

Legal Framework on Radiation Pollution for Mobile Towers: National & International Perspective

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Abstract

Mobile tower radiations are becoming a topic of concern for numerous individuals around the globe. The network of mobile tower service providers is growing day by day because of the worldwide need for the use of mobile phones. In the case³, the Supreme Court of India had issued interim orders to deactivate the mobile tower as it was the major cause for the development of the cancer. The interim orders have been passed in this case on 30th March, 2017. Radiation from towers with special reference to mobile towers is a moderately new sort of ecological issue which is being perceived as an inconspicuous and unobtrusive contamination that might be influencing life structures in more ways than one. If we assume such mobile towers are important for financial turn of events and health and wellbeing of individuals is additionally in question. So, development on one hand and right to health on other hand is a genuine thought to ponder about. In the event that notwithstanding the ICNIRP⁴ rules to lessen radiation, the residents are getting impacted, then, at that point, it is time that the legitimate system on towers that are associated with mobile are relooked at and, as needs be, fitting measures ought to be taken on to forestall more damage.

Keywords: mobile towers, radiation, article 21, EMR, waves, illegal, air pollution, pollutant.

1. Introduction

With the advent of the modern technology, there has been an increment in the use of telecom gadgets, which has turned into a simple method for correspondence. According to a study, there are roughly 400,000 towers, i.e. mobile towers that will be projected to develop at around 3% over the course of the following 4-5 years.⁵ During recent years, there may be a vertical pattern with an expansion in range interest of 4G and 5G mobile networks. The utilization of mobiles has become more prominent, during the last ten years and this has prompted development of transmission towers on a huge scale, both in the metropolitan, just as in country regions including other scantily populated regions.⁶ Mobile towers depend on the electromagnetic waves, which over delayed use may antagonistically affect people just as on other fauna. Additionally, the fields which are electromagnetic and released from cell phones and different sources have been categorised as "possibly cancer-causing to human" by the WHO's International Agency for Research on Cancer (IARC).⁷

Mobile radiations are turning into a subject of worry for quite a long time all over the planet. The effect of these mobile towers as they

produce non-ionizing radiation that could be unsafe and may affect the wellbeing of individuals who are regularly gets exposed by those radiations.⁸ Close to half of the mobile towers⁹ installed in South Delhi regions are without authorization from community bodies and turns into radiation contamination representing a genuine danger to human existence. This violates the right to life under article 21 of the Constitution of India. The "Ministry of Environment and Forests (MoEF)" ordinarily gets inquiries on such subject during the recent few years. Subsequently, the Study¹⁰ was comprised by "Ministry of Environment and Forest, Government of India" and the board comes to the conclusion that there are adverse consequences on climate, human wellbeing and natural life species due to radiation pollution.

On account of case¹¹, the Supreme Court of India had given interval orders to deactivate the towers, i.e. mobile towers as it was the significant reason for the improvement of the disease including cancers. Moreover, orders including interim orders have been passed for this situation on 30th March, 2017. This is the reason why the researcher has decided to take up the topic of radiation pollution on the

environment with special reference to mobile tower radiations.

The Supreme Court in the case¹², expressed that any aggravation of the essential component of the climate, for example, air, water and soil which are vital for life would be perilous for life under Article 21 of the Constitution of India which expresses “no person shall be deprived of his life or personal liberty except according to procedure established by law”.

2. Radiation defined¹³

Radio frequency with a radiation that is non-ionizing is termed as radiation. Some of the renowned examples include radiation having infra-red waves, the sunlight waves having visible light and various forms of radiations having electromagnetic waves. They have very low frequencies. The type of energy emitted from the mobile phones includes radiations with low frequencies. As these ways are of non-harming nature because they are of non-ionizing character and unable to break DNA bonds in the human body.

3. Mobile Tower defined¹⁴

“A mobile tower is a cone/triangular moulded metal structure which is more than nine meters in stature and on which at least three radio wires are settled. Mobile Tower Antennas are the origin of radiation in a mobile tower. In any case, a telecom foundation comprises of electronic (dynamic) and non-electronic framework.”

