

SINGAPORE

Report to the World Health Organisation on EMF Activities

International EMF Project

International Advisory Committee

June 2019

Electromagnetic Field Exposure and Health Effects Research Activities

DSO National Laboratories, Singapore's largest defence research and development organisation, published a conference paper "Non-Ionising EMF Hazard in the 21st Century" at the IEEE Electromagnetic Compatibility (EMC) symposium in 2018. The paper reviewed the current non-ionising EMF exposure guidelines and the associated biological effects studies. In conclusion, the paper recommends that IEEE and ICNIRP review the exposure guidelines.

New Policies and Legislation Regarding Electromagnetic Field Exposure

General

In Singapore, the Radiation Protection Act (RPA) and its Regulations govern and regulate activities and safety issues pertaining to ionising and non-ionising radiation. The NEA enforces the RPA and its Regulations.

Under Radiation Protection (Non-Ionising Radiation) Regulations, selected types of non-ionising radiation equipment are controlled:

- 1) Sunlamps
- 2) Microwave ovens
- 3) Ultrasound apparatus
- 4) Magnetic resonance imaging apparatus
- 5) Entertainment lasers
- 6) High power lasers

Telecommunication equipment and electrical power equipment or facility are not classified as controlled apparatus under the RPA. On public exposure to RF and Extremely Low Frequency (ELF) radiation from such sources, the NEA adopts the exposure guidelines for RF and ELF radiation recommended by the World Health Organisation (WHO).

Singapore is aware that the [International Agency for Research on Cancer \(IARC\)](#) has classified RF electromagnetic fields and ELF magnetic fields as Group 2B carcinogen (possibly carcinogenic to humans). Government agencies will continue to monitor international developments relating to effects of RF and ELF exposure on health in order to make policy interventions if and when necessary.

Areas of Public Concern and National Responses

A number of queries were received from members of the public regarding the safety of RF radiation emitted from mobile base stations and ELF radiation emitted from electrical substations. The queries were addressed based on findings, recommendations and advice from WHO factsheets and health publications on radiation.

New Public Information Activities

An updated list of information on radiofrequency radiation and mobile phones is made available on [NEA website](#) via "Ask Jamie @ NEA".