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CAUTIONARY APPROACH: Cautionary approaches are used for management of health risks in the face of scientific uncertainty, high potential risk, and public controversy. Several different policies promoting caution have been developed to address concerns about public, occupational and environmental health issues.

COST-BENEFIT ANALYSIS: An economic method for assessing the costs and benefits of achieving alternative standards with different levels of health protection.

CRISIS: A crucial or decisive point when conflict reaches its highest level of tension; a turning point. In the "Issue Life Cycle," the crisis stage is when the participants demand immediate action, i.e., when the dialogue stops, and the established process is no longer working.

DOSE-RESPONSE RELATIONSHIP: The relationship between exposure, characterized by level and duration, and the incidence and/or severity of adverse effects.

DOSEMETRY: The technique to determine the amount of electromagnetic energy absorbed in the body or its tissues.

EFFECT: Change in the state or dynamics of a system, caused by the action of an agent.

ELECTRIC FIELD: A region associated with a distribution of electric forces acting upon electric charges.

ELECTROMAGNETIC COMPATIBILITY (EMC): The property of an electrical or electronic apparatus to function satisfactorily in its electromagnetic environment without introducing unacceptable interference signals to that environment.

EMF: Abbreviation for Electric and Magnetic Fields or Electromagnetic Fields.

GLOSSARY

ABSORPTION: In radio wave propagation, attenuation of a radio wave due to dissipation of its energy, i.e., conversion of its energy into another form, such as heat.

ACUTE: Short term, immediate consequence.

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ASSOCIATION: Originally used for ionizing radiation.

BASIC RESTRICTION: Health-based exposure limits that relate to certain electromagnetic phenomena that, if exceeded, may lead to health impairment in the human body. For static fields these limits are the electric and magnetic field strengths, for alternating fields up to around 10 MHz, they are the electric current that is induced in the body, and for alternating fields greater than about 100 kHz they are the conversion that takes place in the body from electromagnetic energy into heat. Between 100 kHz and 10 MHz, both the induction of currents in the body and the generation of heat are important.

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DELPHI PROCESS: A method for developing consensuses, presented in two variations. The first variation includes the following steps: identify individuals who are most knowledgeable about the issue and ask them to identify others; repeat this until it is clear who people think are the experts; then, draw predictions from these experts, report the responses to them and ask if they wish to change their personal predictions; finally, repeat the process until the members choose to make no more changes. The second variation includes the following steps: use an expert panel, but ask stakeholders to name the experts they trust most; ask stakeholders to respond to questionnaires about the issue; provide their responses to the experts; and repeat the process until the experts have sufficient confidence to make decisions or propose recommendations they feel the community will accept.

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Health Organization, the International Labor Organization and the Commission of the European Communities.

**LIFE CYCLE** Tracking a project or a public concern through time at all stages of its development and evolution.

**LONG-TERM EFFECT** Biological effect that only manifests itself a long time after exposure.

**MAGNETIC FIELD** A region associated with forces acting upon ferromagnetic particles or moving electric charges.

**MICROWAVES** Electromagnetic fields of sufficiently short wavelength for which practical use can be made of waveguide and associated cavity techniques in its transmission and reception. The term is taken to signify radiation or fields having a frequency range of 300 MHz to 300 GHz.

**MOBILE TELEPHONY** A means of telecommunication where at least one of the users has a mobile phone to communicate via a base station with a stationary or another mobile phone user.

**NON-IONIZING RADIATION** Non-ionizing radiations (NIR) are electromagnetic waves that have photon energies too weak to break atomic bonds.

**OCCUPATIONAL EXPOSURE** All exposure to EMF experienced by individuals in the course of performing their work.

**PEER REVIEW** Evaluation of the accuracy or validity of technical data, observations, and interpretation by qualified experts.

**PRECAUTIONARY PRINCIPLE** The principle of taking measures to limit a certain activity or exposure, even when it has not been fully established that the activity or exposure constitutes a health hazard.

**PROPORTIONALITY** What is done to protect against risk of one agent or circumstance is about the same as has been done for other agents or circumstances of similar concern.

**PUBLIC EXPOSURE** All exposure to EMF experienced by members of the general public, excluding occupational exposure and exposure during medical procedures.