The researcher tries to analyse the following points in the article namely:-

1. Does India have any specific legislation that particularly defined protection of environment from radiation pollution?
2. What specific laws govern the operation of radiation in India?
3. If there are laws in India for the control and prevention of radiation pollution, does it specify the limit at which the radiation becomes the pollution for the environment?

4. Justification of Problem

The presence of radiation in the environment of various concentrations from towers especially mobile towers can possibly be damaging to individuals, other living animals, plants, property or climate throughout some undefined time frame and can, in like manner, be considered as an air contamination. Notwithstanding, because of illegal establishments¹⁵ and informal multiplication, the waves or radiation emanating from mobile towers is enhanced and not at all like different sources it is constant. Thus, legitimate system doesn't demonstrate productive measures to give sufficient security to its residents. Also, frequent establishment of unlawful mobile towers brings about infringement of right to life under the ambit of “article 21 of the Constitution of India.”

5. Literature Survey

There are number of studies that have been directed by different government and private offices and broad writing is accessible on the current theme.

Eger H, 2004¹⁶ of Germany observed that the extent of carcinogenic disease cases was essentially higher among those patients who had lived inside 400 meters from the phone transmitter site during the 10 years, contrasted with those patients living further away. They likewise observed that the patients became sick on normal span of 8 years.

Tanwar (2006)¹⁷ studies completed on the RF levels in North India, especially at the site of mobile tower destinations at Delhi have shown that individuals in Indian urban communities are presented to perilously undeniable degrees of EMF contamination.

Report¹⁸ presented by Prof. Sujoy K. Guha, Girish Kumar et al. shows that radiation from mobile towers are unsafe for human wellbeing and obliviousness and non-familiarity with it adds to this hopelessness and we all are retaining this sluggish toxin unwittingly.

According to the report¹⁹ based on audit of the logical data by the Expert Committee, the Report demonstrates that the Electro-Magnetic Radiations (EMR) obstruct the natural or

biological system of the environments. They also reported cases which shows effects on human beings as well.

Jaskaran Singh²⁰ observes that Radiation from portable pinnacles is a generally new sort of ecological issue which is being perceived as a concealed and unobtrusive poison that might be influencing life structures in more ways than one.

In the case²¹, the person aggrieved filed a petition in the court for uninstalling the mobile towers close to emergency clinics, schools and local locations as they impacted the wellbeing and everyday routine individuals experiencing nearby. The person aggrieved satisfied that by installing mobile towers close to medical facilities and schools might influence small kids, matured people and pregnant ladies who are more inclined to radiation that is electromagnetic in nature when contrasted with others, and may almost certainly be powerless to malignant growth, weariness, cerebral pains and so on. Accordingly, the petitioner prayed to the State government to disallow permissions to mobile tower companies that are raised close to universities, medical clinics and correctional facilities.

Conversely, in the case²², a writ request was documented under the watchful eye of the High Court of Delhi for expulsion of mobile phone towers as they supposedly discharged radiation, which cause medical conditions, for example, high pulse rate, prostate malignant growth and heart issues. After hearing the conflicts of the both parties, the court excused the request because of absence of proof set forth by the petitioner.

In case²³, wherein it was held that even in the event of a sensible uncertainty or doubt, the prudent guideline necessitates that as a precautionary measure should be made to forestall any mischief. Hence, banters on absence of direct proof on this issue definitely should not make

any difference given the instances of aberrant harm and endeavours being made to make preventive measure to prevent such harm.

In the case²⁴ Right to Life cherished under Article 21 incorporates that multitude of parts of life which make life significant, meaningful and worth living. Advancement of innovation

has its own evil consequences for individuals, yet on occasion individuals should endure that at the expense of their benefits.

Oberfeld 2004²⁵ observed that critical medical affliction impacts among those living nearby two GSM cell phone base stations. The five most important affiliations or symptoms found were burdensome propensity, weariness, restlessness, trouble in fixation and cardiovascular issues. The researchers revealed the accompanying side effects inside 50 to 150 m of the cell phone towers.

