell Phone Radiofrequency Radiation Studies"

http://www.niehs.nih.gov/health/docs/cell-phone-fact-sheet.pdf

- "The weight of scientific evidence has not conclusively linked cell phones with any health problems. Additional research is needed. The NTP is conducting studies on radiofrequency radiation emitted by cell phones."

48. US Health Physics Society (2009)

http://hps.org/documents/mobiletelephonefactsheet.pdf

- "These analyses, together with other previous reviews by expert groups and health agencies, show there is no clear evidence for health hazards from exposures to RF fields below international (IEEE or ICNIRP) exposure guidelines."

49. French Agency for Environmental and Occupational Health Safety (2009)

http://www.afsset.fr/upload/bibliotheque/964737982279214719846901993881/Rapport_RF_20_151009_l.pdf

- "..the currently available experimental data do not indicate short-term or long-term effects from RF EMF exposure, nor do current epidemiological data point to effects from short-term exposure. Questions remain for long-term effects, the group states; however, no biological mechanism has been established to support the presence of long-term harm."

50. French Parliament (2009)

http://www.assemblee-nationale.fr/13/rap-off/i2005-tl.asp#P1889_148540

- "The majority of researchers have confirmed, albeit with some caution, the absence of any health risk. There is a near consensus on the harmlessness of mobile phone relays,"
- "With regard to the possible effects of mobile phone, a majority of researchers affirm, though cautiously, the absence of a proven health hazard,"

51. Germany Federal Office for Radiation Protection BfS (2009)

http://www.bfs.de/en/elektro/papiere/EMF_Wirkungenttp://www.bfs.de/en/elektro/hff/papiere.html/Fruchtbarkeit_Mann.

html

- "..research to date has not demonstrated a lasting threat to animals or plants from EMF below the limits, nor significant effects of mobile phone EMF on testes and sperm -- only minor fluctuations in individual physiological parameters. "

52. Nordic countries (2009)

EXPOSURE OF THE GENERAL PUBLIC TO RADIOFREQUENCY ELECTROMAGNETIC FIELDS - A joint statement from the Nordic Radiation Safety Authorities

http://www.stuk.fi/stuk/tiedotteet/fi_FI/news_578/_files/82468261251448918/default/Nordic_Statement-EMF161109.pdf

- "The Nordic authorities agree that there is no

scientific evidence for adverse health effects caused by radiofrequency field strengths in the normal living environment at present. ….The Nordic authorities therefore at present see no need for a common recommendation for further actions to reduce these radiofrequency fields."

53. Sweden SSI (2009)

Recent Research on EMF and Health Risks Sixth annual report from SSM's independent Expert Group on Electromagnetic Fields

Report number: 2009:36 ISSN: 2000-0456, Available at www.stralsakerhetsmyndigheten.se

- "Overall the studies published to date do not demonstrate an increased risk of cancer related to mobile phone use within approximately ten years of use for any tumour of the brain or any other head tumour." "For slow-growing tumours such as meningioma and acoustic neuroma, as well as for glioma among longterm users, the absence of association reported thus far is less conclusive because the observation period has been too short.", and "Long-term animal data on balance do not indicate any carcinogenic effect."
- "..these results in combination with the negative animal data and very low exposure from transmitters make it highly unlikely that living in the vicinity of a transmitter implicates an increased risk of cancer."
- "While the symptoms experienced by patients with perceived electromagnetic hypersensitivity are very real and some subjects suffer severely, there is no evidence that RF exposure is a causal factor."

54. UK Health Protection Agency (HPA) (2010)

Health Advice on Mobile Phones

http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1195733769169

Although HPA mentions in this statement that scientific evidence is limited, in particular regarding long term use and children, they clearly state at the beginning of the paper:

- "The scientific consensus is that, apart from the increased risk of a road accident due to mobile phone use when driving, there is no clear evidence of adverse health effects from the use of mobile phones or from phone masts."

55.WHO (2010)

http://www.who.int/mediacentre/factsheets/fs193/en/index.html

Electromagnetic fields and public health: mobile phones

- To date, no adverse health effects have been established for mobile phone use.

56.ICNIRP (2010)

Note on the Interphone publication

http://icnirp.org/documents/ICNIRPnote.pdf

- ICNIRP therefore considers that the results of Interphone study give no reason for alteration of the current guidelines.

57. UK HPA (2010)

http://www.hpa.org.uk/NewsCentre/NationalPressReleases/2010PressReleases/100518INTERPHONE/

- Dr John Cooper, director of the Health Protection Agency's Centre for Radiation, Chemicals and Environmental Hazards, said: "The INTERPHONE study has not established an increase in brain cancer but some uncertainties remain, particularly regarding high users. The HPA welcomes both the study and the call from the International Agency for Research on Cancer for further research into mobile phone use and brain cancer."

58.FDA (2010)

http://www.fda.gov/downloads/ForConsumers/ConsumerUpdates/UCM212306.pdf

- “No evidence linking cell phone use to risk of brain tumors”

59.National Cancer Institute (2010)

http://www.cancer.gov/newscenter/pressreleases/Interphone2010Results

- “NCI Statement: International Study Shows No Increased Risk of Brain Tumors from Cell Phone Use”

60.Australia Cancer Council (2010)

http://www.cancer.org.au/Newsmedia/mediareleases/mediareleases2010/17May2010.htm

- “World’s largest mobile phone study fails to find brain cancer link

  Mobile phones and cancer risk – Interphone study”

61. Austria (2010): Scientific Expert Panel on EMF and health confirms ICNIRP limits

http://www.wbf.or.at/wbf-expertenforum/expertenforum-2010/

- The Austrian Scientific Advisory Board Funk (WBF) has unanimously concluded that the current state of scientific evidence on mobile phone use shows no conclusive health hazard could be proven. WBF says it may therefore continue to be assumed that mobile phones - in compliance with the limits – represents no health risk to humans.

62. The Institution of Engineering and Technology (2010)
http://www.theiet.org/factfiles/bioeffects/emf-position.cfm

The Possible Harmful Biological Effects of Low-Level Electromagnetic Fields of Frequencies up to 300 GHz

- BEPAG has concluded that the balance of scientific evidence to date still does not indicate that harmful effects occur in humans due to low-level exposure to EMFs. This conclusion remains the same as that reached in its previous position statements, the last being in May 2008, and has not been substantially altered by the peer-reviewed literature published in the past two years.

63. European health risk assessment network on EMF exposure (2010)
http://efhran.polimi.it/docs/IMS-EFHRAN_09072010.pdf

Report on the analysis of risks associated to exposure to EMF: *in vitro* and *in vivo* (animals) studies

- For the three frequency ranges examined, the conclusions of the 2009 SCENIHR report are still valid in spite of the publication of several positive findings.
- Many of the new publications originate from laboratories and countries that are new to bioelectromagnetics research. This translates sometimes into unsatisfactory dosimetry or statistical analysis. Health risk assessment to be performed in the coming years (e.g., WHO EMF project) will need to be carried out with strict quality criteria.

64. Latin America (2010)

Experts Committee on High Frequency Electromagnetic Fields and Human Health.

Scientific review: Non-ionizing electromagnetic radiation in the radiofrequency spectrum and its effects on human health.

http://www.wireless-health.org.br/downloads/LatinAmericanScienceReviewReport.pdf

- “Having many different rules only creates confusion and mistrust of government. Every effort should be made to harmonize standards at all levels (from national to state or municipality level)

adopting science-based standards recommended by international bodies such as ICNIRP."

- "…the general conclusion, after more than 20 years of in vivo studies, is that no consistent or important effects of RF could be demonstrated in intact animals below international safety standards,"
- Overall, "current science-based evidence points to there being no adverse effects in humans below thermal thresholds, no hazardous influences on the well-being and heath status of users and non-users of cell phones and people living near base stations, and that no convincing evidence for adverse cognitive, behavioral and neurophysiological and other physiological effects exist."

65. European Commission (2010)

PROMOTING HEALTHY ENVIRONMENTS WITH A FOCUS ON THE IMPACT OF ACTIONS ON ELECTROMAGNETIC FIELDS

http://ec.europa.eu/health/electromagnetic_fields/docs/bio_frep_en.pdf

- There is no conclusive scientific evidence of any adverse health effects below the protection limits of exposure to electromagnetic fields proposed by the International Commission on Non-Ionising Radiation Protection (ICNIRP), implemented in Europe by the Council Recommendation 1999/519/EC. The advantage of applying the ICNIRP guidelines is their solid scientific basis of established biological effects.
- In conclusion, society and/or decision-makers have to decide which options of exposure reductions are to be applied, given the present scientific uncertainty in relation to some exposure scenarios. However, it is unclear at the moment whether precautionary measures lead to any benefits. For this purpose, the options, their potential benefits, and potential lack of any benefits together with the implementation costs have to be communicated in a transparent manner. At the same time, more data are needed to have a better overview of an individual's total EMF exposure in a modern environment, to better identify where exposure peaks occur, and how they can be avoided.

66. Tanzania Communications Regulatory Authority (2010)

Electromagnetic radiation from telecommunications and broadcasting equipment and health

http://www.tcra.go.tz/headlines/radiationPressReleaseEng.pdf

- The conclusions from these publications show that there is strong evidence that RF exposure below a certain threshold does not cause harmful effects to biological systems.
- The weight of substantial international scientific research is that there is no substantial evidence that the use of communications equipment causes harmful health effects.

67. European Union (2010)

European Health Risk Assessment Network on Electromagnetic Fields Exposure (EFHRAN)

http://efhran.polimi.it/docs/EFHRAN_D2_final.pdf

- For none of the diseases is there sufficient evidence for a causal association between exposure and the risk of the disease, and the strength of evidence for many outcomes remains as inadequate.
- Classification: Evidence for Lack of Effect for EHS.

69. Ontario Agency for Health Protection and Promotion (2010)

Wireless Technology and Health Outcomes: Evidence and Review

http://www.oahpp.ca/resources/documents/10-09-2010_Wireless_technology_and_health_outcomes_v2.pdf

'…While the most recent review continues to call for additional research to follow up on new findings, after a decade of additional research, there is still no conclusive evidence of adverse effects on health at exposure levels below current Canadian guidelines.'

"Given the experience with other sources of non-ionizing radiation (e.g. power lines) that have been in use much longer than cellphones or Wi-Fi, it is unlikely that all controversies related to potential RF effects will be resolved even after decades of additional research."

70. French National Cancer Institute (2010)

Mobile phones and health: what do we know?

http://www.e-cancer.fr/prevention/environnement-et-cancers/ondes-electromagnetiques/telephones-mobiles-et-sante--que-savons-nous-

- "French health authorities indicate there is no evidence to demonstrate that the use of mobile phones presents a risk to health, both for adults and for children. "

71. Swedish Radiation Safety Authority (2010)

2010:44 Recent Research on EMF and Health Risk: Seventh annual report from SSM:s IndependentExpert Group on Electromagnetic Fields, 2010

http://www.stralsakerhetsmyndigheten.se/Global/Publikationer/Rapport/Stralskydd/2010/SSM-Rapport-2010-44.pdf

- "…for up to about ten years of mobile phone use associations with brain tumour risk are unlikely. … For longer duration of use, for specific subtypes of cancer, and for children and adolescents data are sparse or non-existing, and conclusions are less certain."
- "Available data do not indicate any risks related to exposure to RF from base stations or radio or TV antennas. Taking into account also the low levels of exposure that these sources give rise to, health effects from transmitters are unlikely."

72. Spain's Comité Cientifico Asesor en Radiofrecuencias y Salud (CCARS) (2011)

http://www.ccars.es/

- "According to various agencies, there is no scientific justification for a reduction in current exposure limits for RF EMF."

73. ICNIRP (2011)

Note From The ICNIRP Regarding The IARC Classification Of Radiofrequency Fields

http://www.icnirp.de/documents/ICNIRP_IARCclassificationRF.pdf

- "ICNIRP awaits with interest the full Monograph that explains the justification and arguments put forward by IARC in arriving at this conclusion. ICNIRP has been conducting a review of the potential health effects of RF including carcinogenicity as well as other aspects. The Commission will be publishing a revision of the ICNIRP guidelines on limiting RF exposure for the general public and occupational groups. It will take into account all aspects of the literature including the material put forward in the IARC Monograph."

74. National Cancer Institute

http://www.cancer.gov/ncicancerbulletin/062811/page4

A conversation with Dr. Martha Linet on Cell Phone Use and Cancer Risk

- "Most studies to date have not found an association between cell phone use overall and the development of tumors. However, there are a handful of studies that have shown an association with increased risk for glioma among the small number of cell phone users who reported the highest level of call time. Among the positive studies, results are conflicting and don't show a dose-response. In addition, there is no biologically plausible mechanism or animal evidence for how

cell phones might cause cancer. “

75. Association for International Cancer Research (2011)
http://www.thecourier.co.uk/Community/Health/article/14539/cancer-expert-plays-down-mobile-phone-link-with-brain-tumours.html

- “There is no convincing evidence linking mobile phone use and cancer.”

76. Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) (2011)
Statement by ARPANSA on IARC announcement on classification of radiofrequency

http://www.arpansa.gov.au/index.htm

- “ARPANSA does not consider that the new classification should give rise to any alarm.”
- “ARPANSA will consider the implications of the IARC decision and the underlying scientific evidence and, if necessary, review the current standard and other means of protecting the public.”

77. Cancer Council Australia (2011)
http://www.cancer.org.au/Newsmedia/mediareleases/mediareleases2011/1June2011.htm

- “However, these findings need to be put in context. While we need to continue researching the possible link between mobile phones and cancer, it is important to remind people there are many more established cancer risk factors that we can take action every day. Strong action on clear cancer risks like tobacco, alcohol, excessive UV exposure and obesity remain a priority.”

78. Irish Cancer Society
http://www.cancer.ie/news/news.php?newsID=464?h

- “This means that there is potential for harm from mobile phones but there is insufficient evidence to say there is a direct effect. “

79. UK Health Protection Agency (2011)
http://www.hpa.org.uk/NewsCentre/NationalPressReleases/2011PressReleases/110531electomagneticfields/

- “HPA advice is that there is no clear scientific evidence of a cancer risk from exposure to radiofrequencies at levels below international guidelines but the possibility remains.”

80. UK National Health Service (2011)
http://www.nhs.uk/news/2011/05May/Pages/iarc-mobile-

phones-brain-tumour-cancer.aspx

So do mobile phones definitely cause cancer?

- No. The IARC's classification means there is some evidence linking mobile phones to some types of brain cancer but that this evidence is too weak to draw strong conclusions.

81. US National Cancer Institute (2011)
http://www.cancer.gov/newscenter/pressreleases/2011/IARCcellphoneMay2011

NCI Statement: International Agency for Research on Cancer Classification of Cell Phones as "Possible Carcinogen"

- "Interphone, considered the major study on cell phone use and cancer risk, has reported that overall, cell phone users have no increased risk of the most common forms of brain tumors -- glioma and meningioma. In addition, the study revealed no evidence of increasing risk with progressively increasing number of calls, longer call time, or years since beginning cell phone use. For the small proportion of study participants who reported spending the most total time on cell phone calls, there was some increased risk of glioma, but the researchers considered this finding inconclusive. Furthermore, a large population-based cohort study in Denmark has found no evidence of increased risk of brain tumors. It is noteworthy that brain cancer incidence and mortality rates in the population have changed little in the past decade."

82. American Cancer Society (2011)
http://pressroom.cancer.org/index.php?s=43&item=312

Dr. Otis Brawley, Chief Medical Director, responds to IARC Classification of Cell Phones as Possible Carcinogenic

- *"It is critical that its findings be interpreted with great care. The working group reviewed a large number of studies and concluded that there was limited evidence that cell phones may cause glioma, a type of brain tumor that starts in the brain or spine. A 2B classification means that there could be some risk, but that the evidence is not strong enough to be considered causal, and needs to be investigated further. The bottom line is the evidence is enough to warrant concern, but it is not conclusive."*
- *"It's also important to put this 2B classification into perspective. Many common exposures are classified in Category 2B, including gasoline exhaust and even coffee."*

83. Health Canada (2011)
http://www.canada.com/health/Call+concern+cellphone+emissi

ons+carcinogenic+says/4868280/story.html#ixzz1NyKX64T5

- "The best way to define this is it's a recognition that there is some evidence from human studies and from animal studies. It's very important to state that this evidence is far from established and it's far from causal, but it is a recognition that a lot of work has been done, a great deal of work has been reviewed and it's a statement of where the science is in time," said McNamee.

84. WHO (June, 2011)

Fact Sheet #193 Electromagnetic fields and public health: mobile phones

http://www.who.int/mediacentre/factsheets/fs193/en/index.html

Are there any health effects?

- "A large number of studies have been performed over the last two decades to assess whether mobile phones pose a potential health risk. To date, no adverse health effects have been established as being caused by mobile phone use."

- "WHO will conduct a formal risk assessment of all studied health outcomes from radiofrequency fields exposure by 2012."

