



**environment, forestry
& fisheries**

Department:
Environment, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Ref: O2/1/5/2

NATIONAL ASSEMBLY

(For written reply)

QUESTION NO. 2595 {NW3309E}

INTERNAL QUESTION PAPER NO. 45 of 2020

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Mr N Singh (IFP) to ask the Minister of Forestry, Fisheries and the Environment:

- (1) What are the full, relevant details of the role that her department plays in minimising the negative impact of the Internet of Things on the environment in terms of reducing the carbon footprint, as well as the adverse environmental health effects linked to electromagnetic radiation, which is emitted from cell phone towers, which will soon be 5G or fifth generation-enabled;**
- (2) whether her department has conducted any studies in this regard; if not, why not; if so, what are the full, relevant details?**

2595. THE MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT REPLIES:

- (1) The Environmental Impact Assessment Regulations, 2014 (as amended) (EIA Regulations) identify activities that may result in substantial negative impacts to the environment. The Regulations require that anyone who wishes to undertake any of the identified activities must do so after having obtained an environmental authorisation from a competent authority. An environmental impact assessment process is undertaken with respect to these identified activities. An application for environmental authorisation is submitted to the competent authority for**

consideration by an independent Environmental Assessment Practitioner, on behalf of the applicant. The competent authority will consider the application and then make a decision as to whether or not a development must be approved.

Based on the above, and in line with Section 24(2)(a) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), the Minister of Forestry, Fisheries and the Environment has considered all the potential significant impacts associated with cellular masts and base stations on the receiving environment. The development of masts or towers used for telecommunication broadcasting or radio transmission purposes has been identified as an activity requiring environmental authorisation, where such masts or towers exceed 15 metres in height, are placed on a site not previously used for this purpose, are to be developed within certain specified geographical areas and will not be attached to existing buildings, masts or rooftops. Should the mast or tower not meet this criteria or fall outside the specified geographical areas, environmental authorisation is not required, as the potential impact of such developments are not deemed to be significant.

In developing the Notices for the EIA Regulations, 2014, the department was guided by the informed views of, amongst others, the National Department of Health, regarding the effects of electromagnetic fields. The Department of Health through its directorate Radiation Control, considers the World Health Organisation's and the International Commission on Non-Ionising Radiation Control's (ICNIRP) guidelines to be appropriate to manage potential radiation risks. The Department of Health, in their letter dated 14 March 2011, has indicated that measurement surveys conducted in South Africa and elsewhere have shown that the actual levels of public exposure, as a result of base station emissions, are only a fraction of those specified as safe in the ICNIRP guidelines (please refer to Annexure A). In addition, the letter from Department of Health, dated 13 June 2020 (attached as Annexure B), confirms that its position has not changed.

(2) The department has not conducted any studies in this regard, as communication from the Department of Health confirms that there is no need to do so at this stage.

Regards


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MS B D CREECY, MP
MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT

DATE:16/11/2020.....



Department of Health

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Date: 14 March 2011

To whom it may concern

HEALTH EFFECTS OF CELLULAR BASE STATIONS

The Directorate: Radiation Control is the section within the National Department of Health that is responsible, from the viewpoint of human health, for regulating electronic products producing non-ionising electromagnetic fields (EMF), i.e. EMF operating at any frequency less than 300 GHz. In carrying out this responsibility, the Directorate has been utilising the World Health Organization's (WHO) International EMF Project (www.who.int/emf) as its primary source of information and guidance with respect to the health effects of EMF. The International EMF Project was established by the WHO in 1996 to (i) assess the scientific evidence for possible adverse health effects of non-ionising electromagnetic fields on an on-going basis, (ii) initiate and coordinate new research in this regard, and (iii) compile health risk assessments for different parts of the electromagnetic spectrum. The Department of Health has been a member of the International Advisory Committee of the International EMF Project since 1998.

In June 2005 the EMF Project hosted a workshop that was specifically aimed at considering the possible health consequences of the emissions from cellular base stations and wireless networks. The findings of this workshop were published by the WHO as both a full report and a 2-page Fact Sheet (www.who.int/mediacentre/factsheets/fs193/en/index.html). The following extract from this Fact Sheet provides a clear-cut summary of the findings to date, i.e. ***“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.”***

The WHO endorses the set of exposure guidelines published in 1998 by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), and consequently, the

Department of Health also endorses these ICNIRP guidelines. The ICNIRP states categorically that exposure to any EMF at a level below that of the applicable ICNIRP exposure guideline will protect people against the known adverse health effects of EMF.

Measurement surveys conducted in South Africa and around the world have shown that the actual levels of public exposure, as a result of base station emissions, invariably are only a fraction of the ICNIRP guidelines, even in instances where members of the public have been really concerned about their exposure to these emissions. At present there is **no** confirmed scientific evidence that points to any health hazard associated with the very low levels of exposure that the general public would typically experience in the vicinity of a cellular base station. The Department is therefore satisfied that the health of the general public is not being compromised by their exposure to the microwave emissions of cellular base stations. This also means that local and other authorities, in considering the environmental impact of any particular base station, do not need to and should not attempt, from a public health point of view, to set any restrictions with respect to parameters such as height of the mast, distance to the mast, and duration of exposure. In all of this, it is implicitly assumed that the normal engineering and security measures, which are routinely implemented by cellular network providers at base stations, will effectively prevent reasonable members of the public from gaining close access to the actual antennas situated on any mast structure.

