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Estonia – report on EMF activies (Ministry of Social Affairs, June 2023)

Because of rising popularity of 5G topics and fears/questions among the public about the hazards and risks of the EMF, Ministry of Social Affairs ordered the study „"Assessment of the current and associated with the implementation of 5G possible health effects, which are related to non-ionizing radiation" (financed by the Ministry of Economy) from Tallinn Technical University in 2022.

The purpose of the study:

The purpose of the study was to analyse the results of published evidence-based studies and, based on them, to give an assessment by the Estonian scientific community of the possible effects of non-ionizing radiation, including mobile communication 5G effects on health and, depending on this, input for updating the requirements of non-ionizing radiation. The additional goal was to measure (in special cases, model) current levels and determine worst case radiofrequency radiation levels in the vicinity of a sufficient selection of Estonian mobile communication base stations, including 5G base stations, in order to analyse the radiofrequency radiation (RFR) situation in public areas. The work was divided into three parts: first, literature review and analysis of normative materials; secondly, the experimental part including the assessment and simulation of the RFR situation based on measurements; and thirdly, assessments of the possible health effects of RFR, proposals for reducing health effects and updating the requirements of the regulation on nonionizing radiation.

Assessment of the possible health effects of RFR and proposals for reducing the health effects and updating the requirements of the regulation on non-ionizing radiation:

To reduce the health risk of the population, it is necessary to follow the principle of prevention and precaution, using all possible measures to reduce the level of RFR and at the same time ensure the operation of devices that use the radiation - the ALARA principle. For this purpose, all possibilities as notification of population, protection of risk groups, and technological solutions must be applied. It makes sense to use cable connections if there is no need to ensure mobility. Switching off older generations (2G, 3G) accompanying the development of technology significantly reduces the level of RFR. In order to reduce the possible health risk and radiation level, it is necessary to move in the direction of replacing older generations not of banning newer generations (5G). Based on the conclusions above, the proposals for amending the draft of the Regulation of the Minister "Requirements for ensuring the safety of non-ionizing radiation in the living environment and methods for measuring the levels of non-ionizing radiation" are as follows:

• To establish reference values for electric field strength of 6 V/m and power density of 0.1 W/m^2 in the frequency range from 10 MHz to 10 GHz.

• To control the level of radiofrequency radiation in the living environment, the methods accepted for use in electrical measurements can and must be used.

Read the full english summary of the study with reasonings and conclusions here:
https://www.sm.ee/media/2603/download

Ministry of Social Affairs plans to update our national EMF living environment requirements and we are considering to take into account the results of the study and also the ICNIRP 2020 updated recommendations in that process. Risk communication has been relevant – there have been several press releases from the Ministry of Social Affairs, Ministry of Economy and the Health Board regarding the risks of EMF and 5G. It is an ongoing process and communication.

There are different laws and regulations in the field of EMF but the main ones are as follows:

The regulation of the Minister of Social Affairs „Non-ionizing radiation limit values in living and recreation areas, residential and communal buildings, study rooms and measurement of non-ionizing radiation levels“

The government regulation for occupational health and safety (optical radiation): „Occupational health and safety requirements in a work environment affected by artificial optical radiation, artificial optical radiation limit values and radiation measurement procedure“

The government regulation for workers:“Effective dose limits for radiation workers and residents and equivalent dose limits for eye lens, skin and limbs“

The regulation of Minister of Environment for the workers:

„The procedure for monitoring and evaluating effective doses of radiation workers and residents, radiation and tissue factor values, and values of dose coefficients used to estimate doses caused by ingestion of radionuclides“