85. ICNIRP (July 2011)

Mobile Phones, Brain Tumours and the Interphone Study: Where Are We Now?

http://ehp03.niehs.nih.gov/article/info%3Adoi%2F10.1289%2Fehp.1103693

- "In summary, Interphone and the literature overall have methodological deficiencies but do not demonstrate greater risk of either glioma or meningioma with longer or greater use of mobile phones, although the longest period since first use examined is <15 years."
- "Although there remains some uncertainty, the trend in the accumulating evidence is increasingly against the hypothesis that mobile phone use can cause brain tumours in adults."

86. International Epidemiology Institute (2011)

http://jnci.oxfordjournals.org/content/early/2011/07/27/jnci.djr285.full

- "There have been other recent studies presenting brain tumor incidence trends among adults and children over the last 20 years in the United States; the United Kingdom; New Zealand; and Denmark, Norway, Sweden, and Finland. It is especially encouraging that these nationwide time-trend studies are uniformly and remarkably consistent in showing no evidence of increases in brain tumors over recent calendar years, up to and

including 2009 in Sweden. Increases would have been expected if radio frequency waves were causally associated with brain cancer, given the steady and marked rise in the use of cell phones throughout the world since the 1980s."

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87. National Cancer Institute (2011)
Fact Sheet: Cell Phones and Cancer Risk

http://www.cancer.gov/cancertopics/factsheet/Risk/cellphones

- "Studies thus far have not shown a consistent link between cell phone use and cancers of the brain, nerves, or other tissues of the head or neck."
- "..to date there is no evidence from studies of cells, animals, or humans that radiofrequency energy can cause cancer."

88. Health Canada (2011)
Wi-Fi Equipment

http://www.hc-sc.gc.ca/ewh-semt/radiation/cons/wifi/index-eng.php

- "Based on scientific evidence, Health Canada has determined that exposure to low-level RF energy, such as that from Wi-Fi equipment, is not dangerous to the public."

89. Health Canada (2011)
Safety of Cell Phones and Cell Phone Towers

http://www.hc-sc.gc.ca/hl-vs/alt_formats/pacrb-dgapcr/pdf/iyh-vsv/prod/cell-eng.pdf

- "The IARC classification of RF energy reflects the fact that some limited evidence exists that RF energy might be a risk factor for cancer. However, the vast majority of scientific research to date does not support a link between RF energy exposure and human cancers."
- "With respect to cell phone towers, as long as exposures respect the limits set in Health Canada's guidelines, there is no scientific reason to consider cell phone towers dangerous to the public."

90. Health Council of the Netherlands (2011)
Radiofrequency electromagnetic fields and children's brains

http://www.gezondheidsraad.nl/en/news/infleuence-radiofrequency-telecommunication-signals-children-s-brains

- "Available data do not indicate that exposure to radiofrequency electromagnetic fields affect brain development or health in children."

91.EU Commission's DG Health and Consumers (2011)
Public Health (22-11-2011) Electromagnetic Fields and Health: The Way Forward
http://ec.europa.eu/dgs/health_consumer/dyna/enews/enews.cfm?al_id=1198

- "The nocebo effect (an ill effect caused by the suggestion or belief that something is harmful) is a major contributor to electrohypersensitivity"

92.European Cooperation in Science and Technology COST BM0704 (2011)

Fact Sheet: Idiopathic Environmental Intolerance attributed to electromagnetic fields (IEI-EMF) or 'electromagnetic hypersensitivity'

http://www.cost-bm0704.org/index.php?option=com_docman&Itemid=61

- "a relationship between EMF exposure and symptoms has not been established and studies on perception and physiological responses do not provide support for a causal link between EMF and the occurrence of symptoms."
- "As there is no scientific evidence for a causal relationship between EMF exposure and the occurrence of symptoms, there are no diagnostic criteria for 'electromagnetic hypersensitivity' and no EU countries recognize it as a medical condition."

93.Germany SSK (2011)
Biological effects of mobile phones: Overall view.

http://www.ssk.de/de/werke/2011/kurzinfo/ssk1109.htm

- The SSK concludes, "In line with other international bodies (ICNIRP 2009, WHO 2011), it can be determined that the existing limits underlying the concept of protection are not jeopardized."

94. UK Independent Advisory Group on Non-Ionizing Radiation (AGNIR) (2012)
Health effects from radiofrequency electromagnetic fields.

http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1317133826368

- "In summary, although a substantial amount of research has been conducted in this area, there is no convincing evidence that RF field exposure below guideline levels causes health effects in adults or children."

95.UK Biological Effects Policy Advisory Group (BEPAG) of the Institution of Engineering and Technology (2012)
http://www.theiet.org/factfiles/bioeffects/emf-position-page.cfm?type=pdf

- "that the balance of scientific evidence to date does not indicate that harmful effects

occur in humans due to low-level exposure to EMFs."

- "In summary, the absence of robust new evidence of harmful effects of EMFs in the past two years is reassuring and is consistent with our findings over the past two decades. The widespread use of electricity and telecommunications has demonstrable value to society, including health benefits. BEPAG is of the opinion that these factors, along with the overall scientific evidence, should be taken into account by policy makers when considering the costs and benefits."

96. US Government Accountability Office (2012)

Exposure and testing requirements for mobile phones should be reassessed.

http://www.gao.gov/products/GAO-12-771

- "Scientific research to date has not demonstrated adverse human health effects of exposure to radio-frequency (RF) energy from mobile phone use, but research is ongoing that may increase understanding of any possible effects."

97. Swedish Council for Working Life and Social Research (2012)

RADIOFREQUENCY ELECTROMAGNETIC FIELDS AND RISK OF DISEASE AND ILL HEALTH– Research during the last ten years
http://www.fas.se/pagefiles/5303/10-y-rf-report.pdf

- "Extensive research for more than a decade has not detected anything new regarding interaction mechanisms between radiofrequency fields and the human body and has found no evidence for health risks below current exposure guidelines. While absolute certainty can never be achieved, nothing has appeared to suggest that the since long established interaction mechanism of heating would not suffice as basis for health protection."

98. Norwegian Institute for Public Health (2012)

Low-level radiofrequency electromagnetic fields – an assessment of health risks and evaluation of regulatory practice.
http://www.fhi.no/eway/default.aspx?pid=238&trg=MainLeft_5

895&MainArea_5811=5895:0:15,2829:1:0:0:::0:0&MainLeft_5895=5825:99168::1:5896:1:::0:0

- "The studies have been performed on cells and tissues, and in animals and humans. The effects that have been studied apply to changes in organ systems, functions and other effects. There are also a large number of population studies with an emphasis on studies of cancer risk."
- "The large total number of studies provides no evidence that exposure to weak RF fields causes adverse health effects."

The aforesaid reports are guarded; they talk of lack of consistent evidence and with caution to say that EMF radiation below guideline level does not cause health effects in adults or children; EMF exposure below the international guidelines limits does not cause health effects; emphasis is on maintaining low level EMF radiation as is evident from the various reports; these reports are conditional and cautions. It is apparent from the various reports from 1 to 98 that in case low level EMF radiation is maintained, there is no consistent evidence that it will cause adverse health effects. The matter is not placed beyond reasonable doubt. We are not experts, as such, we do not go into their correctness but some reports may be sponsored one or procured by either side may be catering to business interest of parties as alleged, but the main issue before us is for adopting precautionary approach. Even low level of EMF radiation is harmful. However, the reports do not lay down that if EMF radiation is higher than prescribed limit, it would not cause any health hazard, rather risk is admitted fact in the

instant case that in case EMF radiation level is higher than the prescribed limit and there is violation of norms in maintaining EMF radiation, it would cause health hazard and various diseases.

Model Bye-laws/policy framed by State

Based upon the guidelines issued by the Central Government, recommendations of the Inter-Ministerial Committee, DoT, report of committee of MOEF, the State Government constituted the Committee so as to form policy for installation of towers and antennas and security measures to be adopted; it consists of 11 persons; 7 Government Officers including two officers of Telecommunication Department and 4 representatives of cellular operators/mobile companies; various meetings were held on 22.5.2012, 4.7.2012 & 13.8.2012 and guidelines have been finalized; it has been decided by the State Government considering the recommendations of the Inter-Ministerial Committee that installation of mobile towers on schools, colleges, playgrounds and hospitals and on the place within 500 meters from the jail premises be prohibited and removed and pursuant thereto, the State Government has framed the Bye-laws. Accordingly, the State Government has issued the order dated 31.8.2012 in which it has been mentioned that considering the recommendations made by the Government of India (Inter-Ministerial Committee) with regard to mobile tower/pole antenna, the policy decision has been

taken by the State Government and model bye-laws have been formulated and while sending the copy of the model bye-laws, all the municipal corporations/municipal councils/municipal boards were directed to frame the bye-laws in accordance with the model bye laws and in case bye-laws have earlier been framed in this regard, the same be amended to bring them in accordance with the model bye-laws or the same be repealed and new bye-laws be framed as per model bye-laws and till new bye-laws are framed or amended bye-laws are issued, the model bye-laws framed by the State Government shall be made effective considering it as policy decision of the State Government. As the matter is connected with the public interest, the same be given priority and compliance report be sent.

The Model Bye-laws provide that they are with respect to 2G and 3G technology of mobile tower and antenna; 'mobile tower' has been defined in clause 2(4); various provisions with respect to height, weight, roof etc. have been made; in case of fitting of multiple antennas on roof, use of roof for other work has been restricted and number of antenna on tower and distance between tower and building have been specified. Other guidelines issued by the Central Government have also been taken into consideration and made part of the model bye-laws framed by the State Government. The permission of Local Bodies is required for installation of tower, provisions have been

made for registration of tower and monthly fee to be paid to the Municipal Corporation/Municipal Council and Municipal Board as is apparent from clause 13 of Model Bye-laws which provides that for Municipal Corporation/Council Rs.30,000/- and for Municipal Board, Rs.20,000/- as registration charges and Rs.10000/- per year per tower have been prescribed, which may vary from time to time and payment has to be made to the local bodies. In clauses 25 and 26 of the Model Bye-laws, prohibition has been made on installation of mobile towers on educational institutions (schools/colleges), playgrounds and hospitals and within vicinity of 500 meters from jail premises and in clause 26 it has been provided that towers already installed within the area of 500 meters from jail premises be removed within six months. It is also provided that there shall be no tower within 100 meters from historical monuments.

The State Government has also issued directions vide communication dated 14.6.2012, which has been relied upon by the Dy.Director (Secondary) Secondary Education, Rajasthan, Bikaner and directions have been issued for removal of towers from the schools.

We have passed the order with respect to removal of towers from "schools" on 22.8.2012 in PIL No.2774/12 and the same reads as follows:-

Court's order as to schools

"Order

The matter has come up pursuant to the order dated 9.8.2012 passed by this court. This court has taken note of the situation in the order dated 9.8.2012 considering the application filed by Shri Sudhir Kasliwal that two brothers have suffered Cancer within a short span of six months after installation of mobile towers by three companies in close vicinity of their house. There are several other cases in number of families where a large number of family members residing nearby mobile towers are suffering from the disease of Cancer due to radiation caused by mobile towers. In this regard, report of the State Government has been called.

Shri G.S. Bapna, learned Advocate General has stated that they are collecting data and the State Government will submit the requisite report within a period of ten days from today.

It was also pointed out that the State Government has taken a decision to remove the mobile towers from close distance of schools and other public hospitals/buildings. Office Memorandum dated 9.8.2012 issued by the Ministry of Environment and Forests (Wildlife Division), Government of India and communication dated 4.7.2012 of the Directorate, Secondary Education, Rajasthan have been placed on record. The case has been posted today for consideration of the aforesaid aspect.

The Government of India, Ministry of Environment and Forests in its Office Memorandum dated 9.8.2012 has issued advisory to the Chief Secretaries of all the State Governments on the use of mobile towers to minimize their impact on wildlife including birds and bees, etc. The advisory also contains guidelines with respect to human also. An expert committee to study the possible

impact of communication towers on wildlife including birds and bees was constituted by the Ministry of Environment and Forests, Government of India on 30th August, 2010. The report of the expert committee has been submitted to the Ministry of Environment and Forests. On the basis of the said report, request has been made by the Ministry of Environment and Forests to the concerned Departments, State Governments, Local Bodies, user agencies and the public at large to take following actions:-

"Ministry of Environment and Forests:

1. The Electro Magnetic Radiations from the communication towers may have varying negative impacts on wildlife especially birds and bees. Accordingly, the information on the impacts related to different forms of wildlife as well as human, should be provided to the concerned agencies for regulating the norms for notification of standards for safe limits of EMR taking into consideration the impacts on living beings.

State/Local Bodies:

1 Regular auditing and monitoring of EMR should be conducted in urban localities/ educational/hospital/ industrial/residential/ recreational premises and especially around the Protected Areas (PAs) and ecologically sensitive areas were notified norms of Department of Telecommunication. Problematic towers from EMR point of view should be got suitably relocated/removed.

2.Bold signs and messages on the dangers of cell phone towers and associated radiations are displayed in and around the structures of the towers. In addition to these signs, use of visual daytime markers in areas of high diurnal raptor or waterfowl movements, should also be promoted.

3.Before according permission for construction of towers, ecological impact assessment and review of installation sites will be essential in wildlife and/or ecologically important areas. The Forest Department should be consulted before installation of cell phone towers in and around PAs and zoos.

State Environment and Forest Departments:

1. Regular awareness drive with high level of visibility through all forms of media, and in regional languages should be undertaken by the State Governments and concerned Departments to make people aware about

various norms and standards with regard to cell phone towers and dangers of EMR from the same. Such notices should also be placed in all wildlife protected areas and zoos by the Forest Department.

Department of Telecommunication:

1. *To prevent overlapping of high radiation fields, new towers should be permitted within a radius of one kilometer of the existing towers. Sharing of passive infrastructure if made mandatory for Telecom Service Providers can minimize need of having additional towers. If new towers must be built, these should be constructed with utmost care and precautions so as not to obstruct flight path of birds, and also not to increase the combined radiations from all towers in the area.*
2. *The location and frequencies of cell phone towers and other towers emitting EMR, should be made available in public domain. This can be at city/district/village level. Location-wise GIS mapping of all cell phone towers should be maintained which would, inter alia, help in monitoring the population of birds and bees in and around the mobile towers and also in and/or around wildlife protected areas.*
3. *There is an urgent need to refine the Indian standard on safe limits of exposure to EMR, keeping in view the available literature on impacts on various life forms. Till such time the Indian standards are reformed, a precautionary approach shall be preferred to minimize the exposure levels and adopt stricter norms possible, without compromising on optimum performance of the networks.*

All concerned agencies:

1. *Security lighting for on-ground facilities should be minimized and as far as possible point downwards or be down shielded to avoid bird hits.*
2. *Any study conducted on impact of EMF radiation on wildlife needs to be shared with Forest Department and Department of Telecommunications to facilitate appropriate policy formulation."*

It is apparent from Para-1 of the advisory under the caption of 'Ministry of Environment and Forests' that information on the impacts related to different forms of wildlife as well as human, should be provided to the concerned agencies for regulating the norms for notification of standards for safe limits of EMR taking into consideration the impacts on living beings. The

recommendation No.1 made to State/Local Bodies emphasizes that Regular auditing and monitoring of EMR should be conducted in urban localities/educational/ hospital/ industrial/residential/recreational premises and especially around the Protected Areas and ecologically sensitive areas. Problematic towers from EMR point of view should be got suitably relocated/removed from such places. It has also been mentioned in recommendation No.2 made to the State/Local Bodies that bold signs and messages on the dangers of cell phone towers and associated radiations are displayed in and around the structures of the towers. In addition to these signs, use of visual daytime markers in areas of high diurnal raptor or waterfowl movements, should also be promoted. Recommendation has been made to the Department of Telecommunication to the effect that to prevent overlapping of high radiation fields, new towers should not be permitted within a radius of one kilometer of the existing towers.

An Inter-ministerial committee consisting of officers from Department of Telecom, Indian Council of Medical Research, Ministry of Health, Department of Biotechnology and Ministry of Environment and Forest was constituted to examine the effect of EMF Radiation from base stations and mobile phones. The said committee has also, inter alia, recommended with respect to mobile base stations to impose restrictions on installation of mobile towers near high density residential areas, schools, playgrounds and hospitals.

It is submitted by Shri Maninder Singh, learned senior counsel appearing with Shri Naveen Chawla and Shri Ravi Chirania that duty of finalizing the norms with respect to mobile base stations is of the committee

constituted by the DoT and after finalization of the committee's recommendations, the guidelines shall be forwarded to all the State Governments.