R. Wolf (2004)²⁶ explored that, in view of clinical records of individuals living inside 350 meters of the mobile towers, since a long time ago, showed a fourfold expanded occurrence of disease contrasted to other individuals of Israel, and a ten times increment explicitly among ladies, contrasted and the encompassing area further from the mobile tower.

6. Current scenario of mobile towers in India

As the population of India is increasing day by day the need for wireless communication and its network has increased to a great extent if we see the statistics of the mobile towers in past years. The data revealed that there are 868 million subscribers in India that uses mobile phones as their basic need. This data revealing the statistics is the data of March 2013.²⁷

According to the reports²⁸ of TRAI in 2014, there are more than 5 lakh telecom towers that were already installed in the year 2014. It is estimated that 1 lakh mobile tower will be required in order to cater the needs of 1 billion population. That is why it is necessary to make the laws stricter in the telecom sector.

The dangers that are usually connected with the health hazards from the mobile towers are not clear and obvious among the general public. Numerous mobile companies and organizations keep on asserting that there are no medical issues. On the other hand, numerous complaints have been lodged by the residents who are living near the vicinity of the mobile towers. As a result, everyone is consuming this sluggish toxin accidentally.

The rights that are usually associated with the health and the environment is inferred in

Article 21 of the Constitution of India and its infringement would be the encroachment of the privileges ensured under the Constitution. Besides, the telecom companies or organisations endeavour to be defensive and to stay away from any obligations, yet opposite they are disregarding the privileges of the individuals ensured in the Constitution. In this manner, The existing lawful system doesn't give satisfactory measures to shield its residents from radiation contamination from numerous mobile towers and has a genuine danger to the environment that is associated with human and other natural life species. Along these lines, one can interpret this as the infringement of the Constitution under article 21.

7. Worldwide Scenario of Radiation Limits

The whole scenario of mobile towers is currently being regulated by the government²⁹. India currently is following norm that is also known as ICNIPR³⁰ guidelines for regulation of radiation from the mobile towers in India. ICNIPR guidelines initially issued by the Germany and are widely accepted by countries like Malaysia, Australia, UK, India and Korea. Numerous countries usually set up the limits of the radiation levels beyond which the radiation becomes pollution. This will seriously damages environment and the people. The radiation limits are mentioned below for numerous countries and they are: -

8.Foreign radiation limits for EMF in W/m² 31

The below-mentioned limits deals with the legal norms and radiation limits adopted by numerous nations around the globe. The ICNIPR guidelines³² initially issued by the Germany and are widely accepted by countries like Malaysia, Australia, UK, India, USA and Korea will be discussed for comparative analysis for mobile tower radiations.

4.5	India
12	USA, Canada and Japan
9	Radiation levels accepted in Australia
2.4	Radiation levels accepted in Belgium

1.0	Radiation levels accepted Italy, Israel
0.5	Radiation levels accepted in Auckland, New Zealand

9. Mobile Tower Regulating Authority

The service providers that is mobile service providers (MSPs) & telecom service providers (TSPs) are represented by Terms and Condition of Licenses sanctioned by “Department of Telecom” and they ought to guarantee that radiation from their approved telecom tower or mobile tower is as far as possible within the prescribed limits. For this, all TSPs will undoubtedly present the self-consistence authentication of all the mobile tower establishments on half-yearly basis to guarantee radiations are within the norms and they are not infringing the specified limits.³³

There is a unit called **TERM- Telecom Enforcement Resource & Monitoring** cell which is a sub unit of the DOT that serves on its shoulders the responsibilities for testing the radiation levels in the area and imposing penalties in case the radiation limit exceeds the required level in the country. The cell also has the power to impose a penalty of 5 lakh in case of violations of the above-mentioned limit of the radiation.

