This report contains the collective views of an international group of experts and does not necessarily represent the decisions or the stated policy of either the World Health Organization, the United Nations Environment Programme, or the International Radiation Protection Association.

Environmental Health Criteria 35

EXTREMELY LOW FREQUENCY (ELF) FIELDS

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NOTE TO READERS OF THE CRITERIA DOCUMENTS

While every effort has been made to present information in the criteria documents as accurately as possible without unduly delaying their publication, mistakes might have occurred and are likely to occur in the future. In the interest of all users of the environmental health criteria documents, readers are kindly requested to communicate any errors found to the Manager of the International Programme on Chemical Safety, World Health Organization, Geneva, Switzerland, in order that they may be included in corrigenda, which will appear in subsequent volumes.

In addition, experts in any particular field dealt with in the criteria documents are kindly requested to make available to the WHO Secretariat any important published information that may have inadvertently been omitted and which may change the evaluation of health risks from exposure to the environmental agent under examination, so that the information may be considered in the event of updating and re-evaluation of the conclusions contained in the criteria documents.

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Electric and magnetic field quantities and units in the SI system

Quantity	Symbol	Unit
Frequency	f	hertz (Hz)
Electric field strength	E	volt per metre (V/m)
Electric flux density	D	coulomb per square metre (C/m^2)
Capacitance	C	farad (F)
Current	I	ampere (A)
Current density	J	ampere per square metre (A/m^2)
Electric charge	Q	coulomb (C = A•s)
Impedance	Z	ohm (Ω)
Volume charge density	ρ	coulomb per cubic metre (C/m^3)
Magnetic field strength	H	ampere per metre (A/m)
Magnetic flux density	B	tesla[a] (1 T = 1 Wb/m^2) (weber per square metre)
Permittivity	$\underline{\epsilon}$[b]	farad per metre (F/m)
Permittivity of vacuum	ϵ_o	$\epsilon_o = 8.854 \cdot 10^{-12}$ F/m
Permeability	μ	henry per metre (H/m)
Permeability of vacuum	μ_o	$\mu_o = 12.57 \cdot 10^{-7}$ H/m
Time	t	seconds (s)

[a] 1 T = 10^4 Gauss (G), a unit in the CGS unit system.
[b] Designates a complex number.