There is ample material placed before this court in the shape of advisory on use of mobile towers issued by the Ministry of Environment and Forests and the report of the Inter-Ministerial Committee on EMF Radiation. Besides that, communication dated 4.7.2012 of Deputy Director, Secondary Education, Rajasthan is also on record which has been issued on the basis of communications of the State Government dated 16.5.2012, 14.6.2012 and 22.6.2012 containing direction to the effect that from government and non-government schools, mobile towers should be removed at once and information be submitted to the Department within 15 days. Considering ill-effect of radiation caused by mobile towers on the health of children, aforesaid decision has been taken by the State Government which has been reflected in the communication dated 4.7.2012. The State Government has also constituted a committee on 21.5.2012 which has also submitted its report to the State Government duly considering the recommendations made by the Inter-Ministerial Committee on EMF Radiation constituted by the Government of India. The said committee has also recommended to the State Government that not only from schools, but from sports grounds, high density residential areas, etc. installation of mobile towers be prohibited. However, as stated by Advocate General the State Government is in the process of finalizing the bylaws on the basis of said recommendations. The fact remains that there is already an order issued by the State Government for removing mobile towers from the schools as reflected in the

communication dated 4.7.2012 and it is apparent from overwhelming reports and material placed on record that it is not appropriate to have the mobile towers on the school buildings. We are not touching the other aspects as on today as the State Government is in the process of finalizing the bylaws on the basis of recommendations of the committee and the learned Advocate General has assured to place the same on record within a period of ten days. As assured, within a period of ten days decision be taken with respect to other aspects also, failing which, we may have to consider various aspects.

The learned Advocate General has also assured this court to implement the decision dated 14.6.2012 and other decisions reflected in the letter dated 4.7.2012 to remove the mobile towers from school buildings. In fact, it was required to be done within a period of 15 days; the action was to be taken forthwith, in view of fact that radiation affects the children as they are of tender age. As assured, let the decision of the State Government for removal of towers from school buildings be implemented and compliance report be submitted within a period of 15 days in this court.

We also direct Medical Board to be constituted for examining Shri Sanjay Kasliwal as well as Shri Pramod Kasliwal who are suffering from Cancer and belong to same family and report of the Medical Board be also submitted within a period of ten days with respect to possible cause of ailment including effect of radiation which may have been caused due to mobile towers in close vicinity.

Let return be also filed by respondents positively within a period of 15 days, failing which, right to file return shall stand closed.

As prayed, list on 21.09.2012.

Sd/- *Sd/-."*

The order dated 22.8.2012 passed by this Court was questioned by the Cellular Operators Association of India before the Hon'ble Supreme Court by way of SLP (Civil) CC No.15740/2012 and the said SLP was dismissed by the Hon'ble Supreme Court vide order dated 7.9.2012. Following is the order passed by the Hon'ble Supreme Court on 7.9.2012:-

> *"Learned senior counsel for the petitioner seeks permission of this Court to withdraw the application. Permission sought for is granted. The application is dismissed as withdrawn."*

Though SLP was dismissed as withdrawn, order passed by this Court on 22.8.2012 has not been interfered with by the Hon'ble Supreme Court and thus, it has attained finality.

It was submitted at bar that in compliance of the order of this Court dated 22.8.2012, towers have been removed from the schools in the entire State of Rajasthan and order has been complied with in toto. In our considered opinion, the part of the order which was passed relating to schools was final in its nature and it was not interlocutory one, as stated by the learned Senior Counsel appearing on behalf of COAI and infrastructure Providers.

Now the question remains in the instant case is with respect to mobile towers situated on hospitals, playgrounds,

colleges, ancient monuments and densely populated areas and the areas within 500 meters from the jail premises.

Whether there is encroachment by State Government:Re. Entry 31 of List I of the VIIth Schedule of the Constitution

It was submitted by the learned Senior Counsel appearing on behalf of the COAI, Infrastructure Providers and other respondents that there is encroachment made by the State Government upon the power of Central Government reserved under Entry 31 of List I of Seventh Schedule of the Constitution by enacting the model Bye-laws and taking policy decision. Entry 31 of List I of Seventh Schedule of the Constitution, upon which reliance was placed, is quoted below:-

> *"31. Posts and telegraphs; telephone, wireless broadcasting and other like forms of communication."*

However, the learned Additional Advocate General appearing on behalf of the State and the learned counsel appearing on behalf of the petitioners have relied upon the Entries 1, 4, 6 and 12 of List II of Seventh Schedule of the Constitution and contended that there is no encroachment made by the State on the power of the Central Government while enacting the Bye-laws and taking policy decision. It was further submitted that the provisions for prohibition of installation of mobile towers on schools/colleges, playgrounds & hospitals, monuments and within the area of 500 meters from jail

premises have been made for safeguarding public health and security measure in jails to maintain public order and the State Government was competent to make such provisions in public interest in view of Entries 1, 4, 6 and 12 of List II of Seventh Schedule of the Constitution. The said Entries 1, 4, 6 and 12 are quoted below:-

> *"1. Public order but not including the use of any naval, military or air force or any other armed force of the Union or of any other force subject to the control of the Union or of any contingent or unit thereof in aid of the civil power.*
>
> *4. Prisons, reformatories, Borstal institutions and other institutions of a like nature and persons detained therein; arrangements with other States for the use of prisons and other institutions.*
>
> *6. Public health and sanitation; hospitals and dispensaries.*
>
> *12. Libraries, museums and other similar institutions controlled or financed by the State; ancient and historical monuments and records other than those declared by or under law made by Parliament to be of national importance."*

We are of the considered opinion that Entry 31 relating to posts and telegraphs, telephones, wireless, broadcasting and other like forms of communication would include mobile towers and handsets, but it does not oust the power of the State Government reserved with it relating to various others such as under Entry 6 of List I of Seventh Scheduled relating to public

health and sanitation and hospitals and dispensaries nor it ousts the power of the State Government to act under Entry 1 relating to public order, Entry 4 pertaining to prisons and Entry 12 relating to historical monuments. The role of the State with respect to public health and hospitals etc. cannot be ruled out. Under Entry 6, the State has the power to ensure health including that of patients admitted in the hospitals, children in the schools, students in the colleges and players in the playground. Besides, the guidelines issued by DoT also expressly envisaged permission to be granted by the Local Bodies for installation of tower and while granting permission, various aforesaid aspects mentioned in the State List-II of Seventh Schedule of the Constitution have to be applied.

It is also clear that State has the power to take the policy decision with respect to aforesaid aspects and also to ensure protection of jails and jails are not used as a crime place by jail inmates by using mobile phones and technology. There are instances which have been noted by this Court in pending Public Interest Litigation Petition being D.B.Civil Writ Petition No.2808/12 and large number of mobile handsets have been seized from accused in jails. This Court has taken suo moto cognizance on 28.2.2012 in D.B.Civil Writ Petition No.2808/12 considering the news published in various newspapers i.e. Times of India, Rajasthan Patrika, Dainik Bhaskar, Dainik Navjyoti etc. which indicated that prisoners were possessing mobile sets in

jails and they were directing commission of various offences from jails by using mobile handsets, whereas purpose of incarnation is that they have to be prevented from committing an offence; in case they are getting the offence committed while remaining in jail, it is a serious matter as to public order and State cannot escape from the responsibility. This Court directed the Jail Administration to search all the jails in State of Rajasthan and to ensure that none of the prisoners in jail is possessing any mobile or any such electronic device by which he can communicate outside world. Thereafter, 93 mobile phones and 64 sim cards were recovered from various jails. There are recurrence of such episode.

Thus, considering the aforesaid aspects, the State Government has taken policy decision and has enacted model bye-laws after due consultation with the various representatives of the Mobile Operators and has issued requisite directions for compliance. Recently, there has been incident in which conspiracy has been hatched from jail by using mobile sets by some of accused persons in jail in connection with Bhanwari Devi's case and for running away from the court premises on the next day also to commit yet another crime. There is another instance of jail inmates getting committed offence of murder from Ajmer Jail at Jaipur. It is a serious matter that accused persons in jail are possessing mobile phones and they are using them for making conspiracy either for committing another

offence and for escaping from jail/custody. Thus, the State Government was right in taking policy decision to prohibit installation of mobile towers within the area of 500 meters from the jail premises so as to prevent providing of coverage in jails and to remove such towers located within 500 meters of jails within six months. It was submitted by learned Additional Advocate General that use of jammers has not been successful wherever they are used. The policy decision has been taken by the State Government considering the law and order, safety, public health etc.; the State Government has not exceeded the power, rather acted within the framework of law; there is no encroachment made by the State Government on the power of the Central Government under Entry 31.

Reliance has been placed by the learned Senior Counsel Shri Gopal Subramanyam on the decisions of the Apex Court in *Calcutta Gas Company (Proprietary) Ltd. V/s State of West Bengal* (AIR 1962 SC 1044), *Waverly Jute Mills Co.Ltd. V/s Raymon and Co.(India)Pvt.Ltd.* (AIR 1963 SC 90), *State of Orisssa V/s M.A.Tulloch & Co.* (AIR 1964 SC 1284), *Indu Bhushan Bose V/s Rama Sundari Debi* (1969(2) SCC 289) and *Association of Natural Gas V/s Union of India* (AIR 2004 SC 2647).

In the case of Calcutta Gas Company (Proprietary) Ltd. V/s State of West Bengal & Ors. (supra), the Apex Court held that rule of interpretation is that every attempt should be made

to harmonize apparently conflicting entries not only of different Lists but also of the same List and to reject that construction which will rob one of the entries of its entire content and make it nugatory.

In Waverly Jute Mills Co.Ltd. V/s Raymon & Co. (India) Pvt.Ltd. (supra), the Apex Court held that the entries in the lists in the Seventh Schedule should be so construed as to give effect to all of them and a construction which will result in any of them being rendered futile or otiose must be avoided and where there are two entries, one general in its character and the other specific, the former must be construed as excluding the later. This is only an application of the general maxim that Generalia specialibus non derogant.

In State of Orissa and anr.V/s M.A.Tulloch and Co. (supra), the Apex Court observed that repugnancy arises when two enactments both within the competence of the two legislatures collide and when the Constitution expressly or by necessary implication provides that the enactment of one legislature has superiority over the other then to the extent of the repugnancy the one supersedes the other. But two enactments may be repugnant to each other even though obedience to each of them is possible without disobeying the other. The test of two legislations containing contradictory provisions is not, however, the only criterion of repugnancy, for if a competent legislature with a superior efficacy expressly or

impliedly evinces by its legislation an intention to cover the whole field, the enactments of the other legislature whether passed before or after would be overborne on the ground of repugnance. Where such is the position, the inconsistency is demonstrated not by a detailed comparison of provisions of the two statutes but by the mere existence of the two pieces of legislation.

In Indu Bhusan Bose V/s Rama Sundari Debi and anr. (supra), the Apex Court held that the scope of the expression "regulation of house accommodation" in Entry 3 of List I, cannot be confined and this Entry gives the power to Parliament to pass legislation for the purpose of directing or controlling all house accommodation in cantonment areas. The general power of legislating in respect of relationship between landlord and tenant exercisable by a State Legislature either under Entry 18 of List II or Entries 6 and 7 of List III is subject to the overriding power of Parliament in respect of matters in List I, so that the effect of Entry 3 of List I is that, on the subject of relationship between landlord and tenant in so far as it arises in respect of house accommodation situated in cantonment areas. Parliament alone can legislate and not the State Legislature. No anomaly arises in holding that the executive power of Parliament for regulation of house accommodation including control of rents in cantonment areas has the effect of making the legislative powers conferred by Lists II and III subject to this power of

Parliament.

In Association of Natural Gas V/s Union of India (supra), the Apex Court held that in case of apparent conflict, it is the duty of the court to iron out the crease and avoid conflict by reconciling the conflict. If any entry overlaps or is in apparent conflict with another entry, every attempt should be made to harmonize the same. The doctrine of pith and substance is sometimes invoked to find out the nature and content of the legislation. However, when there is an irreconcilable conflict between the two legislations, the Central legislation shall prevail. However, every attempt would be made to reconcile the conflict.

In *State of Rajsthan V/s* **G. Chawla and Dr. Pohumal** (AIR 1959 SC 544) relied upon by the learned Additional Advocate General, the Apex Court held that pith and substance of the Ajmer (Sound Amplifiers Control) Act, 1952 (Ajmer 3 of 1953), is the control of the use of amplifiers in the interests of health and also tranquility, and thus falls substantially (if not wholly) within the powers conferred to preserve, regulate and promote them and does not so fall within the Entry in the Union List, even though the amplifier, the use of which is regulated and controlled is an apparatus for broadcasting or communication. The Apex Court laid down thus:-

> *"13. The pith and substance of the impugned Act is the control of the use of amplifiers in the interests of health and also tranquillity, and thus falls substantially (if not*

wholly) within the powers conferred to preserve, regulate and promote them and does not so fall within the Entry in the Union List, even though the amplifier, the use of which is regulated and controlled is an apparatus for broadcasting or communication. As Latham, C.J., pointed out in Bank of New South Wales v. The Commonwealth (1948) 76 C.L.R. 1, 186) :

> *"A power to make laws 'with respect to' a subject-matter is a power to make laws which in reality and substance are laws upon the subject-matter. It is not enough that a law should refer to the subject-matter or apply to the subject-matter : for example, income-tax laws apply to clergymen and to hotel-keepers as members of the public; but no one would describe an income-tax law as being, for that reason, a law with respect to clergymen or hotel-keepers. Building regulations apply to buildings erected for or by banks; but such regulations could not properly be described as laws with respect to banks or banking."*

14. On a view of the Act as a whole, we think that the substance of the legislation is within the powers conferred by Entry No. 6 and conceivably Entry No. 1 of the State List, and it does not purport to encroach upon the field of Entry No. 31, though it incidentally touches upon a matter provided there. The end and purpose of the legislation furnishes the key to connect it with the State List. Our attention was not drawn to any enactment under Entry No. 31 of the Union List by which the Ownership and possession of amplifiers was burdened with any such regulation or control, and there being thus no question of repugnancy or of an occupied field, we have no hesitation in holding that the Act is fully covered by the first cited Entry and conceivably the other in the State List."

In *Prem Chand Jain & anr. V/s R.K.Chhabra* (1984(2) SCC 302), relied upon by the learned Additional Advocate General, the Apex Court held that as long as the legislation is within the permissible field in pith and substance, objection would not be entertained merely on the ground that while enacting legislation, provision has been made for a matter which though germane for the purpose for which competent legislation is made, it covers an aspect beyond it. If an enactment substantially falls within the powers expressly conferred by the Constitution upon the legislature enacting it, it cannot be held to be invalid merely because it incidentally encroaches on matters assigned to another legislature. The Apex Court laid down thus:

> *"Education including universities' was a State subject until by the 42nd Amendment of the Constitution in 1976, that entry was omitted from the State list and, was taken into entry 25 of the concurrent list. But as already pointed out the Act essentially intended to make provisions for the coordination and determination of standards in universities and that, as already indicated, is squarely covered under entry 66 of list I. While legislating for a purpose germane to the subject covered by that entry and establishing a University Grants Commission, Parliament considered is necessary, as a regulatory measure, to prohibit unauthorised conferment of degrees and diplomas as also use of the word 'university' by institution which had not been either established or incorporated by special legislation. We are not inclined to agree with the submission advanced on the behalf of the*

appellants that in doing so Parliament entrenched upon legislation power reserved for the State legislature. The legal position is well-settled that the entries incorporated in the lists covered by Schedule VII are not powers of legislation but 'fields' of legislation. Harakchand v. Union of India [1970]1SCR479. In State of Bihar v. Kameswar [1952]1SCR 889 this Court has indicated that such entries are mere legislative heads and are of an enabling character. This Court, has clearly ruled that the language of the entries should be given the widest scope or amplitude.. Navinchandra v. C.I.T. [1955] 2 S.C.R. 129. Each general word has been asked to be extended to all ancillary or subsidiary matters which can fairly and reasonably be comprehended. See State of Madras v. Gannon Dunkerley [1959]1SCR379 . It has also been held by this Court in The Check Post Officer and Ors. v. K.P. Abdulla Bros. [1971]2SCR817 that an entry confers power upon the legislature to legislate for matters ancillary or incidental, including provision for avoiding the law. As long as the legislation is within the permissible field in pith and substance, objection would not be entertained merely on the ground that while enacting legislation, provision has been made for a matter which though germane for the purpose for which competent legislation is made it covers an aspect beyond it. In a series of decisions this Court has opined that if an enactment substantially falls within the powers expressly conferred by the Constitution upon the legislature enacting it, it cannot be held to be invalid merely because it incidentally encroaches on matters assigned to another legislature. (See State of Karnataka v. Ranganatha Reddy [1978]1SCR641 ; KSE Board v. India Aluminium Co. [1976]1SCR552; Subramanyam Chettiar v.

Mutuswami [1945] F.C.R. 179; Prafulla Kumar Mukherjee v. Bank of Commerce [1947] F.C.R. 28; Ganga Sugar Corpn. v. State of UP [1960]1SCR569 . We, therefore, do not accept the submission that the definition of university given in Section2(f) or the prohibition in Section 23 of the Act are ultra vires the Parliament on the ground that such provisions are beyond its legislative competence."