10. Legal Framework in India on Radiation

The research deals with the possible ways to make the legal norms more efficient. Through this section the researcher tries to explore proposed laws that could change the framework positively and furthermore the laws promoting environment like Air (Prevention and Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 , Indian Wireless Act, 1933, Indian Telegraph Act, 1885, Atomic Energy Act, 1962, Telecom Regulatory Authority of India Act, 1997, have also been critically analysed along with the reports like Inter-Ministerial Committee (IMC) Report, 2011 and ICNIRP Guidelines of 1998.

In perspective of the above-mentioned details and numerous complaints filed by individuals regarding their health issues and medical problems concerning radiation risks and

wellbeing. Mobile Tower Base Stations (MTBS) are the stations which regulates the radiation of mobile towers. This area abridges legitimate angles regarding the matter of radiation. Indian legislations with respect to this topic are: -

1. The first Act relating to mobile towers radiation defined wireless communication as 34:

“Wireless communication means any transmission, omission or reception of signs, signals, writing, images and sounds, or intelligence of any nature by means of electricity, magnetism, or Radio waves or Hertzian waves, without the use of wires or other continuous electrical conductors between the transmitting and the receiving apparatus.”

“Explanation: - Radio waves or Hertzian waves means electromagnetic waves of frequencies lower than 3,000 gigacycles per second propagated in space without artificial guide”

2. The second Act define Telegraph as³⁵

“Telegraph means any appliance, instrument, material or apparatus used or capable of use for transmission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, visual or other electro-magnetic emissions, radio waves or Hertzian waves, galvanic, electric or magnetic means.”

3. The TRAI Act define, the telecommunication service as³⁶

“Telecommunication service’ means service of any description (including electronic mail, voice mail, data services, audio text services, video text services, radio paging and cellular mobile telephone services) which is made available to users by means of any transmission or reception of signs, signals, writing, images and sounds or intelligence of any nature by

wire, radio, visual or other electro-magnetic means but shall not include broadcasting services.”

The accompanying laws are notable focuses that feature the part of administrative offices

in the territory of establishments of Mobile Tower Base Stations (MTBS) and they are: -

1. According to the Act of 1981 and Act of 1986 ‘air pollutant’³⁷ and environmental pollutant³⁸ is defined as:

“Any solid, liquid or gaseous substance [(including noise)] present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment”

It is to be seen that the word ‘radiations’ is not expressly mentioned in any above definition but EMR³⁹ that is being released into the environment from mobile tower, which can be termed as “non-air pollutant” be interpreted from the above section.

2. According to the Act⁴⁰:

“No person shall, without the previous consent of the State Board, establish or take any steps to establish any industry, operation or process, or any treatment and disposal system or an extension or addition thereto”.

3. According to the Act⁴¹ of 1962 which defines substance and deals with the radiation. It defines substance as:

“Substance which means any substance including any mineral which the Central Government may prescribe.”

Notwithstanding it is the substance that might be utilized for the creation or utilization of nuclear energy or examination into the issues associated therewith. Numerous kinds of substance and materials have been covered by the above-mentioned section. It is to be noted that it does not specify radiation as a substance.

The Act also defines radiation⁴² as

“Gamma rays, X-rays, and rays consisting of alpha particles, beta particles, neutrons, protons and other nuclear and sub-atomic particles.”

Along these lines it is impermissible to peruse the same in any settled standards of interpretation. This unmistakably demonstrates the blueprint of the law that it didn't wish to incorporate radio waves as a major aspect of this demonstration. Potentially this can be interpreted that in our approach to make advances on conclusion that radioactive waves are not secured under the Atomic Energy Act, 1962.

11. Case laws relating to Radiation Emitted through Mobile Towers in India In case⁴³, NGT⁴⁴ remarked that:-

“It is certain that the radiation from electromagnetic waves coming about because of the numerous mobile towers isn't expressly written or interpreted in any of the written demonstrations to the NGT Act, 2010. Truth be told, even under the NGT Act, 2010, pertinent definition under arrangements don't allude to the radiation particularly.”

