EFFECTS OF ELECTROMAGNETIC POLLUTION

MUDURA Pavel
University of Oradea
e-mail: pmudura@uoradea.ro

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Radiation is a physical phenomenon of emission and propagation of waves (wave radiation) or particles (corpuscular radiation). Any radiation involves transport of energy.

Electromagnetic waves (e.m.w.) are physical phenomena, natural or artificial, whose analytical model is given by Maxwell's equations. Such a wave is the combination of a periodic sinusoidal electric field, E, with a magnetic field, H, sinusoidal with the same period, perpendicular to each other at every point.

Electromagnetic Pollution. is a physical phenomenon consisting in the exposure of beings, plants and devices to electromagnetic field (e.m.f.) issued by the electric devices (electromagnetic radiation). Quantities that characterize this exposure are: *power*, *frequency* and *duration of exposure*. The question is whether these e.m.f. are a factor of disturbance (affecting health and reproduction) for certain species or is a factor of fragmentation of ecological space (to prevent movement of species living in some areas). The answer to this question is controversial at present and had not been decided yet.

Environmental protection against electromagnetic pollution is shown in many aspects: jurisdiction, economic, application of standards, research of health effects, prevention and information on health risk. There is a worldwide discussion on the health effect of electromagnetic radiation of low intensity radiation long term effects, the so called *non-thermal effects*. The European Parliament [5] recognizes the emergence of new diseases, in the last years, between which the hypersensitivity to electromagnetic radiation and asks the European Counsel to modify the 1999/519/CE recommendation to fix more exigent limiting values for the assembly equipments which have electromagnetic wave release.

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