**PUBLIC HEALTH** The science and practice of protecting and improving the health of a community, as by preventive medicine, health education, control of communicable diseases, application of sanitary measures, and monitoring of environmental hazards.

**PUBLIC VALUE ASSESSMENT** Understanding how the community values something.

**RADIOFREQUENCY (RF)** Any frequency at which electromagnetic radiation is useful for telecommunications. Here, radiofrequency refers to the frequency range 10 MHz - 300 GHz.

**REDUCTION FACTOR** Size of the reduction or "safety factor" in the exposure limit that incorporates uncertainties in the data.

**REFERENCE LEVELS** Values for the strength of the undisturbed electric and magnetic field that are derived from the basic restrictions and which serve to establish whether the basic restrictions are being satisfied. Measuring the quantities that underlie the basic restrictions is not easy; whereas the electric and magnetic field strength is easily measured.

**REGULATION** A legislated set of rules, usually under an act of parliament.

**RISK** The probability of a specific outcome, generally adverse, given a particular set of conditions.

**RISK ASSESSMENT** A formal process used to describe and estimate the likelihood of adverse health outcomes from environmental exposures to an agent. The four steps are hazard identification, dose-response assessment, exposure assessment, and risk characterization.

**RISK COMMUNICATION** An interactive process of exchange of information and opinion among individuals, groups and institutions. It involves multiple messages about the nature of risk and other messages, not strictly about risks, that express concerns, opinions, or reactions to risk messages, or to legal and institutional arrangements for risk management.

**RISK MANAGEMENT** The process of identifying, evaluating, selecting, and implementing actions to reduce risk to human health and to ecosystems.

**RISK PERCEPTION** The way that an individual or a group perceives and values a certain risk. A particular risk or hazard can have a different meaning depending on the individual and the context.

**RISK SURVEILLANCE** The process of monitoring and providing feedback to the ongoing risk management process with surveillance systems collecting data over time on risk factors and on health outcomes.

**SHORT-TERM EFFECT** Biological effect that occurs during or shortly after exposure.

**SPECIFIC ABSORPTION RATE (SAR)** The rate at which energy is absorbed in body tissues, in watt per kilogram (W/kg). SAR is the dosimetric measure that has been widely adopted at frequencies above about 100 kHz.

**STAKEHOLDER** A person or a group who has an interest in the outcome of a policy or decision, or seeks to influence the outcome.

**THERMAL EFFECTS** Biological effects caused by heating.

**WEIGHT OF EVIDENCE** Considerations involved in assessing and interpreting published scientific information. These include the quality of methods, ability of a study to detect adverse effects, consistency of results across studies, and biological plausibility of cause-and-effect relationships.

**WORLD HEALTH ORGANIZATION** The World Health Organization (WHO) is a United Nations agency with the mandate to act as the directing and coordinating authority on international health work, promoting technical co-operation, assisting Governments in strengthening health services, and working towards the prevention and control of epidemic, endemic and other diseases.
FURTHER READING


ON RISK PERCEPTION, RISK COMMUNICATION AND RISK MANAGEMENT AS APPLIED TO ELECTROMAGNETIC FIELDS


ON ELECTROMAGNETIC FIELDS AND HEALTH IN GENERAL

The World Health Organization International EMF Project
http://www.who.int/emf

The International Commission on Non-Ionizing Radiation Protection (ICNIRP)
http://www.icnirp.org

The National Radiological Protection Board (NRPB) of the United Kingdom
http://www.nrpb.org

The NIEHS special RAPID program on electromagnetic fields
http://www.niehs.nih.gov/emfrapid

ON RISK COMMUNICATION AND MANAGEMENT IN GENERAL

The annotated bibliography on risk communication of the National Cancer Institute of the United States
http://dccps.nci.nih.gov/DECC/riskcommbib/

The Department of Health of the United Kingdom on: Communicating About Risks to Health: Pointers to Good Practice
http://www.doh.gov.uk/pointers.htm

The annotated guide on literature about risk assessment, risk management and risk communication of the Research Center Jülich/Germany
http://www.bfjuelich.de/mos/rc/inhalt.html

The US Environmental Protection Agency on risk assessment and policy options
http://www.epa.gov/ORD/spc

A description of current national guidelines can be found on the WHO web page at
http://www.who.int/docstore/peh-emf/EMFStandards/who-0102/Worldmap5.htm