The same tribunal, after all the observations before them remarked that the matter of radiation i.e. the waves that is electromagnetic in nature and being discharged from the numerous mobile towers built by the individual respondents cannot be concluded to fall and include within the jurisdiction, ambit & extension vested with the NGT under the arrangements of the NGT Act with reference to the Act⁴⁵. The NGT has however remarked that the previously mentioned order just manages the issue of purview and that it has not recorded any finding with reference to whether radiation is a pollutant for the most part or under some other particular law including natural law. The NGT brought up that it isn't managing the inquiry whether the Central Government or other State Governments are at risk to be coordinated to outline statutory or other administrative administration covering the development, its detail, destinations and operation of mobile towers. The NGT likewise dismissed any finding with reference to whether radiation is above endorsed limits and the rules and additionally past them is really damaging to human wellbeing and condition.

In the above-mentioned case the NGT features the vulnerability in the current law, in so far as tending to the issue of electromagnetic radiations is worried, there have been orders

passed by different high courts in India which have either observed electromagnetic radiations to be a wellbeing risk or have featured the vulnerability because of absence of confirmation in such manner.

1. In case ⁴⁶, the Court of Rajasthan has remarked that:-

“Towers on hospitals and school structures and so forth ought to be stayed away from kids and patients that might be more powerless to conceivable unsafe impacts of electro-attractive radiation. The cases identified with the erection of portable towers in certain high-chance ranges like schools, doctor's facilities and high-thickness local locations and the legitimacy of bye-laws which restricted the erection of versatile towers in such territories. The court held to be legitimate the bye-laws of the State Government, made on the proposal of the Central Government. On account of the thickly populated local locations, the court coordinated the State Government and the nearby specialists to take choice on insightful premise as to establishment of towers in the thickly populated zones as per law.”

12. Conclusion

The numerous high courts have additionally opposite perspectives in different cases in such manner. On account⁴⁷, the request petitioned was the denial from installation on roof tops the towers which are associated with mobile. For this situation, the Himachal Pradesh High court held that:-

The standard issue was whether or not the radiations from the numerous mobile towers will bring on any hazardous impact or not. The Hon'ble High Court found that radiation is not a new concept and all have experiencing it in presence since life began on the planet. Additionally, there are many studies which shows no alert concerning possible risk effect of the field that is electromagnetic in nature (EMF) from wireless towers or the phones towers as the farthest point will not normally affect the existence of everybody. The Hon'ble High Court commented that there was no unquestionable confirmation or legitimate sponsorship that the towers especially mobile towers would cause prosperity risks to life and the human being.

More as of late in 2016, and on account of the case⁴⁸, it has been remarked that

All assessments exhibit an impression of being no indisputable consistent material or data which might warrant EMF radiation being appointed imperilling risk to the life of the individual. Be that as it may, the state of the investigation can at show, be best portrayed as being at this point ill-defined and unsteady. This is perhaps the clarification behind research in the field being continued and constant. The standards got in our country are communicated to be more severe than those proposed by guidelines in the world.

However in the case, it has been held on account of⁴⁹ that Article⁵⁰ fuses all of those pieces of life which make life significant, effective and meaningful. Also:

“Improvement of innovation has its own particular bad consequences on individuals, in any case, now and again individuals should endure that at the cost of their favourable circumstances.”

From the above provisions the researcher concludes that there is no provision in laws that specifically defined radiation pollution but only Department of Telecommunication (DOT) specifies the limit above which the radiation becomes harmful for the health of the individuals. As of today, there are numerous complaints regarding diseases that were developed from mobile tower radiation but there is no scientific proof that mobile tower radiation is only cause of disease in the individuals. There are numerous countries that have specifically have their own laws regarding radiation pollution. So, there is a need to make stricter laws and regulations which specifically deals with radiation pollution so the robust service providers should be restricted to install mobile towers in areas that are sensitive ones like hospitals, schools and other areas concerned. Also, there should be a limit upon number of tower one can install in any given locality.

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