The learned Additional Advocate General has also placed reliance on the Bye-laws of Jaipur Municipal Corporation which were framed in the year 2011 under which erection of mobile tower on the building relating to ancient and historical monuments and also schools and hospitals has been prohibited as is evident from Bye-law 8. Thus, as a matter of fact, such bye-laws are existing from earlier point of time and State Government has not taken such decision for the first time but has tried to issue model guidelines considering the recommendations made by the Inter-Ministerial Committee which have been approved by the Government of India.

In *Federation of Hotel & Restaurant Association of India, etc. v. Union of India & ors.* ((1989) 3 SCC 634), the aspect theory has been considered and it was observed that subjects which in one aspect and for one purpose fall within the power of a particular legislature may in another aspect and for another purpose fall within another legislative power. There might be overlapping, but the overlapping must be in law. The

same transaction may involve two or more taxable events in its different aspects. But the fact that there is an overlapping does not detract from the distinctiveness of the aspects.

In *State of W.B. v. Kesoram Industries Ltd.* ((2004) 10 SCC 201), the Apex Court has clarified that there can be an overlapping in fact, as the methodology or mechanism adopted for assessment and quantification can be similar for taxes relating to different fields of taxation, but there can be no overlapping in law i.e. even though the mechanism adopted for assessment is similar but the subject matter of two taxes by reference to the two lists can be different and therefore, two taxes cannot be said to be overlapping. The Apex Court relied upon the decisions in *Hoechst Pharmaceuticals Ltd. V/s State of Bihar* ((1983) 4 SCC 45) and *Governor General in Council V/s Province of Madras* (AIR 1945 PC 98). The Apex Court in the case of Kesoram (supra) has laid down thus:-

> *"31. Article 245 of the Constitution is the fountain source of legislative power. It provides - subject to the provisions of this Constitution, Parliament may make laws for the whole or any part of the territory of India, and the legislature of a State may make laws for the whole or any part of the State. The legislative field between Parliament and the legislature of any State is divided by Article 246 of the Constitution. Parliament has exclusive power to make laws with respect to any of the matters enumerated in List I in the Seventh Schedule, called the "Union List". Subject to the said power of Parliament, the legislature of any State has power to make laws with respect to any of the matters enumerated in List III, called the "Concurrent List". Subject to the abovesaid two, the legislature of any State has exclusive power to make laws with respect to any of the matters enumerated in List II, called*

the "State List". Under Article 248 the exclusive power of Parliament to make laws extends to any matter not enumerated in the Concurrent List or State List. The power of making any law imposing a tax not mentioned in the Concurrent List or State List vests in Parliament. This is what is called the residuary power vesting in Parliament. The principles have been succinctly summarised and restated by a Bench of three learned Judges of this Court on a review of the available decision in Hoechst Pharmaceuticals Ltd. v. State of Bihar. They are:

> *(1) The various entries in the three lists are not "powers" of legislation but "fields" of legislation. The Constitution effects a complete separation of the taxing power of the Union and of the States under Article 246. There is no overlapping anywhere in the taxing power and the Constitution gives independent sources of taxation to the Union and the States.*
>
> *(2) In spite of the fields of legislation having been demarcated, the question of repugnancy between law made by Parliament and a law made by the State Legislature may arise only in cases when both the legislations occupy the same field with respect to one of the matters enumerated in the Concurrent List and a direct conflict is seen. If there is a repugnancy due to overlapping found between List II on the one hand and List I and List III on the other, the State law will be ultra vires and shall have to give way to the Union law.*
>
> *(3) Taxation is considered to be a distinct matter for purposes of legislative competence. There is a distinction made between general subjects of legislation and taxation. The general subjects of legislation are dealt with in one group of entries and power of taxation in a separate group. The power to tax cannot be deduced from a general legislative entry as an ancillary power.*
>
> *(4) The entries in the lists being merely topics or fields of legislation, they must receive a liberal construction inspired by a broad and generous spirit and not in a narrow pedantic sense. The words and expressions employed in drafting the entries must be given the widest-possible interpretation. This is because, to quote V.*

Ramaswami, J., the allocation of the subjects to the lists is not by way of scientific or logical definition but by way of a mere simplex enumeration of broad categories. A power to legislate as to the principal matter specifically mentioned in the entry shall also include within its expanse the legislations touching incidental and ancillary matters.

(5) Where the legislative competence of the legislature of any State is questioned on the ground that it encroaches upon the legislative competence of Parliament to enact a law, the question one has to ask is whether the legislation relates to any of the entries in List I or III. If it does, no further question need be asked and Parliament's legislative competence must be upheld. Where there are three lists containing a large number of entries, there is bound to be some overlapping among them. In such a situation the doctrine of pith and substance has to be applied to determine as to which entry does a given piece of legislation relate. Once it is so determined, any incidental trenching on the field reserved to the other legislature is of no consequence. The court has to look at the substance of the matter. The doctrine of pith and substance is sometimes expressed in terms of ascertaining the true character of legislation. The name given by the legislature to the legislation is immaterial. Regard must be had to the enactment as a whole, to its main objects and to the scope and effect of its provisions. Incidental and superficial encroachments are to be disregarded.

(6) The doctrine of occupied field applies only when there is a clash between the Union and the State Lists within an area common to both. There the doctrine of pith and substance is to be applied and if the impugned legislation substantially falls within the power expressly conferred upon the legislature which enacted it, an incidental encroaching in the field assigned to another legislature is to be ignored. While reading the three lists, List I has priority over Lists III and II and List III has priority over List II. However, still, the predominance of the Union List would not prevent the State Legislature from dealing with any matter within List II

though it may incidentally affect any item in List I.

43. In Ralla Ram v. Province of East Punjab AIR 1949 FC 81 the Federal Court made it clear that every effort should be made as far as possible to reconcile the seeming conflict between the provisions of the Provincial legislation and the Federal legislation. Unless the court forms an opinion that the extent of the alleged invasion by a Provincial Legislature into the field of the Federal Legislature is so great as would justify the view that in pith and substance the impugned tax is a tax within the domain of the Federal Legislature, the levy of tax would not be liable to be struck down. The test laid down in Sir Byramjee Jeejeebhoy case AIR 1940 Bom 65 by the Full Bench of the Bombay High Court was approved.

Xx xx xx xx

In a nutshell

129. The relevant principles culled out from the preceding discussion are summarised as under:

(1) In the scheme of the lists in the Seventh Schedule, there exists a clear distinction between the general subjects of legislation and heads of taxation. They are separately enumerated.

(2) Power of "regulation and control" is separate and distinct from the power of taxation and so are the two fields for purposes of legislation. Taxation may be capable of being comprised in the main subject of general legislative head by placing an extended construction, but that is not the rule for deciding the appropriate legislative field for taxation between List I and List II. As the fields of taxation are to be found clearly enumerated in Lists I and II, there can be no overlapping. There may be overlapping in fact but there would be no overlapping in law. The subject-matter of two taxes by reference to the two lists is different. Simply because the methodology or mechanism adopted for assessment and quantification is similar, the two taxes cannot be said to be overlapping. This is the distinction between the subject of a tax and the measure of a tax.

(3) The nature of tax levied is different from the

measure of tax. While the subject of tax is clear and well defined, the amount of tax is capable of being measured in many ways for the purpose of quantification. Defining the subject of tax is a simple task; devising the measure of taxation is a far more complex exercise and therefore the legislature has to be given much more flexibility in the latter field. The mechanism and method chosen by the legislature for quantification of tax is not decisive of the nature of tax though it may constitute one relevant factor out of many for throwing light on determining the general character of the tax.

(4) Entries 52, 53 and 54 in List I are not heads of taxation. They are general entries. Fields of taxation covered by Entries 49 and 50 in List II continue to remain with State Legislatures in spite of the Union having enacted laws by reference to Entries 52, 53 and 54 in List I. It is for the Union to legislate and impose limitations on the States' otherwise plenary power to levy taxes on mineral rights or taxes on lands (including mineral-bearing lands) by reference to Entries 50 and 49 in List II, and lay down the limitations on the States' power, if it chooses to do so, and also to define the extent and sweep of such limitations.

(5) The entries in List I and List II must be so construed as to avoid any conflict. If there is no conflict, an occasion for deriving assistance from non obstante clause "subject to" does not arise. If there is conflict, the correct approach is to find an answer to three questions step by step as under:

One - Is it still possible to effect reconciliation between two entries so as to avoid conflict and overlapping?

Two - In which entry the impugned legislation falls by finding out the pith and substance of the legislation?

and

Three - Having determined the field of legislation wherein the impugned legislation falls by applying the doctrine of pith and substance, can an incidental trenching upon

another field of legislation be ignored?

(6) "Land", the term as occurring in Entry 49 of List II, has a wide connotation. Land remains land though it may be subjected to different user. The nature of user of the land would not enable a piece of land being taken out of the meaning of land itself. Different uses to which the land is subjected or is capable of being subjected provide the basis for classifying land into different identifiable groups for the purpose of taxation. The nature of user of one piece of land would enable that piece of land being classified separately from another piece of land which is being subjected to another kind of user, though the two pieces of land are identically situated except for the difference in nature of user. The tax would remain a tax on land and would not become a tax on the nature of its user.

(7) To be a tax on land, the levy must have some direct and definite relationship with the land. So long as the tax is a tax on land by bearing such relationship with the land, it is open for the legislature for the purpose of levying tax to adopt any one of the well-known modes of determining the value of the land such as annual or capital value of the land or ts productivity. The methodology adopted, having an indirect relationship with the land, would not alter the nature of the tax as being one on land.

(8) The primary object and the essential purpose of legislation must be distinguished from its ultimate or incidental results or consequences, for determining the character of the levy. A levy essentially in the nature of a tax and within the power of the State Legislature cannot be annulled as unconstitutional merely because it may have an effect on the price of the commodity. A State legislation, which makes provisions for levying a cess, whether by way of tax to augment the revenue resources of the State or by way of fee to render services as quid pro quo but without any intention of regulating and controlling the subject of the levy, cannot be said to have encroached upon the field of "regulation and control" belonging to the Central Government by reason of the incidence of levy

being permissible to be passed on to the buyer or consumer, and thereby affecting the price of the commodity or goods. Entry 23 in List II speaks of regulation of mines and mineral development subject to the provisions of List I with respect to regulation and development under the control of the Union. Entries 52 and 54 of List I are both qualified by the expression "declared by Parliament by law to be expedient in the public interest". A reading in juxtaposition shows that the declaration by Parliament must be for the "control of industries" in Entry 52 and "for regulation of mines or for mineral development" in Entry 54. Such control, regulation or development must be "expedient in the public interest". Legislation by the Union in the field covered by Entries 52 and 54 would not like a magic touch or a taboo denude the entire field forming the subject-matter of declaration to the State Legislatures. Denial to the State would extend only to the extent of the declaration so made by Parliament. In spite of declaration made by reference to Entry 52 or 54, the State would be free to act in the field left out from the declaration. The legislative power to tax by reference to entries in List II is plenary unless the entry itself makes the field "subject to" any other entry or abstracts the field by any limitations imposable and permissible. A tax or fee levied by the State with the object of augmenting its finances and in reasonable limits does not ipso facto trench upon regulation, development or control of the subject. It is different if the tax or fee sought to be levied by the State can itself be called regulatory, the primary purpose whereof is to regulate or control and augmentation of revenue or rendering service is only secondary or incidental.

(9) The heads of taxation are clearly enumerated in Entries 83 to 92-B in List I and Entries 45 to 63 in List II. List III, the Concurrent List, does not provide for any head of taxation. Entry 96 in List I, Entry 66 in List II and Entry 47 in List III deal with fees. The residuary power of legislation in the field of taxation spelled out by Article 248 (2) and Entry 97 in List I can be applied only to such subjects as are not included in Entries 45 to 63 of List II. It follows that taxes on lands and buildings in Entry 49 of List II cannot be levied by

> *the Union. Taxes on mineral rights, a subject in Entry 50 of List II, can also not be levied by the Union though as stated in Entry 50 itself the Union may impose limitations on the power of the State and such limitations, if any, imposed by Parliament by law relating to mineral development to that extent shall circumscribe the States' power to legislate. Power to tax mineral rights is with the States; the power to lay down limitations on exercise of such power, in the interest of regulation, development or control, as the case may be, is with the Union. This is the result achieved by homogeneous reading of Entry 50 in List II and Entries 52 and 54 in List I. So long as a tax or fee on mineral rights remains in pith and substance a tax for augmenting the revenue resources of the State or a fee for rendering services by the State and it does not impinge upon regulation of mines and mineral development or upon control of industry by the Central Government, it is not unconstitutional."*

Considering the aspect theory & various entries in List-II referred above, there is no encroachment made by the State Government or local bodies on the power of the Central Government reserved under Entry 31. Thus, we have no hesitation in rejecting the submission raised on behalf of the COAI and Infrastructure Providers that State Government has encroached upon the power of Central Government reserved under Entry 31.

Telegraph Act

It was submitted by the learned Senior Counsel appearing on behalf of COAI and Infrastructure Providers that under section 10 of the Telegraph Act, the telegraph authority has been empowered to place and maintain a telegraph line under, over, along or across and posts in or upon, any immovable

property and thus, the State Government was not justified in interfering with the installation of tower. Reliance has also been placed on Section 12 of the Telegraph Act.

Sections 10 & 12 of the Telegraph Act are quoted below:-

"10. Power for telegraph authority to place and maintain telegraph lines and posts:- The telegraph authority may, from time to time, place and maintain a telegraph line under, over, along, or across, and posts in or upon any immovable property:

Provided that-

(a) the telegraph authority shall not exercise the powers conferred by this section except for the purposes of a telegraph established or maintained by the [Central Government], or to be so established or maintained;

(b) the [Central Government] shall not acquire any right other than that of user only in the property under, over, along, across in or upon which the telegraph authority places any telegraph line or post; and

(c) except as hereinafter provided, the telegraph authority shall not exercise those powers in respect of any property vested in or under the control or management of any local authority, without the permission of that authority; and

(d) in the exercise of the powers conferred by this section, the telegraph authority shall do as little damage as possible, and, when it has exercised those powers in respect of any property other than that referred to in clause (c), shall pay full compensation to all persons interested for any damage sustained by them by reason of the exercise of those powers.

12. Power for local authority to give permission under section 10, clause (c), subject to conditions.- Any permission given by a local authority under section 10, clause (c), may be given subject to such reasonable conditions as that authority thinks fit to impose, as to the payment of any expenses to which the authority will necessarily be put in consequence of the exercise of the powers conferred by that section, or as to the time or mode of execution of any work, or as to any other thing connected with or relative to any work undertaken by the

telegraph authority under those powers."

As per Section 10(c) of the Telegraph Act, the telegraph authority shall not exercise those powers in respect of any property vested in or under the control or management of any local authority, without the permission of that authority. The Telegraph Act does not take away power of local bodies to control construction activities. The buildings which are erected/construction activities in the local areas of local authorities are subject to grant of permission under the Municipalities Act, 2009. When they have power to grant permission, obviously, no tower can be installed/erected without permission having been granted by the concerned local authority as contemplated under the provisions of the Municipalities Act, 2009. Besides, the Department of Telecommunication has also laid down in its guidelines in Annex.R filed by COAI alongwith additional affidavit that before installation of towers the telecom service provides are required to obtain necessary permission from the local bodies. In return of Government of India, DoT has clarified that permission has to be obtained from local bodies for installation of towers/BTSs.

Thus, the submission that no permission is required from local bodies for installation of mobile tower cannot be accepted.

Conflict in guidelines of MOEF/DoT

The learned Senior Counsel Shri Gopal Subramanyam has submitted that MOEF has issued guidelines on wildlife including birds and bees etc.; no useful purpose is going to be served if bold sign and messages on the dangers of cell phone towers and associated radiations are displayed in and around the structure of the towers. It was also submitted that one more window of Forest Department has been created for seeking permission for erection of towers. He has referred to Para-II(2) and (3) of advisory of MOEF.He has also referred to letter dated 3.10.2012 of the Department of Telecommunication contending that doubt has been cleared that no such permission is required from any authority.

We are not on the issue as MOEF was dealing with impact on wildlife including birds and bees and clearance of MOEF was required in that connection as laid down in para-II(3) of advisory. We are not required to resolve the controversy between the two departments as that is not issue before us, nor we are concerned about one more window for seeking clearance from MOEF as it is in relation to wildlife, birds , bees etc. It is also clear that confusion has been created by the aforesaid two communications, much less doubt has been cleared as contended by the learned Senior Counsel.

