

*Proceedings of National Conference**“Environmental Conservation and Clean India Programme” December 2014, India***Mobile Towers and Vanishing Sparrows****Shashi Nautiyal and Shweta Bansal****Received:** October 02, 2014 | **Accepted:** December 07, 2014 | **Online:** December 31, 2014

Birds are often called the thermometers of environment if we can hear their shrieks and soulful songs then we can safely say the environment is safe. The sparrow is micro example of the same. Urban Indians of our age grew watching pigeons, sparrow around our houses many of our childhood stories were based on sparrows, pigeons and other birds. These are rare experiences for our children now. Sparrow a commonly found bird in the past has become scantier now.

Sparrows belong to family of small passerine bird, it has stout-body covered with brown black and white feathers. They are basically grass, seeds and worm and grain eater. Their life cycle range from four to five years. Constant decline in number of sparrows can be attributed to many reasons loss of habitat-older houses had ventilators, lofts, holes between the walls for in sparrows and pigeons to build nests but these feature are not found on new

buildings, increased use of insecticide has decrease their food and infected them. Increased use of unleaded petrol combustion which produce compounds such as methyl-nitrate which is highly toxic for insects which form a major part of young sparrow's diet, creating havoc to sparrows' population, Grassy landscapes are being replaced by urban landscapes reducing habitat to sparrows.

Latest threat to sparrows is from mobile towers. Rapid development in science and technology has made human life easy but-on the same side human life interference into natural environment has led to various undesirable results one such symbol of development is mobile phone. A TRAI report indicates “Number of India's telecom subscribers has increased to 76.75% by Sept. 2014 among these private operators hold 90.05% of wireless subscriber market share whereas BSNL and NTNL the two PSU operators hold only 9.95% market share. The increasing number of mobiles users led to increasing number of mobile towers.

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Radiation from mobile towers is not only dangerous to humans but birds too. sparrows are at mortality risk from mobile towers. An environment science expert team led by Sainudeen Pattanzy attributes the disappearance of sparrow to electromagnetic fields and radiation effects created by mobile towers. Mobile towers emit electromagnetic radiation which is a form of energy released by electromagnetic process. It consists of electromagnetic waves which are synchronized oscillation of electric and magnetic field. The oscillation of two fields is perpendicular to each other and perpendicular to the direction of energy and wave proportion forming of transverse wave. The effects of electromagnetic radiation on humans and animals depend on the power and frequency of radiation.

Studies on radiation notice nest abandonment, plumage deterioration and death of the birds. Ministry of environment and forests set up an expert committee comprising Rahmani Sainuddin Pattanzy and others to study to possible impact of communication towers on wildlife including birds and bees. The Panel found that EMR (electromagnetic radiation) as pollutant. It has negative consequences on immunity, communication and co-ordination in animals and birds, radiation affects all kinds of birds including sparrows in the cities and obstruct migratory birds in their flight.

Radiation impact on sparrows is also found in a study carried out by centre for environment and vocational studies, Punjab. 50 eggs of house sparrows were exposed to EMR for 5-10, it was found that all the fifty embryos were

damaged. The same can be observed if the eggs are placed inside a microwave oven or for that matter on any hot surface for sufficient time.

Sept. 2010, A study by Bombay Natural History society (BNHS) under Asad Rahmani was conducted under Asad Rahmani to study the impact of cell phone towers on birds and bees. The group viewed 919 studies performed in India and abroad regarding effects of cell phones towers on birds, insects, wildlife and humans of 919 studies, 593 studies showed the negative impacts of mobile towers on birds. The expert even pin pointed cell phone towers as potential cause in the decline of animal population. Dr. Sajed Hussain Research Scholar Entomology says that studies have warned about ill effects of mobile tower radiation on reproduction of sparrows. Britain sparrows population has almost halved from 24 to 14 million in the last thirty years.³ We are not sure of long term effect of emission from mobile towers on birds and even on human health. In an article titled “Cell phone Radiation May be harmful but not lethal” published in the Hindu dated Sept. 2013 by Vasudha Venugopal. It has been mentioned that research papers in encyclopedia of environment health have said that no study has concretely proved that cell phone emission is lethal to sparrow but that is sure that emission from mobile tower is harmful.

Out of total mobile circulation in India, private companies owe 90% of share in mobile market. These companies do not follow guidelines for installation of mobile towers. Mobile companies increase tower frequencies

to avoid putting up more towers which in turn adversely affects birds. EMR adversely affecting not only birds but bees too. It is causing colony collapse disorder. The radiation from mobile phones interfere with bees navigation system preventing them from finding their ways back to their hives observation also show that number of bats near mobile towers has gone down due to radiation affect.

Besides being thermometer of ecology, birds help society by eating harmful insects they also help in germination of seeds. Some natural structures like lakes, ponds attract birds where some structures distract them mobile towers among such structure.

Cellular towers cannot be eliminated overall but their numbers can be reduced with telecom companies operating on a share basis rather than via individual basis more over these towers should not be allowed to be installed in thickly populated areas. New towers should not be allowed within radius of one kilometer of existing towers. Moreover towers should not be allowed to install near zoos or any wildlife protected zones so that they do not obstruct the flight path of birds.

It has been our tradition to feed and protect birds our rishis' ashrams have been the place where animals and birds live together. We should follow our tradition and try our best to sustain them.

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