

(b) whether Government by merging the above two companies and by implementing 'One India Plan' proposes to make phone calls and net services cheaper, if so, the details thereof; and

(c) whether any fixed time-limit has been set to effect the merger, the details thereof?

THE MINISTER OF COMMUNICATIONS AND INFORMATION TECHNOLOGY (SHRI RAVI SHANKAR PRASAD): (a) Government is in the process of revival and revitalization of Bharat Sanchar Nigam Limited (BSNL) and Mahanagar Telephone Nigam Limited (MTNL) through various short term, medium term and long term measures. The long-term measures would attempt to position these PSUs to emerge as market leaders in the converged telecommunication market. Amongst various options being considered as long-term measures for revival of BSNL and MTNL is merger of the two CPSUs (Central Public Sector Undertakings). No decision has been taken for merger.

(b) No, Sir. Merger of BSNL and MTNL may help in adopting a common approach to network infrastructure, enterprise business and customer services issues.

(c) No Sir. For an in-depth study on the implications of merger of the two PSUs, four groups have been constituted to study issues of human resources integration, system integration, corporate integration and financial integration.

Studies on EMF radiations

1441. SHRI RAMKUMAR KASHYAP: Will the Minister of COMMUNICATIONS AND INFORMATION TECHNOLOGY be pleased to state:

(a) whether studies conducted by Guru Nanak Dev University, Amritsar and Jawaharlal Nehru University have found that radiations emitted from mobile towers are degenerating DNA and chromosomes and the exposure to radiation from mobile towers and mobile phones could have an adverse impact on male fertility and deplete the defence mechanism of cells;

(b) whether the study of Ministry of Environment, Forests and Climate Change has blamed electromagnetic radiation from communication towers for the declining number of sparrows, bees, etc.; and

(c) if so, measures taken or proposed to be taken to check adverse impact of Electro Magnetic Field radiation?

THE MINISTER OF COMMUNICATIONS AND INFORMATION TECHNOLOGY (SHRI RAVI SHANKAR PRASAD): (a) Sir, Government on 24.08.2010, has constituted an Inter-Ministerial Committee (IMC) consisting of officers from Department of Telecommunications (DoT), Indian Council of Medical Research (Ministry of Health), Department of Biotechnology and Ministry of Environment and Forest to examine the effect of Electro Magnetic Field (EMF) Radiation from base stations and mobile phones. In its report, the committee has, *inter-alia*, referred to following studies conducted by Jawaharlal Nehru University and Guru Nanak Dev University, Amritsar:

- “(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.
- (ii) Also 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 individuals using mobile phones which may have long-term consequences in terms of neoplasia and/or age-related changes.”

However, the Inter-Ministerial Committee (IMC) in its report, has examined various national and international studies on the environmental and health related concerns due to EMF and has indicated that most of the laboratory studies were unable to find a direct link between exposure to radio frequency radiation and health; and the scientific studies as yet have not been able to confirm a cause and effect relationship between radio frequency radiation and health. The effect of emission from cell phone towers on human health is not known yet with certainty.

Further, World Health Organization (WHO) has referred to approximately 25,000 articles published around the world over past 30 years, and based on an in-depth review of scientific literature, has concluded: “current evidence does not confirm the existence of any health consequences from exposure to EMF radiation”

(b) As per Ministry of Environment, Forests and Climate Change, no research study has been conducted on EMF radiations from mobile towers and their effect on sparrow, bees etc. However, Ministry of Environment and Forests on 30th August, 2010 constituted an expert committee to Study the possible Impacts of Communication Towers on Wildlife including Birds and Bees. The committee reported that there are indications

that the Electromagnetic Radiations can affect biological systems of animals, birds and insects.

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

(c) Department of Telecommunication (DoT), since 2008, has been monitoring global developments and has already taken necessary steps and adopted stricter norms for safety from EMF radiation that are emitted from mobile towers and mobile handsets. Government of India has been taking due precautions and necessary actions in respect of EMF radiation emitted from mobile towers and mobile handsets by issuing various guidelines and norms taking into account the international standards/norms prescribed by International Commission on Non Ionizing Radiation Protection (ICNIRP) as recommended by World Health Organization.

Government of India adopted the ICNIRP guidelines in the year 2008 for basic restriction and limiting reference levels of Electromagnetic radiation from Mobile towers and inserted the additional clause in the Access Service Licenses *vide* its amendment letter dated 4/11/2008. Based on the recommendations by Inter-Ministerial Committee (IMC), these norms for exposure limit for the Radio Frequency Field (Base Station Emissions) have been further reduced to 1/10th of the existing limits prescribed by International Commission on Non Ionizing Radiation Protection (ICNIRP).

In order to ensure compliance to the prescribed stricter precautionary norms of EMF radiation from mobile tower, the extensive audit of compliance of self-certificates being submitted by telecom service providers and base transceiver station (BTS) sites is carried out by Telecom Enforcement Resource and Monitoring (TERM) field units of DoT. This is regularly done by TERM units for the purpose of limiting the EMF radiation exposure and keeping general public areas in the vicinity of towers safe. In case, any BTS site is found to violate the prescribed EMF norms, actions are taken to put a penalty of ₹ 10 lakh per BTS per incidence including closing of BTS site as per the prescribed procedure. Additionally, the BTS sites against which there are public complaints are also tested by TERM Cell.