TRAI

Submission has also been raised that TRAI constituted under the Act of 1997 has the power to deal with such aspects

as to where the towers are to be installed. The submission is untenable. The Act of 1997 has been enacted to regulate the telecommunication services, adjudicate disputes, dispose off appeals and to protect the interest of service providers and consumers of the telecom sector, to promote and ensure orderly growth of the telecom sector and for matters connected therewith or incidental thereto. "Tele-communication service" has been defined in section 2(k) of the Act of 1997. The powers & functions of the TRAI are dealt with in Section 11 of the Act of 1997 contained in Chapter III, the TRAI to make recommendations on the matters enumerated in Section 11(1)(a) and it has to ensure compliance of terms and conditions of license; technical compatibility and effective inter-connection between different service providers. However, a close scrutiny of Section 11 makes it clear that it nowhere ousts the power of the State Government to enact the bye-laws/policy and powers of local authorities under the Municipalities Act,2009 to grant permission for construction of towers and as to where the towers are to be located and grant of permission by local authorities is expressly provided in DoT policy also. The Act of 1997 nowhere ousts the applicability of Municipal Laws etc. relating to construction permission etc. This aspect is not dealt with in the Act of 1997. Hence, the aforesaid submission cannot be accepted and the same is hereby repelled.

Validity of Bye-laws/policy framed by State Government.

With respect to model bye-laws, submission has been raised that the same are not framed in accordance with the provisions contained in Section 340 of the Municipalities Act, 2009. The State Government has directed all the Municipal Corporations/Municipal Councils/Municipal Boards to frame the bye-laws in accordance with the model bye-laws framed by it and in case, bye-laws have already been framed by any one of them, the same be amended in accordance with the model bye-laws or the same be repealed and new bye-laws be framed and till new bye-laws are framed under Section 340 of the Municipalities Act, 2009, the model bye-laws shall be made applicable treating it as policy decision of the State. Section 340 of the Municipalities Act, 2009 empowers the Municipality to make bye-laws for regulating the permission for temporary erection of a booth or any other structure on any public place; under section 340, there is power for prescribing all matters relating to the imposition, levy, assessment and collection of user charges under section 104; there is power under section 340(1)(z) to determine the conditions, restrictions, norms and specifications for all kinds of constructions looking to the local need for the purpose of operation of section 194 which deals with the provisions relating to erection of all kinds of buildings. Section 194(1) includes re-erection or material addition in a building or to erect or re-erect any projecting portion of a building. Thus, installation of mobile towers in the local area is

one of the matters which is covered under such bye-laws.

Under Section 337 of the Municipalities Act, 2009, the State Government has power to make rules and issue orders generally for the purpose of carrying into effect the provisions of the said Act.

Section 339 of the Municipalities Act confers power on the Municipality to make rules not inconsistent with the said Act or with the rules made by the State Government under section 337. Under section 325, the State Government has power to repeal wholly or in part or modify any rule or bye-laws made by any Municipality.

In the instant case, the State Government has framed the model bye-laws/policies and directed all the Municipalities/Municipal Corporations/Municipal Councils/ Municipal Boards to make make them applicable and in case, bye-laws have already been framed, the same be amended in accordance with the model bye-laws or after repealing the existing, new bye-laws be framed as per model bye-laws and till such time, the model bye-laws be made applicable, to treat and implement it as policy decision of the State. State Government is competent to frame guidelines in such an important matter and seek compliance of such a policy; human life, safety & security cannot be left at the mercy of inaction by local bodies; such directives are binding/enforceable without bye-laws being framed by local bodies. The State Government is competent to

issue such direction and order considering the provisions of the Municipalities Act, 2009 and the Entries of List II of Seventh Schedule of the Constitution which have been quoted above. Apart from this, Article 243W of the Constitution confers powers, authority and responsibilities of the municipalities subject to the provisions of the constitution, the Legislature of a State may, by law, endow the Municipalities with such powers and authority as may be necessary to enable them to carry out the responsibility conferred upon them including those in relation to the matters listed in the Twelfth Schedule as provided in Article 243W(b). Twelfth Schedule contained the powers with respect to regulation of land use and construction of buildings as mentioned in entry 2 and entry 6 relates to public health, sanitation conservancy and solid waste management.

Thus, the State Government has power to issue the requisite directions and its orders are binding upon the Municipalities/Municipal Corporations/Municipal Councils/ Municipal Boards considering the aforesaid provisions.

We are of the considered opinion that since some of members of the Cellular/Mobile Companies/Associations were also party and members of the Committee formed by the State Government, it cannot be said that the decision taken by the State Government is unilateral and it also cannot be said that suggestions have not been invited. They have also presented

their views before Inter Ministerial Committee of Government of India. The State Government has issued the wholesome directives which otherwise it can issue for ensuring public health, safety and maintenance of law and order etc. It has not rightly been disputed by the learned Senior Counsel Shri Gopal Subramanyam appearing on behalf of COAI that the State Government has power to issue such directives. However, his submission is that there was no material before the State Government to enact the bye-laws imposing restriction on installation of towers on the schools, colleges, playgrounds, hospitals, monuments and on a place within 500 meters of the jail premises. This submission also cannot be accepted as such bye-laws have been framed by the State Government considering the report of Inter-Ministerial Committee, which is based on consideration of various research work, recommendations and guidelines of the Government of India, DoT etc.

SACFA

It was also submitted by Shri Gopal Subramanyam, learned Senior Counsel appearing on behalf of COAI that in view of the constitution of Standing Advisory Committee on Frequency Allocations (SACFA), which is apex body in the Ministry of Telecommunication , matter of installation of tower has to be left at the discretion of the said body; the said body has to deal with the frequency allocation; in that respect, allocation is

required in respect of each station and its antenna. It is not for SACFA to grant permission to erect construction. In our considered opinion, frequency allocation is altogether a different matter than the location where mobile towers are to be erected, which power itself has been statutorily conferred upon the local bodies and even DoT has laid down policy directives contained in Annex.R that before installation of towers Telecom service providers are required to obtain necessary permission from the local bodies. Thus, we are not at all impressed by the aforesaid submission. The Union of India in its return has made following averment:-

> *"The sitting clearance (SACFA Clearance) is issued by WPC without prejudice to applicable bye-laws, rules and regulations of local bodies such as Municipal Corporation/Gram Panchayat etc.*
>
> *Accordingly, the telecom service providers have to obtain the necessary permission from the concerned local authorities/municipal corporation/Gram Panchayat etc. for installation of tower."*

In view of the return filed by the Union of India, the submission raised by the learned Senior Counsel Shri Gopal Subramanyam cannot be accepted that local bodies have no role to play in the matter of installation of towers.

In our opinion, considering the model bye-laws, which have been framed by the State Government, it cannot be said that they are arbitrary and whimsical, rather based on the

report of the Inter-Ministerial Committee, which was based on various research work and study and the same has been accepted by the Government of India and the recommendations, reports and guidelines of the Government of India, DoT and MOEF were also taken into consideration. Even the members of the Mobile Companies participated in the Committee constituted by the State Government. Hence, model bye-laws/ policy decision cannot in any manner be said to be arbitrary and whimsical. There was no encroachment made by the State Government on the power of Central Government reserved under Entry 31 of List-I of Seventh Schedule, while enacting model bye-laws/policy decision. The State Government acted within the framework of law.

Whether action of State is regulatory or restrictive of right under Article 19(1)(g)

The learned Senior Counsel Shri Gopal Subramanyam appearing on behalf of COAI has also made effort to show how mobile network operates with the help of diagram; his submission was that considering the mode of functioning of network and technicality involved, no obstruction should be caused in the matter of installation of towers and antennas as obstruction may interrupt the communication system, same would entail in breach of conditions of license to provide coverage. Thus, installation of towers should be left with the expert body as to where they are to be erected as every BTS has a particular call handling capacity and number of users increase

and their need for mobile communications results in higher traffic, it calls for increase in number of cell sites/BTSs/BSCs etc. thus increasing their density.

Considering the entire materials available on record and the reports of Inter-Ministerial Committee, which has been accepted by the Government of India, recommendations and guidelines of the Government of India, DoT and advisory of MOEF and when we consider deliberation of expert reports called by the Associated Chambers of Commerce and Industry of India (ASSOCHAM), it appears that in case numbers of mobile towers are increased, that may also be dangerous for health and also lowering the frequency. In our considered opinion, by directing that mobile towers should not be installed on the top of schools/colleges, hospitals, playgrounds, within 100 meters from historical ancient monuments and within 500 meters from jail premises, it cannot be said that any restriction much less unreasonable one has been placed upon the infrastructure providers; they can install tower at the other safe places for which permission may be granted and carry on there business. However, they cannot claim any unfettered right to install the mobile towers on schools/colleges, playgrounds, hospitals, within 100 meters of monuments and within 500 meters from jail premises. The provisions are regulatory measures considering the health hazard and other aspects of EMF radiations from mobile towers and such regulatory measures

cannot in any manner be said to be arbitrary, rather they are wholesome provisions, particularly when research work is going on and undisputably EMF radiation from mobile towers may be dangerous to life as per various reports, as such, "precautionary approach" is required to be adopted in such matter, which cannot be over looked and ignored by this Court while exercising the power of judicial review. The regulatory measures undertaken cannot be said to be unreasonable/arbitrary. In our opinion, there is no violation/restriction of right to carry on business under Article 19(1)(g) of the Constitution of India.

No doubt about it that every aspect of proportionality for sustainable growth has to be considered by this Court while dealing with such matter, however, when risk of health and human being is involved, the balance tilts in favour of saving health hazard; for growth of mobile communication, human life cannot be put at slightest risk; there is need to take precautionary measures. Growth has to be systematic with due observance of "precautionary principle". The services are for use of humans, it cannot be detriment of such a consumer; growth cannot be haphazard, it is necessary for local bodies to specify places now in master plan for such locations, that is also with a view to check haphazard growth as laid down by Government of India, it passes comprehension how such operators claim unfettered right to have towers/BTSs on such

places in which restriction has been imposed.

When restriction is reasonable and not interfere with the right to carry business, positive approach is required of removal of towers from such places otherwise objective sought to be achieved under the report of the Inter-Ministerial Committee and policy decision of State Government would remain a paper mockery.

Precautionary principle/sustainable development

EMF radiation from mobile towers may be dangerous to health/life, its continuous exposure may result in various kind of diseases and thus "precautionary approach" is required to be adopted in such matter.

In the judgment dated 4th February 2009 of Versailles Court of Appeal, French Republic In the name of the French People, relied upon by the learned counsel for the petitioners, considering that the installation of the relay antenna in close proximity to the respondents' home and the fact that they have been living within its beam since 2005 has undeniably created a feeling of extreme anxiety, proof of which can be inferred from the numerous actions they have undertaken and considering the psychological stress caused to them, directions have been issued to remove transmission station and not only to make payment of compensation, but company has been sentenced to pay seven thousand euros in compensation for the psychological distress caused to them and after a period of four months

counting from the announcement of the decision, the penalty that accompanies the sentence to remove the installation pronounced by the Crown Court is fixed at a sum of five hundred euros per day of delay' in addition, company was sentenced to pay to the respondents the sum of six thousand euros in accordance with article 700 of the code of civil procedure.

In *ICEMS Vs ICNIRP; Hardell vs Interphone* (decided on 12.10.2012), relied upon by the learned counsel for the petitioners, the Supreme Court of Italy has affirmed the ruling granting worker's compensation to a businessman who developed a tumor after using a cell phone for 12 years. The Italian Supreme Court has affirmed the tumor risk from long term use of a cell phone.

In *M.C. Mehta (Taj Trapezium Matter) Vs. Union of India & Ors., (1997) 2 SCC 353,* the Apex Court held that precautionary principle is the requirement of the sustainable development; it cannot be beyond capacity of ecosystem; anticipation and prevention is part of precautionary measure; the remediation is part of sustainable development; not even 1% chance can be taken when there is danger to historical monuments; the onus is on industrialist to show action is benign. In *Vellore Citizens' Welfare Forum v. Union of India ((1996) 5 SCC 647),* the Apex Court held that the State

Government and the statutory authorities must anticipate, prevent and attack the causes of environmental degradation and "where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation". The 'onus of proof' is on the actor or the developer/industrialist to show that his action is environmentally benign. In our opinion, the aforesaid principles laid down by Hon'ble Supreme Court apply with much vigour when danger to human life is involved and even if scientific studies are not laying down with certainty as to effect of low EMF radiation, the precautionary approach is the call of the day, it cannot be postponed at all. We cannot permit experimentation on human life, more so thinking nobly that there would be no violation in the gaga scenario we are, though we survive on hopes but it cannot be at the mercy of service providers.

The Apex Court in the case of M.C.Mehta (Taj Trapezium Matter) also referred to the decision in Vellore Citizens' Welfare Forum (supra) and laid down thus:-

> *"30. The Taj, apart from being a cultural heritage, is an industry by itself. More than two million tourists visit the Taj every year. It is a source of revenue for the country. This Court has monitored this petition for over three years with the sole object of preserving and protecting the Taj from deterioration and damage due to atmospheric environment pollution. It cannot be disputed that the use of coke/coal by the industries emits*

pollution in the ambient air. The objective behind this litigation is to stop the pollution while encouraging development of industry. The old concept that development and ecology cannot go together is no longer acceptable. Sustainable development is the answer. The development of industry is essential for the economy of the country, but at the same time the environment and the ecosystems have to be protected. The pollution created as a consequence of development must be commensurate with the carrying capacity of our ecosystems.

31. Various orders passed by this Court from time to time (quoted above) clearly indicate that the relocation of the industries from TTZ is to be resorted to only if the Natural Gas which has been brought at the doorstep of TTZ is not acceptable/available by/to the industries as a substitute for coke/coal. The GAIL has already invited the industries in TTZ to apply for gas connections. Before us Mr Kapil Sibal and Mr. Sanjay Parikh, learned counsel for the industries have clearly stated that all the industries would accept gas as an industrial fuel. The industries operating in TTZ which are given gas connections to run the industries need not relocate. The whole purpose is to stop air pollution by banishing coke/coal from TTZ.

32. This Court in Vellore Citizens' Welfare Forum v. Union of India((1996) 5 SCC 647) has defined "the Precautionary Principle" and the "Polluter Pays Principle" as under:-(SCC pp.658-60, paras 11-14)

> *"11. . . . .We are, however, of the view that 'The Precautionary Principle' and 'The Polluter Pays Principle' are essential features of 'Sustainable*

Development'. The 'Precautionary Principle' - in the context of the municipal law - means:-

(i) Environmental measures - by the State Government and the statutory authorities - must anticipate, prevent and attack the causes of environmental degradation.

(ii) Where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

(iii) The 'onus of proof' is on the actor or the developer/industrialist to show that his action is environmentally benign.

12. "The Polluter Pays Principle" has been held to be a sound principle by this Court in Indian Council for Enviro-Legal Action v. Union of India (1996) 3 SCC 212. The Court observed:(SCC p.246 para 65)

> *'...we are of the opinion that any principle evolved in this behalf should be simple, practical and suited to the conditions obtaining in this country.'*

The Court ruled that: (SCC p.256 , para 65)

> *'.....once the activity carried on is hazardous or inherently dangerous, the person carrying on such activity is liable to make good the loss caused to any other person by his activity irrespective of the fact whether he took reasonable care while carrying on his activity. The rule is premised upon the very nature of the activity carried on.'*

Consequently, the polluting industries are 'absolutely liable to compensate for the harm caused by them to villagers in the affected area, to the soil and to the underground water and hence, they are bound to take all necessary measures to remove sludge and other pollutants lying in the affected areas'. The 'Polluter Pays Principle' as interpreted by this Court means that

the absolute liability for harm to the environment extends not only to compensate the victim of pollution but also the cost of restoring the environmental degradation. Remediation of the damaged environment is part of the process of 'Sustainable Development' and as such the polluter is liable to pay the cost to the individual sufferers as well as the cost of reversing the damaged ecology....."

33. Based on the reports of various technical authorities mentioned in this judgment, we have already reached the finding that the emissions generated by the coke/coal consuming industries are air pollutants and have damaging effect on the Taj and the people living in the TTZ. The atmospheric pollution in TTZ has to be eliminated at any cost. Not even one per cent chance can be taken when - human life apart - the preservation of a prestigious monument like the Taj is involved. In any case, in view of the precautionary principle as defined by this Court, the environmental measures must anticipate, prevent and attack the causes of environmental degradation. The "onus of proof" is on an industry to show that its operation with the aid of coke/coal is environmentally benign. It is, rather, proved beyond doubt that the emissions generated by the use of coke/coal by the industries in TTZ are the main polluters of the ambient air."

(emphasis added by us)

In *T.N. Godavarman Thirumulpad Vs. Union of India & Ors.,* **((2002) 10 SCC 606)**, the Apex Court has observed that

the right to live is now recognized as a fundamental right to an environment adequate for health and well being of human beings. Duty is cast upon the Government under Article 21 of the Constitution to protect the environment and the two salutary principles which govern the law of environment are :(i) the principles of sustainable development, and (ii) the precautionary principle.