Although the Department of Health currently neither prescribes nor enforces any compulsory exposure limits for electromagnetic fields, the Department does advise all concerned (whether they be a government department, the industry or the public) that voluntary compliance with the afore-mentioned ICNIRP exposure guidelines is the recommended and science-based way to deal with any situation involving human exposure to non-ionising electromagnetic fields.

Yours sincerely,



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Date: 13 June 2020

To whom it may concern

HEALTH EFFECTS OF CELLULAR BASE STATIONS AND HANDSETS

The Directorate: Radiation Control was the section within the National Department of Health that was responsible, from the viewpoint of human health, for regulating electronic products producing **non-ionising** electromagnetic fields (EMF), i.e. where the frequency of such EMF is less than 300 GHz. The Directorate Radiation Control has since been transferred to the South African Health Products Regulatory Authority (SAHPRA). In carrying out its responsibility, the Directorate has been utilising the World Health Organization's (WHO) International EMF Project (www.who.int/peh-emf/en/) as its primary source of information and guidance with respect to the health effects of EMF. The International EMF Project was established by the WHO in 1996 to (i) assess the scientific evidence for possible adverse health effects of non-ionising electromagnetic fields on an on-going basis, (ii) initiate and coordinate new research in this regard, and (iii) compile health risk assessments for different parts of the electromagnetic spectrum. The Department of Health has been a member of the International Advisory Committee of the International EMF Project since 1998.

In June 2005 the International EMF Project hosted a workshop that was specifically aimed at considering the possible health consequences of the emissions from cellular base stations and wireless networks. The findings of this workshop were summarised in a 2-page Fact Sheet (<http://www.who.int/peh-emf/publications/facts/fs304/en/>). The following extract from this Fact Sheet is still considered by the WHO as a summary of the findings to date, i.e. ***“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.”***

Another WHO Fact Sheet was published in June 2011 and reviewed in October 2014, i.e. *Electromagnetic fields and public health: mobile phones*. This Fact Sheet can be found at

<http://www.who.int/mediacentre/factsheets/fs193/en/>) and the conclusion is stated as follows: ***“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.”***

The WHO recommends utilising internationally recognised exposure guidelines such as those published in 1998 by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) and reconfirmed in 2009 for the frequency range 100 kHz – 300 GHz (i.e. including all the frequencies employed by the cellular industry). The Department of Health likewise recommends the use of these ICNIRP guidelines to protect people against the known adverse health effects of EMF.

The numerous measurement surveys, which have been conducted around the world and in South Africa, have shown that the actual levels of public exposure as a result of base station emissions invariably are only a fraction of the ICNIRP guidelines, even in instances where members of the public have been really concerned about their exposure to these emissions. At present there is no confirmed scientific evidence that points to any health hazard associated with the very low levels of exposure that the general public would typically experience in the vicinity of a cellular base station. The Department is therefore satisfied that the health of the general public is not being compromised by their exposure to the microwave emissions of cellular base stations. This also means that local and other authorities, in considering the environmental impact of any particular base station, do not need to and should not attempt, from a public health point of view, to set any restrictions with respect to parameters such as distance to the mast, duration of exposure, height of the mast, etc.

The Department of Health is not able to make any pronouncements about the specific levels of EMF that a member of the public would experience at any particular base station site when it is in operation. However, generally-speaking unless a person would climb to the top of a mast (or other structure supporting an antenna) and position him/herself not more than a few meters away right in front of the active antenna, such a person would have no real possibility of being exposed to even anywhere near the afore-mentioned ICNIRP guideline limits. Since these base stations are typically cordoned off by means of barbed wire fencing and locked gates/doors in order to protect the sensitive and expensive technology, getting to a mast and actually climbing it despite the afore-mentioned security measures would certainly not be considered responsible behaviour. Even then the only real threat to the health of the person would be falling at any height from the structure in question. Based on the results of numerous global and local surveys, the experience has been that the exposure to base station EMF at ground level is typically in the range of between 0.001 – 1.0 % of the afore-mentioned ICNIRP guideline limits. Against this background of available data, there

would be no scientific grounds to support any allegation that adverse health effects might be suffered by a responsible member of the public due to the EMF emitted by a base station.

Although the Department of Health currently neither prescribes nor enforces any compulsory exposure limits for electromagnetic fields, the Department does advise all concerned (whether they be a government department, the industry or the public) that voluntary compliance with the afore-mentioned ICNIRP exposure guidelines is the recommended and science-based way to deal with any situation involving human exposure to the non-ionising electromagnetic fields emitted by cellular base stations and handsets.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'LL du Toit', written in a cursive style.

LL du Toit
DEPUTY DIRECTOR: RADIATION CONTROL