In case where the regulatory authorities, either connive or act negligently by not taking prompt action to prevent, avoid or control the damage to environment, natural resources and peoples' life, health and property, the principles of accountability for restoration and compensation have to be applied, as held by the Apex Court in *M.C. Mehta Vs. Union of India & Ors.,* **((2004) 12 SCC 118).**

In the instant case, there are no regulatory measures for fixing accountability of loss caused to human lives in case of violation of prescribed norms by the members of COAI and others with regard to maintaining of limits of EMF radiation; there are no remedial measures provided in the Telegraph Act or Telecom Regulatory Authority of India Act, 1997 so as to take care of the principles of accountability for restoration and compensation; continuous exposure to low radiation itself may be harmful; it is not in dispute that in case EMF radiation is higher than prescribed limits, it may be hazardous to life, when experts in conclusions of ASSOCHEM conference have laid down

that lowering down of frequency will increase radiation and ill effects and it would add to number of mobile towers which would again pose danger, in substance COAI is relying upon the said report which lays down that the modified norms would be more harmful in aforesaid ways, they were in substance opposing the laying down of norms lowering down limits as suggested by Inter-Ministerial Committee, the entire scenario is such that unfettered and unregulated rights cannot be conferred to COAI/service providers, we have to adopt wholesome precautionary approach and cannot wait to act when situation will become irreviewable and become *fate accompli,* health cannot be put at peril and there is no restoration of human life, we have not to go on concept of life beyond death, concept is of right to life in presenti and thus, principle of precautionary approach is to be applied to preserve human health/life as it cannot be left in peril and mercy of the operators, who may or may not comply with the norms laid down for maintaining limits of EMF radiation, there is conflict as to adverse effect of new norms also. As per ASSOCHAM conference conclusion, they may be more dangerous.

The reports are gallore as to violation of norms. Press Release is issued by DoT,Government of India indicating that radiation standards in respect of Electro Magnetic Raditions (EMR) for mobile towers have been recently fixed with effect from 1.9.2012 and a high level delegation of DoT officers led by

Advisor (Technology) DoT and officials from Term Cell Unit in Mumbai visited a few BTS sites in Mumbai on 12.9.2012 as part of random verification of compliance to the new EMF stndards by the Telecom Service Providers and it was found that one of the sites located adjacent to Ekta CHS Kanjur Marg (East) covering Saidham Building and Vighnaharta Building having more than 11 BTSs of Reliance communications, IITM, Airtel, Vodaphone, Idea Cellular, Aircel and Loop Telecom were radiating beyond permissible limits of the new radiation norms when measurements were carried out in some houses facing nearby BTS antenna. Thus, violations are taking place and they may take place in future also is not ruled out. The experts in ASSOCHAM Conference have opined that :-

> *"-Reduction in limits to levels that are not based on scientific evidence would be arbitrary and unjustified;*
>
> *Reduction in limits below prescribed norms, leads to increased proliferation of towers which can increase rather than allay concerns;*
>
> *- Reduction in emission levels from mobile towers will, in some places, result in a corresponding increase in emissions from mobile handsets, i.e. lower public exposure will result in increased personal exposure.*
>
> *- Reduced limits from mobile towers will mean reduced power and will affect the level of service to customers.*

- Lower limits will, in urban areas, lead to a need for more towers, to ensure seamless service, and could increase the overall EMF in the environment. This will also adversely impact the sharing of towers."

When we consider the fact that there is no continuous monitoring system in existence as on today, we are far away from national duties base and whatever instruments for checking of norms are available, they are to be provided by the service providers, in the report it was found that same were not working properly, and the service providers have to pay fee for such checking and only 10% checking is done in existing system of checking by the TERM, which puts us on guard to adopt insulatory measures which are otherwise also called for considering health hazard and other aspects, precautionary measures, which have been taken by the State Government by prohibiting installation of towers on schools/colleges, playgrounds, hospitals, monuments and within 500 meters from the jail premises and direction of removal of towers from such places in positive mandate and such action is required to carry out its objectives.

The EMF radiations from mobile towers are more harmful for foetus, newly born child, children, pregnant ladies, persons having implant; patients in the hospital suffer from various kind of infections and they cannot be subjected to EMF radiations and continuous exposure to EMF radiation as mentioned in

guidelines may also be deteriorating to the health. For various reasons, there may be violation of norms also which may be due to fault in the instrument, competition so to provide the better network etc. and since there is no regular, constant and continuous checking so as to keep EMF radiations within prescribed limit, precautionary approach has to be adopted in such matter and thus, the decision taken by the State Government is in accordance with the dictum laid down by the Apex Court in the case of **M.C.Mehta V/s Union of India & ors. (supra)** wherein it has been held that even in case of reasonable suspicion/doubt, precautionary principle requires anticipatory action to be taken to prevent harm. Lack of scientific certainty and direct evidence of harm cannot come into the way so as to take preventive measures. The Apex Court in the case of M.C.Mehta (supra) has laid down thus:-

> *"47. The mining operation is hazardous in, nature, it impairs ecology and people's right of natural resources. The entire process of setting up and functioning of mining operation require utmost good faith and honesty on the part of the intending entrepreneur. For carrying on any mining activity close to township which has tendency to degrade environment and are likely to effect air water and soil and impair the quality of life or inhabitants of the area, there would be greater responsibility on the part of the entrepreneur. The fullest disclosures including the potential for increased burdens on the environment consequent upon possible increase in the quantum and degree of pollution, has to*

be made at the outset so that public and all those concerned including authorities may decide whether the permission can at all be granted for carrying on mining activity. The regulatory authorities have to act with utmost care in ensuring compliance of safeguards, norms and standards to be observed by such entrepreneurs. When questioned, the regulatory authorities have to show that the said authorities acted in the manner enjoined upon them. Where the regulatory authorities, either connive or act negligently by not taking prompt action to prevent, avoid or control the damage to environment, natural resources and peoples' life, health and property, the principles of accountability for restoration and compensation have to be applied.

48. The development and the protection of environments are not enemies, if without degrading the environment or minimising adverse effects thereupon by applying stringent safeguards, it is possible to carry on development activity applying the principles of sustainable development, in that eventuality, the development has to go on because one cannot lose sight of the need for development of industries, irrigation resources and power projects etc. including the need to improve employment opportunities and the generation of revenue. A balance has to be struck. We may note that to stall fast the depletion of forest, series of orders have been passed by this Court in T.N. Godavarman's case regulating the felling of trees in all the forests in the country. Principle 15 of Rio Conference of 1992 relating to the applicability of precautionary principle which stipulates that where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for proposing effective measures

to prevent environmental degradation is also required to be kept in view. In such matters, many a times, the option to be adopted is not very easy or in a straight jacket. If an activity is allowed to go ahead, there may be irreparable damage to the environment and if it is stopped, there may be irreparable damage to economic interest. In case of doubt, however, protection of environment would have precedence over the economic interest. Precautionary principle retires anticipatory action to be taken to prevent harm. The harm can be prevented even on a reasonable suspicion. It is not always necessary that there should be direct evidence of harm to the environment."

(emphasis added)

In *Intellectuals Forum, Tirupathi Vs. State of A.P. & Ors.* **(**AIR 2006 SC 1352**),** the Apex Court has laid down the concept of 'sustainable development', 'public trust doctrine' and destruction of local ecological resources. The Apex Court has laid down thus:-

"67. The responsibility of the state to protect the environment is now a well-accepted notion in all countries. It is this notion that, in international law, gave rise to the principle of "state responsibility" for pollution emanating within one's own territories [Corfu Channel Case, ICJ Reports (1949) 4]. This responsibility is clearly enunciated in the United Nations Conference on the Human Environment, Stockholm 1972 (Stockholm Convention), to which India was a party. The relevant Clause of this Declaration in the present context is

Paragraph 2, which states:

> *The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.*

Thus, there is no doubt about the fact that there is a responsibility bestowed upon the Government to protect and preserve the tanks, which are an important part of the environment of the area.

Sustainable Development

68. The respondents, however, have taken the plea that the actions taken by the Government were in pursuance of urgent needs of development. The debate between the developmental and economic needs and that of the environment is an enduring one, since if environment is destroyed for any purpose without a compelling developmental cause, it will most probably run foul of the executive and judicial safeguards. However, this Court has often faced situations where the needs of environmental protection have been pitched against the demands of economic development. In response to this difficulty, policy makers and judicial bodies across the world have produced the concept of "sustainable development". This concept, as defined in the 1987 report of the World Commission on Environment and Development (Brundtland Report) defines it as "Development that meets the needs of the present without compromising the ability of the future generations to meet their own needs". Returning to the Stockholm Convention, a support of such a notion can be found in Paragraph 13, which states:

> *In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and coordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve environment for the benefit of their population.*

69. Subsequently the Rio Declaration on Environment and Development, passed during the Earth Summit at 1992, to which also India is a party, adopts the notion of sustainable development. Principle 4 of the declaration states:

> *In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.*

73. In light of the above discussions, it seems fit to hold that merely asserting an intention for development will not be enough to sanction the destruction of local ecological resources. What this Court should follow is a principle of sustainable development and find a balance between the developmental needs which the respondents assert, and the environmental degradation, that the appellants allege.

In *T.N. Godavarman Thirumulpad (104) Vs. Union of India & Ors.*, (**(2008) 2 SCC 222)**, the Apex Court observed that adherence to the principle of sustainable development is now a constitutional requirement. It is the duty of the State under the Constitution to devise and implement a coherent and coordinated programme to meet its obligation of sustainable development based on inter-generational equity.

In **M.C.Mehta Vs. Union of India & Ors., (2009) 6 SCC 142**, the Apex Court has held that environment and ecology are national assets. They are subject to intergenerational equity. Time has now come to suspend all mining in the said area on sustainable development principle which is part of Articles 21, 48A and 51-A(g) of the Constitution of India. The Apex Court has laid down thus:-

> *"4. The question to be answered at the outset is why did this Court impose a complete ban on mining in the Aravalli range falling in the State of Haryana which broadly falls in District Gurgaon and District Faridabad, including Mewat?*
>
> *5. The statistical data placed before this Court indicated that, in October 2002 twenty-six mines were inspected which indicated wide-scale non-compliance with statutory rules and regulations applicable to mines. Broadly stated, most of these mines failed to obtain environmental clearances. Most of these mines failed to submit the environmental management plan. In some cases, the status of mining indicated below groundwater table. Mining pits were turned into huge groundwater lakes. No efforts were made to create plantation. Broadly, these were silica sand mines. In some cases, even groundwater stood extracted. Deep mining pits with large water bodies were detected. Huge amounts of overburden were also seen in the area. These are some of the defects which were highlighted by EPCA in various reports as far back as October 2002. These non-compliances have also been highlighted with the names of the mines meticulously in para 18 of the judgment in M.C.Mehta.*
>
> *6. It is important to note that by Notification dated 7-5-1992 issued by MoEF under Section 3(2)(v) of the Environment (Protection) Act, 1986 ("the EP Act", for short), as amended, all new mining operations including renewal leases stood banned. The notification further laid down the procedure for taking prior permission before undertaking mining activity.*
>
> *7. At this stage it may be noted that by the*

Notification dated 27-1-1994 as amended on 4-5-1994 issued by MoEF under Section 3(2) of the EP Act, 1986 read with Rule 6, environment impact assessment (EIA) before commencement of any mining operation became mandatory. Therefore, by order dated 29-10-2002/30-10-2002, when this Court found large-scale mining without approved plans, it decided to ban all mining activities in the Aravalli range."

In *Centre for Public Interest Litigation and ors. V/s Union of India & ors.* (JT 2012 (2) SC 154), the Apex Court observed that the Government is bound to protect environment, forest, air, water, coastal zones etc.

In *M.C.Mehta V/s Kamal Nath and ors.* ((2000) 6 SCC 213), the Apex Court held that pollution is a civil wrong and by its nature, it is a tort committed against the community as a whole and thus, a person causing pollution can be asked to pay damages (compensation) for restoration of the environment and ecology and he can also be asked to pay damages to those who have suffered loss on account of the act of the offender. Considering Articles 48A and 51-A(g) of the Constitution in the light of Article 21 of the Constitution, the Apex Court held that any disturbance of the basic element of the environment, namely, air, water and soil, which are necessary for 'life', would be hazardous to 'life' within the meaning of Article 21. In the matter of rights under Article 21 the Apex Court besides enforcing the provisions of the Acts has also given effect to the fundamental rights under Articles 14 and 21 and held that if those rights are violated by disturbing the environment, it can

award damages not only for the restoration of the ecological balance, but also for the victims, who have suffered due to that disturbance. In order to protect "life", "environment" and "air, water and soil" from pollution, the Apex Court has given effect to the rights available to the citizens and persons alike under Article 21 and has awarded damages against those who have been responsible for disturbing the ecological balance either by running industries or any other activity which has the effect of causing pollution in the environment. The Apex Court while awarding damages also enforces the "polluter-pays principle", which is widely accepted as "means of paying for the cost of pollution and its control". To put it in other words, the wrong doer, the polluter is under an obligation to make good the damage caused to the environment.

In *Indian Council for Enviro Legal Action V/s Union of India* (AIR 1996 SC 1446), the Apex Court considering the principle "Polluter pays principle" held that once the activity carried on was hazardous or inherently dangerous, the person carrying on that activity was liable to make good the loss caused to any other person by that activity. This principal was also followed In *Vallore Citizens' Welfare Forum V/s Union of India (AIR 1996 SC 2715).*

The precautionary principle defined in Vallore Citizens' Welfare Forum (Supra) provides that State Government is bound to anticipate, prevent and attack the causes of degradation;

lack of scientific certainty is not a ground to postpone measures to prevent environmental degradation; same is applicable to ancient monuments, more so, in view of Articles 49 and 51A(f) of the Constitution. The Apex Court has observed in M.C. Mehta (Taj Trapezium Matter)(Supra) that one percent chance cannot be taken when preservation of monuments like Taj is involved. In the case of M.C. Mehta (supra), the Apex Court has laid down that in case of doubt, protection of environment would have precedence over the economic interest. The harm can be prevented even on a reasonable suspicion. It is not necessary that there should be direct evidence of harm. Same principle being part of precautionary principle which is emanating from sustainable principle holds good for ancient monuments too. The principle applies with much vigour to human health/life.

Apart from this, from the return of the Union of India, it is clear that in certain hospitals, use of mobile phones has been prohibited so as to reduce the risk of interference with electro medical equipments/implants. There is restriction even for doctors to take mobile phones in the hospitals. The relevant portion of reply of Union of India is quoted below:-

> *"Instances have been seen that the use of Mobile phones has been prohibited in hospitals, however, that prohibition is to reduce the risk of interference with electro medical equipments/implants in hospitals/patients....'*

Shri Gopal Subramanyam, learned Senior Counsel appearing on behalf of COAI has referred to the decision of the Apex Court in *Lafarge Umiam Mining Pvt. Ltd. V/s Union of India &Ors.* ((2011) 7 SCC 338) and submitted that balance between sustainable development and intergenerational equity has to be maintained and the "doctrine of proportionality" has been discussed by the Hon'ble Supreme Court in the aforesaid case. However, learned Senior Counsel submitted that he would not like to succeed on the basis of margin of appreciation in this case, he has relied on other decision laying down stricter tests in this regard. Para 30 of the decision in the aforesaid case is quoted below:-

> *"30. Time has come for us to apply the constitutional "doctrine of proportionality" to the matters concerning environment as a part of the process of judicial review in contradistinction to merit review. It cannot be gainsaid that utilization of the environment and its natural resources has to be in a way that is consistent with principles of sustainable development and intergenerational equity, but balancing of these equities may entail policy choices. In the circumstances, barring exceptions, decisions relating to utilization of natural resources have to be tested on the anvil of the well-recognized principles of judicial review. Have all the relevant factors been taken into account? Have any extraneous factors influenced the decision? Is the decision strictly in accordance with the legislative policy underlying the law (if any) that governs the field? Is the decision consistent with the principles of sustainable*

development in the sense that has the decision-maker taken into account the said principle and, on the basis of relevant considerations, arrived at a balanced decision? Thus, the court should review the decision-making process to ensure that the decision of MoEF is fair and fully informed, based on the correct principles, and free from any bias or restraint. Once this is ensured, then the doctrine of "margin of appreciation" in favour of the decision-maker would come into play. Our above view is further strengthened by the decision of the Court of Appeal in the case of R. v. Chester City Council reported in (2011) 1 All ER 476 (paras 14 to 16)."

The Apex Court has emphasized that the doctrine of "margin of appreciation" in favour of decision-maker would come into play. When we consider the doctrine of "margin of appreciation" vis-a-vis to COAI etc., the answer is "No" as human life cannot be put at peril more in case of violation in maintaining prescribed limit of EMF radiation and in scientific material its stages and considering studies as to effect of existing norms also, that low level of continuous radiation may also be detrimental as studies are on and long term adverse effects are not ruled out even if level is maintained at what has been prescribed now. Moreover, mere provision of penalty of Rs.5 lacs and cancellation of license cannot be said to be remedial measure in case of violation in maintaining prescribed limits of EMF radiation, which may result in irreparable injury, health hazard, various kind of diseases etc.

However, learned Senior Counsel Shri Gopal Subramanyam has submitted that he does want this Court to give the benefit of margin of appreciation as laid down by the Apex Court in the aforesaid case, but he has submitted that we should apply the test laid down by the Hon'ble Supreme Court in *Research Foundation For Science Technology and Natural Resource Policy V/s Union of India and ors.* (2007) 15 SCC 193) in which the Hon'ble Supreme Court has laid down that balancing is required while applying the principle of proportionality as part of sustainable development, relying upon the decision in *T.N.Godavarman Thirumalpad V/s Union of India & Ors.* ((2002) 10 SCC 606. He has submitted that while applying sustainable development, one has to keep in mind the principle of proportionality based on the concept of balance. It is an exercise in which we have to balance the priorities of development on one hand and environmental protection on the other hand. He has relied upon the concept of 'balance' discussed by the Hon'ble Supreme Court in Research Foundation for Science Technology & Natural Resource Policy (supra) in para 10 of the report in SCC, same is quoted below:-

> *"10. The concept of "balance" under the principle of proportionality applicable in the case of sustainable development is lucidly explained by Pasayat, J. in the judgment of this Court in the case of T.N.Godavarman Thirmalpad v. Union of India and Ors. reported in (2002) 10 SCC 606 vide para 35 which reads as under:*

> *"35. It cannot be disputed that no development is possible without some adverse effect on the ecology and environment and the projects of public utility cannot be abandoned and it is necessary to adjust the interest of the people as well as the necessity to maintain the environment. A balance has to be struck between the two interests. Where the commercial ventrue or enterprise would bring in results which are far more useful for the people, difficulty of a small number of people has to be bypassed. The comparative hardship have to be balanced and the convenience and benefit to a larger section of the people has to get primacy over comparatively lesser hardship."*

The above paragraphs indicate that while applying the concept of "sustainable development" one has to keep in mind the "principle of proportionality" based on the concept of balance. It is an exercise in which we have to balance the priorities of development on one hand and environmental protection on the other hand."

The learned Senior Counsel has also referred to the decision of the Hon'ble Supreme Court in the case of T.N.Godavarman Thirumalpad (supra) wherein it has been held that no development is possible without some adverse effect on the ecology and environment and the projects of public utility cannot be abandoned and it is necessary to adjust the interest of the people as well as the necessity to maintain the environment. A balance has to be struck between the two interests. The comparative hardship have to be balanced and the convenience and benefit of a larger section of the people has to get primacy over comparatively lesser hardship.

However, considering the facts of the present case, it is

the human life, law and order, beauty of monuments, which are in peril and decision has been taken by the State Government with respect to prevention of crime in jail, these aspects cannot be compromised and thus, applying the principle of proportionality, ratio laid down in the aforesaid case, the balance tilts in favour of bye-laws/policies enacted by the State Government as no risk with the human health and life can be permitted, on the other hand, by prohibition of towers/BTSs as imposed business interest is not going to be adversely affected, the required coverage can be provided by having towers at safe and prescribed places, there can be no right to claim a right acting on aforesaid principle recognizable by law to have towers on the place of choice of such service providers, it can be regulated, the very idea of any impediment to concept of growth of industry is not germane.

The Apex Court in the case of M.C.Mehta (Taj Trapezium Matter) has held that not even 1% chance can be taken when there is danger to historical monuments. Thus, on the basis of same principle, even slightest risk to human life cannot be permitted. When there is danger to the human life from EMF radiation and violation with respect to maintenance of prescribed limit of EMF radiation is gallore as is evident from press release and in absence of adequate machinery to check the violation, we cannot leave such aspect purely at the mercy of observance as submitted by the learned Senior Counsel

appearing on behalf of COAI that they are ready to give undertaking that they will strictly comply with the prescribed norms laid down by DoT with respect of EMF radiation. When even for adverse effects low EMF radiation and continuous exposure may be harmful, as studies are going on, precautionary approach laid down by Inter-Ministerial Committee of Government of India followed by Government of Rajasthan cannot be said to be uncalled for, they have acted as per Constitution imperative of Article 21 read with Article 47. It is apparent from the materials placed on record that multiple antennas are harmful and EMF radiation itself more so if higher than prescribed limit, it would be harmful to human life and though norms are framed, but we are in scenario they are hardly observed. Development has to be sustainable, cannot at the risk of human life, law and order and detriment of monuments.

Telecom Policy

The learned Senior Counsel Shri Gopal Subramanyam appearing on behalf of COAI has also submitted that objective of national telecom policy is to deliver world class infrastructure at affordable prices. However, in our opinion, affordable prices cannot be a ground not to advance the technology, which is being adopted in the world now. Certain suggestions have been made by DoT, which are required to be implemented. There is also advisory issued that new technology

should be used; It was submitted by learned counsel for petitioners in PIL that in Singapore, mobile towers are not being erected and new technology has been developed, whereas in India, the technology is obsolete one.

In our opinion, the regulatory measures taken by the State Government in the facts and circumstances and existing material, cannot be said to have come in the way of achieving the objective of national telecom policy to deliver world class infrastructure at affordable prices. In the matter of installation of towers, the service providers have no right whatsoever to install the tower anywhere or every where or at a particular place of their choice and for regulation of towers/BTSs etc., precautionary measures have been taken considering health hazard, law and order etc. and they are found to be appropriate. The provisions made by the State Government in the bye-laws are in accordance with the recommendations of the Inter-Ministerial Committee of Government of India, which have been accepted by the Government of India and guidelines and report of DoT and MOEF. No impediment would be caused in increasing business, regulation of erection of towers would not in any manner affect the business interest of COAI and infrastructure providers, rather they are duty bound to act and fulfil the obligations enjoined upon them under Article 51A (g) to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for

living creatures and not to act in derogation of the social interest and the people at large and particularly against the interest of common man. Business interest cannot be said to be supreme and that is not going to be adversely affected by regulatory measures taken by the State Government, even in relocation of towers, some expenditure is involved, it cannot be a ground to negate positive action in facts of case. Humans cannot be permitted to be prey of own inventions made for providing facilities for decent life; life is supreme than such facilities and whatever is dangerous can even be abrogated without fear of any violation of any fundamental right as no right exists without life.

Hospital connectivity

The submission of the learned Senior Counsel Shri Gopal Subramanyam is that in hospitals, mobile towers are necessary so as to provide better communication services; patients and attendants may require at any time emergent services of doctors and considering that aspect, better connectivity is needed and for that, installation of tower on the hospital is essential considering height requirement also. Question is that whether mobile tower should be on the top of the hospital whereas EMF radiation level is higher in nearby area and continuous exposure is harmful, moreover, if prescribed EMF radiation level is violated, in that case, it would be dangerous to patients especially foetus, infants, children, pregnant

ladies, persons having implant;critically ill; patients are already in danger of various kind of infections in every hospitals, they are more vulnerable, cannot be exposed to further EMF radiation. Apart from this, there are hospitals where no towers are provided on top, but still better coverage is available there. It is not that in every hospital, mobile tower is fitted. Thus, the decision taken by the State Government in the interest of public health does not warrant interference. There are other ways of providing coverage by relocating towers and inbuilt facilities being provided without towers.

Judicial Review

In *Tata Cellular V/s UOI* (AIR 1996 SC 11), the Apex Court held that principles of judicial review applies to exercise of contractual power by Government bodies in order to prevent arbitrariness or favouritism; there are inherent limitation in exercise of power judicial review; principles laid down in Article 14 are to be kept in view; right to choose cannot be considered as arbitrary power**.** The Apex Court further held that the decision must not only be tested by the application of Wednesbury principle of reasonableness but must be free from, arbitrariness not affected by bias or actuated by mala fides. The Apex Court has laid down the following principles:-

"

> *"93. The duty of the court is to confine itself to the question of legality. Its concern should be:*
>
> 1. Whether a decision-making authority exceeded its powers?

2. committed an error of law

3. committed a breach of the rules of natural justice

4. reached a decision which no reasonable tribunal would have reached or

5. abused its powers.

94. Therefore, it is not for the court to determine whether a particular policy or particular decision taken in the fulfillment of that policy is fair. It is only concerned with the manner in which those decisions have been taken. The extent of the duty to act fairly will vary from case to case, shortly put, the grounds upon which an administrative action is subject to control by judicial review can be classified as under :

(i) Illegality: This means the decision-maker must understand correctly the law that regulates his decision-making power and must give effect to it.

(ii) Irrationality, namely, Wednesbury unreasonableness,

(iii) Procedural impropriety.

95. The above are only the broad grounds but it does not rule out additional of further grounds in courts of time. As a matter of fact, in R v. Secretary of Slate for the Home Department exparte Blind [1991] 1 AC 696 Lord Diplock refers specifically to one development, namely, the possible recognition of the principle of proportionality. In all these cases the test to be adopted is that the court should, "consider whether something has gone wrong of nature and degree which requires its intervention".

96. What is this charming principle of Wednesbury unreasonableness? Is it is a magical formula? In Re: v. Askew[1768] 4 2168, Lord Mansfield considered the question whether mandamus should be granted against the College of Physicians. He expressed the relevant principles in two eloquent sentences. They gained greater value two centuries later :

> "...It is true, that the judgment and discretion of determining upon this skill, ability, learning

> and sufficiency to exercise and practise this profession is trusted to the College of Physician: and this Court will not take it from them, nor interrupt them in the due and proper exercise of it. But their conduct in the exercise of this trust thus committed to them ought to be fair, can did and unprejudiced; not arbitrary, capricious, or biassed; much less, warped by resentment, or personal dislike."

113. The principles deducible from the above are:

(1) The modern trend points to judicial restraint in administrative action.

(2) The Court does no sit as a court of appeal but merely reviews the manner in which the decision was made.

(3) The Court does not have the expertise to correct the administrative decision. If a review of the administrative decision is permitted it will be substituting its own decision, without the necessary expertise which itself may be fallible.

(4) The terms of the invitation to tender cannot be open to judicial scrutiny because the invitation to tender is in the realm of contract. Normally speaking, the decision to accept the tender or award the contract is reached by process of negotiations through several tiers. More often than not, such decisions are made qualitatively by experts.

(5) The Government must have freedom of contract. In other words, a fairplay in the joints is a necessary concomitant for an administrative body functioning in an administrative sphere or quasi-administrative sphere. However, the decision must not only be tested by the application of Wednesbury principle of reasonableness (including its other facts pointed out above) but must be free arbitrariness not affected by bias or actuated by mala fides.

(6) Quashing decisions may impose heavy administrative burden on the administration and lead to increased and unbudgeted expenditure."

Testing on the anvil of aforesaid decision and Wednesbury principle, it cannot be said that the State Government has acted in an arbitrary or unreasonable manner while enacting the bye-laws/policy; the decision is based on the report of Inter-Ministerial Committee, which has considered

overwhelming material and referred to various reports and the report of IMC was accepted by the Government of India. Thus, submission of the learned Senior Counsel that this Court should interfere with the decision of the State Government in judicial review as there was no material before the State Government to frame the bye-laws, is unhesitatingly repelled.

Reliance has been placed on the decision of Kerala High Court in Reliance *Infocom Ltd. V/s Chemanchery Grama Panchayat* (2006(4) KLT 695) wherein the Division Bench of Kerala High Court held the action of panchayat cancelling the building permit issued for erecting mobile phone base station to be illegal, in the absence of any scientific data to substantiate the apprehension that transmission from mobile phone base stations would cause any risk to health.

In the instant case, scientific studies have been considered by Inter-Ministerial Committee and the report of the Inter-Ministerial Committee has been accepted by the Government of India and guidelines and advisory have been issued by the Government of India, DoT, MOEF. There was ample scientific material in the report of Inter-Ministerial Committee. Hence, the decision of Kerala High Court is distinguishable on the basis of principles mentioned in the decision itself. The State Government has constituted Committee which considered the recommendations of Government of India and it was suggested that towers on

hospitals and schools buildings etc. should be avoided as the children and patients may be more susceptible to the possible harmful effects of electro-magnetic radiation.

On the same reasoning, the decision of Single Bench of Kerala High Court in *Antony K.P. V/s Chellanam Grama Panchayath and ors.* (2009(3)KLT 334) cannot be said to have application to the facts of the present case. Similarly, the decision of Kerala High Court in *Reliance Telecommunications Ltd. V/s S.I. Of Police* (W.P.(C) No.6433 of 2010 and connected cases decided on 8.4.2010) is distinguishable.

It was also submitted by Shri B.L.Sharma, learned Senior Counsel appearing on behalf of Infrastructure providers that this Court cannot issue directions prayed in the public interest litigation as it is not for this Court to legislate; petitioners have failed to place on record material which is necessary to grant the relief prayed for. He has placed reliance on the decision of the Apex Court in *State of Uttaranchal V/s Balwant Singh Chaufal and others.* ((2010) 3 SCC 402) and submitted that case research has to be conducted while invoking jurisdiction of this Court by way of public interest litigation; court should be slow to interfere with the opinions expressed by the experts as they are more familiar with the problems they face than the courts.

There is no dispute with the aforesaid proposition. However, Inter-Ministerial Committee included experts have

taken decision and guidelines have been issued and they have been followed by the State Government. Thus, it cannot be said that there is no material on record and there is nothing to doubt the credential of the petitioners.

Reliance has also been placed on the decision of the Apex Court in *Heinz India Pvt. Ltd. & anr. V/s State of UP & ors.* ((2012) 5 SCC 443) to contend that power of judicial review is neither unqualified nor unlimited, it has its own limitations. The Apex Court has laid down thus:

> *"60. The power of judicial review is neither unqualified nor unlimited. It has its own limitations. The scope and extent of the power that is so very often invoked has been the subject-matter of several judicial pronouncements within and outside the country. When one talks of 'judicial review' one is instantly reminded of the classic and oft quoted passage from Council of Civil Service Unions (CCSU) v. Minister for the Civil Service (1984) 3 All ER 935, where Lord Diplock summed up the permissible grounds of judicial review thus:*
>
> > *"Judicial Review has I think developed to a stage today when, without reiterating any analysis of the steps by which the development has come about, one can conveniently classify under three heads the grounds on which administrative action is subject to control by judicial review. The first ground I would call 'illegality', the second 'irrationality' and the third 'procedural impropriety'.*
> >
> > *By 'illegality' as a ground for judicial review I mean that the decision-maker must understand correctly the law that regulates his decision-making power and must give effect to it. Whether he has or not is par excellence a justiciable question to be decided, in the event of dispute, by those persons, the judges, by whom the judicial power of the State is exercisable.*

> *By 'irrationality' I mean what can by now be succinctly referred to as 'Wednesbury unreasonableness'. It applies to a decision which is so outrageous in its defiance of logic or of accepted moral standards that no sensible person who had applied his mind to the question to be decided could have arrived at it. Whether a decision falls within this category is a question that judges by their training and experience should be well equipped to answer or else there would be something badly wrong with our judicial system....*
>
> *I have described the third head as 'procedural impropriety' rather than failure to observe basic rules of natural justice or failure to act with procedural fairness towards the person who will be affected by the decision. This is because susceptibility to judicial review under this head covers also failure by an administrative tribunal to observe procedural rules that are expressly laid down in the legislative instrument by which its jurisdiction is conferred, even where such failure does not involve any denial of natural justice."*

61. The above principles have been accepted even by this Court in a long line of decisions handed down from time to time. We may, however, refer only to some of those decisions where the development of law on the subject has been extensively examined and the principles applicable clearly enunciated.

67. In Dharangadhra Chemical Works Ltd. v. State of Saurashtra and Ors. AIR 1957 SC 264, this Court held that decision of a Tribunal on a question of fact which it has jurisdiction to determine is not liable to be questioned in proceedings under Article 226 of the Constitution unless it is shown to be totally unsupported by any evidence. To the same effect is the view taken by this Court in Thansingh Nathmal's case (supra) where this Court held that the High Court does not generally determine questions which require an elaborate examination of evidence to establish the right to enforce

which the writ is claimed.

68. We may while parting with the discussion on the legal dimensions of judicial review refer to the following passage from Reid v. Secretary of State for Scotland (1999) 1 All ER 481, which succinctly sums up the legal proposition that judicial review does not allow the Court of review to examine the evidence with a view to forming its own opinion about the substantial merits of the case.

> *"Judicial review involves a challenge to the legal validity of the decision. It does not allow the court of review to examine the evidence with a view to forming its own view about the substantial merits of the case. It may be that the tribunal whose decision is being challenged has done something which it had no lawful authority to do. It may have abused or misused the authority which it had. It may have departed from the procedures which either by statute or at common law as a matter of fairness it ought to have observed. As regards the decisions itself it may be found to be perverse or irrational or grossly disproportionate to what was required. Or the decision may be found to be erroneous in respect of a legal deficiency, as for example, through the absence of evidence, or of sufficient evidence, to support it, or through account being taken of irrelevant matter, or through a failure for any reason to take account of a relevant matter, or through some misconstruction of the terms of the statutory provision which the decision maker is required to apply. But while the evidence may have to be explored in order to see if the decision is vitiated by such legal deficiencies it is perfectly clear that in case of review, as distinct from an ordinary appeal, the court may not set about forming its own preferred view of evidence."*

In the instant case, we find that there is sufficient material available on record to frame the bye-laws in question. The bye-laws and policy decision of the State Government are

based on the report of the Inter-Ministerial Committee, which has been accepted by the Government of India, recommendations of the Government of India, report and guidelines of DoT and report of MOEF. Thus, the action of the State in framing the bye-laws cannot in any manner be said to be arbitrary or unreasonable or irrational or on irrelevant consideration so as to call for interference in scope of judicial review as laid down by Hon'ble Supreme Court.

Reliance has also been placed on the decision of Apex Court in *Vishakha and ors. V/s State of Rajsthan & ors.* ((1997) 6 SCC 241) to contend that in absence of legislation, it is not for the Court particularly High Court to lay down guidelines whereas Apex Court can do so.

We make it clear that we are not laying down guidelines as the State Government has already enacted the model bye-laws/policy.

Reliance has also been placed by Shri B.L.Sharma, learned Senior Counsel on the decision of Apex Court in *Vineet Narain and ors. V/s Union of India & anr.* ((1998) 1 SCC 226) so as to contend that under Article 32 read with Articles 141 and 142, the Supreme Court has power to issue directions to fill the vacuum and no such directions can be issued by this Court. We again reiterate that we are not laying down any guidelines, but we are examining the policy decision/model bye-laws, which have been framed by the State Government no doubt during the

pendency of PIL and the same have been questioned by filing writ petitions by Cellular Operators Association of India and Association of United Telecom Services Providers of India. Thus, the submission has no legs to stand.

Reliance has also been placed by Shri B.L.Sharma, learned Senior Counsel on the decision of Apex court in *Divisional Manager Golf Club & anr.V/s Chander Hass & anr.* ((2008)1 SCC 683) in which the Apex Court has laid down that various directions are being issued in every field which are not proper; if there is a law, Judges can certainly enforce it, but Judges cannot create a law and seek to enforce it. We are not creating any law nor laying down any guidelines, but examining the validity of policy decision and directives taken by the State Government.

Shri B.L.Sharma, learned Senior Counsel has also placed reliance on the decision of the Apex Court in *P.Ramachandra Rao V/s State of Karnataka & ors.* ((2002) 4 SCC 578) relating to judicial activism and constitutional democracy in which reference has been made to the work (year 2002) of Prof.S.P.Sathe touching the topic "Directions: A New form of Judicial Legislation" where evaluating legitimacy of judicial activism, the author has cautioned against court "legislating" exactly in the way in which a legislature legislates. We make it clear in the instant case that we are not trying to legislate even for a moment.

Reliance has also been placed by Shri B.L.Sharma, learned Senior Counsel on the decision of the Apex Court in *U.P. State Road Transport Corporation & anr. V/s Mohd. Ismail & Ors.* ((1991) 3 SCC 239) in which it has been laid down that the Court cannot dictate the decision of the statutory authority that ought to be made in the exercise of discretion in a given case. We are not doing so in the instant case. Hence, the decision is of no avail.

Shri B.L.Sharma, learned Senior Counsel has also relied upon the decision of Apex Court in *Assistant Collector, Central Excise V/s Dunlop India Ltd. & Ors.* ((1985) 1 SCC 260) in which it has been observed that in the hierarchical system of courts' which exists in our country, it is necessary for each lower tier including the High Court to accept loyally the decisions of the higher tiers'; it is inevitable in a hierarchical system of courts that there are decisions of the supreme appellate tribunal which do not attract the unanimous approval of all members of the judiciary, but the judicial system only works if someone is allowed to have the last word and that last word, once spoken, is loyally accepted.

There is no dispute with the aforesaid proposition. The law declared by the Apex Court under Article 141 of the Constitution is binding on all courts, as laid down in the aforesaid decision, however, the same is of no avail in the facts of the instant case. We are not acting contrary to decision of

Apex Court.

The report of the Inter-Ministerial Committee which has been accepted by the State Government and guidelines and advisory issued by the DoT and MOEF cannot be said to be violative of any provisions of the Constitution and they are in terms of rules of transaction of business. Thus, State Government has rightly acted upon them.

It was additionally submitted by Shri K.K.Sharma, learned Senior Counsel appearing for the respondents that it is not for this Court to determine the EMF radiation level and report of Prof.Girish Kumar is not reliable. We are not acting upon any particular report, but considering the expert report of Inter-Ministerial Committee which is based on overwhelming material and various reports have been referred to and various studies of 40 years done at international level and in India have been taken into consideration and the report of the Inter-Ministerial Committee has been accepted by the Government of India. Even if the report of Prof.Girish Kumar is discarded, there was other ample material available on record that in case EMF radiation is higher than prescribed limit, it would cause health hazard and various disease. The reports are not conclusive as to ill effects of EMF radiation, if it is kept at the prescribed level, it may still be dangerous in various ways.

Shri K.K.Sharma, learned Senior Counsel appearing on behalf of the respondents has relied upon the decision of the

Apex Court in *N.D.Jayal & anr. V/s Union of India (UOI) and ors.* (2004(9) SCC 362) and submitted that right to clean environment is a guaranteed fundamental right and the right to development is also declared as a component of Article 21 of the Constitution.

There is no dispute about the aforesaid proposition, but in the instant case, when we apply the balance, it tilts in favour of safety of human being. Hence, the aforesaid decision is of no help.

Reliance has also been placed on the decision of the Apex Court in *A.P. Pollution Control Board Vs. Prof. M.V. Nayadu (Retd.) & Others* (1999 (2) SCC 718) in which the Apex Court has laid down that High Court should not adjudicate upon correctness of technological and scientific opinions and thus, it was submitted that we should not interfere in the matter. In the instant case, there is report of Inter Ministerial Committee, which has been accepted by the Government of India and guidelines have been framed and the State Government has framed the bye laws in accordance with the same. We are not interfering with the same, rather enforcing the same. Hence, the decision is of no help.

Reliance has also been placed on the decision of the Apex Court in *Bharat Sanchar Nigam Limited & anr. V/s Union of India & ors.* (2006(3) SCC 1) wherein it has been held that the court must move with times while interpreting the provisions of

the Constitution and balancing of residuary powers of Parliament with legislative powers of States, so as not to whittle down powers of States. Considering the facts of the instant case, in our opinion, there is no question of whittling down powers of State.

Bonafides of petitioners

Shri R.K.Agarwal, learned Senior Counsel appearing on behalf of Service Providers has also submitted that petitioners have not made any research and no material has been placed by them before this Court so as to grant relief prayed for. The submission cannot be accepted; material placed by the rival parties can be considered by this Court; credential and endeavour of the petitioners cannot be doubted in matter of great significance.

It was also submitted by learned counsel Shri Ravi Chirania appearing on behalf of the respondents that the petitioner in petition no.8697/12 has earlier filed suit and after withdrawing the suit, the writ petition has been filed and thus, the same is not maintainable. As in such matter, civil suit can be hardly said to be appropriate remedy and when other public interest litigation was already pending, the writ petition so filed cannot be dismissed on the ground of withdrawal of suit filed earlier.

Other arguments

It was submitted by the learned Senior Counsel Shri Gopal

Subramanyam appearing on behalf of COAI that action of the State Government is unreasonable & not bonafide and is not based on sound reasoning and material; such matters are required to be scientifically examined and thus, it was not appropriate for the State Government to frame the bye-laws . The aforesaid submissions are not acceptable. We are not inclined to direct formation of fresh committee for consideration of such issues afresh as exercise has already been undertaken consuming considerable time by the Inter-Ministerial Committee and its report has been accepted by the Government of India and guidelines and advisory have been issued by DoT and MOEF. We do not venture to repeat such exercise again, the matter cannot brook such delays. Such repeated exercise cannot be for any particular desired result considering state of research work which is always on going process, there is no substantial change in research work of Inter-Ministerial Committee which made recommendations. The State Government has acted on the basis of material and report of Inter-Ministerial Committee and held various meetings also.

The learned Senior Counsel Shri Gopal Subramanyam has referred to the decision of the Supreme Court dated 1.11.2012 passed in Writ Petition (Civil) No. 453 of 2012 *Centre for Public Interest Litigation V/s Union of India*, in which the Supreme Court did not interfere and dismissed the petition in limine. In the said petition, reliefs claimed before the Supreme

Court were to enforce the current EMF radiation safety norms by abolishing self regulation and establishing an independent Regulatory Authority to decide EMF radiation safety levels and to monitor and enforce its implementation; tighten the norms in order to bring them in line with the safety norms followed by other countries and proposed by independent scientific studies; make environmental impact assessments mandatory prior to installation of cell phone towers; ban installation of phone masts in highly populated areas, protected natural areas and in places where endangered species exist. The said SLP was dismissed by the Supreme Court vide order dated 1.11.2012, which reads as follows:-

> "We are not inclined to admit this writ petition for the present.
>
> Accordingly, the writ petition is dismissed."

The learned Senior Counsel has rightly conceded that the aforesaid order cannot operate as res judicata though it may have persuasive value, however the question involved in the instant case is about validity of bye-laws and policy decision taken by the State Government, it has been questioned by COAI and other Infrastructure providers in the petitions, hence we are bound to adjudicate upon the legality of action taken. The decision of Supreme Court is of no help to the COAI and infrastructure providers considering the controversy involved in the instant case.

It was submitted by the learned Senior Counsel Shri Gopal

Subramanayam that exorbitant fee is being charged, that is not appropriate. In our opinion, the fee proposed in bye-laws cannot be said to be exorbitant in any manner whatsoever, rather it appears to be just and reasonable one.

The submission of the learned Senior Counsel Shri Gopal Subramanyam cannot be accepted that bye-laws are in any manner impracticable, unreasonable and arbitrary. It also cannot be said that it was not permissible for the State Government/local authority from them permission for installation is necessary. As a matter of fact, such permission is required to be taken under the Municipalities Act, 2009 from local bodies and even as per the policy and guidelines framed by the DoT; for safe distance, requirement of minimum width of road and areas of the building etc. have been laid down in DoT policy itself, which have to be ensured by local bodies, same is admitted in return of Government of India of DoT.

The submission also cannot be accepted that there is no reason for prohibiting establishment of mobile towers within 100 meters of notified old and heritage buildings. Even if no threat is posed to these structures, they cannot be permitted so as to cause damage to surroundings of old heritage buildings and deface the look and cause obstruction in view of the monuments.

We find that order with respect to schools passed by this Court has attained finality in view of dismissal of SLP of COAI by

the Hon'ble Supreme Court and in compliance of the said order, towers & BTSs located on the schools in the entire State of Rajasthan have been removed. The towers are also required to be removed from colleges buildings as continuous EMF radiation exposure to students taking education in colleges is harmful; schools and colleges more or less stand on same footing and reasonable regulatory measure contained in policy is required to be enforced and given meaning.

The bye-laws framed with respect to prohibiting installation of towers on playgrounds, hospitals and place within vicinity of 500 meters from jail premises and also near ancient monuments and old heritage buildings cannot be said to be illegal or arbitrary in any manner whatsoever, rather they are wholesome and have been framed so as to safeguard the health of people, especially infants, children, pregnant ladies, patients etc., prevent crime from jails and ensure law and order. Hence, impugned bye-laws/policy framed by the State Government cannot be quashed, as prayed on behalf of COAI and others and they are required to be implemented. As per report of the Inter Ministerial Committee and other materials on record, it is clear that in case level of EMF radiation is higher, it would cause health hazard in various manner; hospital is a sensitive place where infants, newly born child, pregnant women, patients of various diseases are treated, they are vulnerable and they require protection from EMF radiation from

mobile tower and thus, if towers are not removed from hospitals, it would enhance the agony of the patients taking treatment of various diseases in the hospitals; EMF radiations are more harmful for infants and pregnant women; even taking of mobile is not permissible in some of the hospitals and thus, decision of the State Government restricting installation of tower on the hospital is just, proper and reasonable and in the public interest.

However, the State Government has not framed bye-laws/policy prohibiting installation of towers in the densely populated areas. The State Government and Local Authorities have to take decision in this regard in accordance with law, considering individual grievance, they can order removal of dangerous towers which are not established as per norms and are erected without the permission and as such, we give liberty to the petitioners in the public interest litigation to approach the State Government/Local bodies in this regard.

As the regulatory body has been framed by the Central Government in the form of Telecom Enforcement, Resource and Monitoring (TERM) Cells, the Government may consider whether it is appropriate to change its constitution by including the people representative so as to generate confidence in the general public. With respect to constant monitoring etc., requisite directions have been issued by DoT and in the report of Inter-Ministerial Committee which has been accepted by the

Government of India, have to be complied with. The respondents-State Government and local authorities are bound to consider the impact/effect on health hazard and observance of guidelines issued by the Inter-Ministerial Committee, DoT, MOEF and State Government from time to time and to act accordingly. While granting permission for installation of towers, they have to consider what would be the effect on the health of people in case towers are permitted to be erected considering various safeguards.

With respect to hospitals, directions have been issued by the State Government to remove the towers. However, we make it clear that statement made by the learned Addl.Advocate General appearing on behalf of State before this Court on 4.10.2012 that with respect to hospitals, they are going to implement their policy within a period of four weeks. However, no order was passed by this Court for removal of towers from hospitals within one month, but interpreting the order dated 4.10.2012 wrongly, the State Government has issued directions for removal of towers from hospitals within one month as if it was court order, it was only statement made on behalf of State Government by its counsel. In this regard, we direct the State Government and authorities to remain careful in future. However, removal of towers from hospitals, which has been ordered, is found to be appropriate. Let the towers from hospitals be removed within a period of two

months from today. Let towers from Colleges be also removed within two months from today.

The State Government has fixed the time for removal of towers within vicinity of 500 meters from the jail premises within six months, as such, it is to be implemented within the time prescribed by the State Government in its order and bye-laws dated 31.8.2012.

Similarly, in case any tower is existing near ancient monuments or old heritage building, the removal be considered by the State Government and local authorities concerned examining on facts on individual basis whether removal is necessary within two months from today. Similarly, the towers on playgrounds may also be looked into and appropriate action be taken within the same period.

It was not disputed that with respect to mobile handsets, directions issued by DoT mentioned above may be enforced. It is necessary that public is made aware of different mobile sets in use whether they are as per norms or not. It is also necessary to inform people of ill-effects of mobile handsets and towers and precautions which are necessary as per guidelines issued by Dot. Let steps be taken by DoT and COAI etc. to advertise them by different modes of communications.

Thus, we uphold the impugned bye-laws/policy decision of the State Government and direct:-

(1) That let the towers from hospitals be removed within a period of two months from today.

(2) That let towers from Colleges be also removed within two months from today.

(3) That since State Government has fixed the time for removal of towers within vicinity of 500 meters from the jail premises within six months, let it be implemented within the time prescribed by the State Government in its order and bye-laws dated 31.8.2012.

(4) That in case any tower is existing near ancient monuments or old heritage building, the removal be considered by the State Government and local authorities concerned examining on facts on individual basis whether removal is necessary within two months from today.

(5) That similarly, the towers on playgrounds may also be looked into and appropriate action be taken within two months from today.

(6) That with respect to mobile handsets and issue of clearance for installation of mobile towers, guidelines issued by DoT mentioned above be strictly enforced.

(7) That public be educated and made aware of different mobile sets in use whether they are as per norms or not. Public be also informed about ill-effects of mobile handsets and towers and precautions which are necessary as per guidelines issued by Dot. In this regard,

let steps be taken by DoT and COAI etc. to advertise them by different modes of communications.

(8) That the State Government and the Local Authorities to take decision on case wise basis with regard to installation of towers in the densely populated areas in accordance with law. Considering individual grievance, they can order removal of dangerous towers which are not established as per norms and are erected without the permission. Thus, we give liberty to the petitioners in the public interest litigation to approach the State Government/Local bodies in this regard.

(9) That as the regulatory body has been framed by the Central Government in the form of Telecom Enforcement, Resource and Monitoring (TERM) Cells, the Government may consider whether it is appropriate to change its constitution by including the member of general public so as to generate confidence in the public.

(10) That with respect to constant monitoring etc., requisite directions have been issued by DoT and in the report of Inter-Ministerial Committee which has been accepted by the Government of India be implemented as early as possible.

(11) That while granting permission for installation of towers, the concerned bodies to consider number of mobile towers in area, what would be the effect on the

health of people in case towers are permitted to be erected and to minutely consider various other safeguards.

Resultantly, PIL Petition No.2774/2012 and Petition No.8697/2012 are disposed off with the aforesaid directions and observations and the writ petitions No.17867/2012 and No.18304/2012 are dismissed. The pending applications are also disposed off except one filed by Sudhir Kasliwal as same is to be heard alongwith other pending writ petition. Let a copy of this order be placed in all the files.

(NARENDRA KUMAR JAIN-I), J. **(ARUN MISHRA), C.J.**

Parmar

All corrections made in the judgment/order have been incorporated in the judgment/order being emailed.

N.K. Parmar, P.S. & Mohit Tak, Jr. P.A.