

Application of the Draft WHO Framework to Radiofrequency Fields

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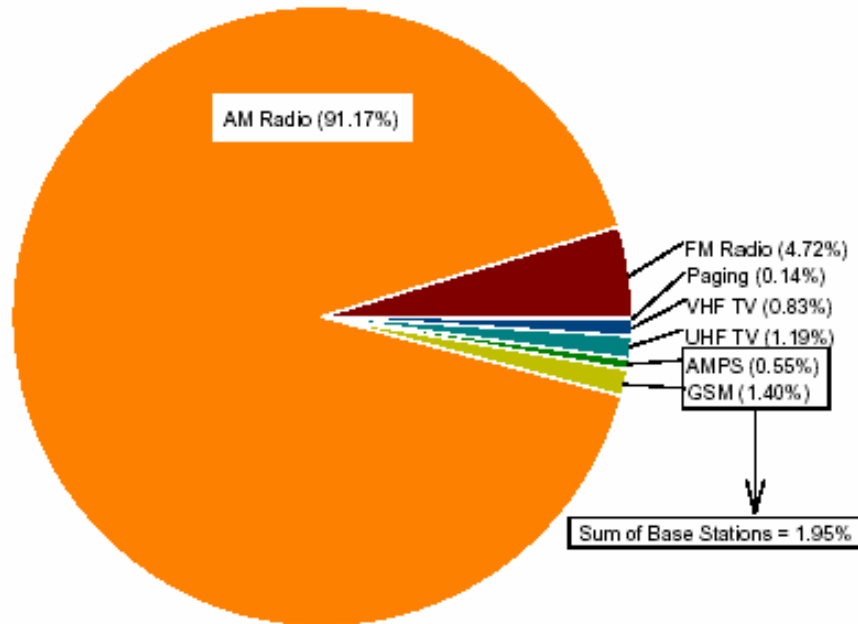
Observations on the Draft Framework

- Significantly improved on October 2004 draft.
 - Greater emphasis on scientific basis for actions.
 - Goal is not a “risk-free” world.
 - Notes that precaution may increase concern.
 - Greater clarity regarding uncertainty.
 - More consistent terminology.
- But...
 - Assumes link between exposure and concern.
 - Little guidance for States on prioritisation.

Many Beneficial Uses of RF Energy

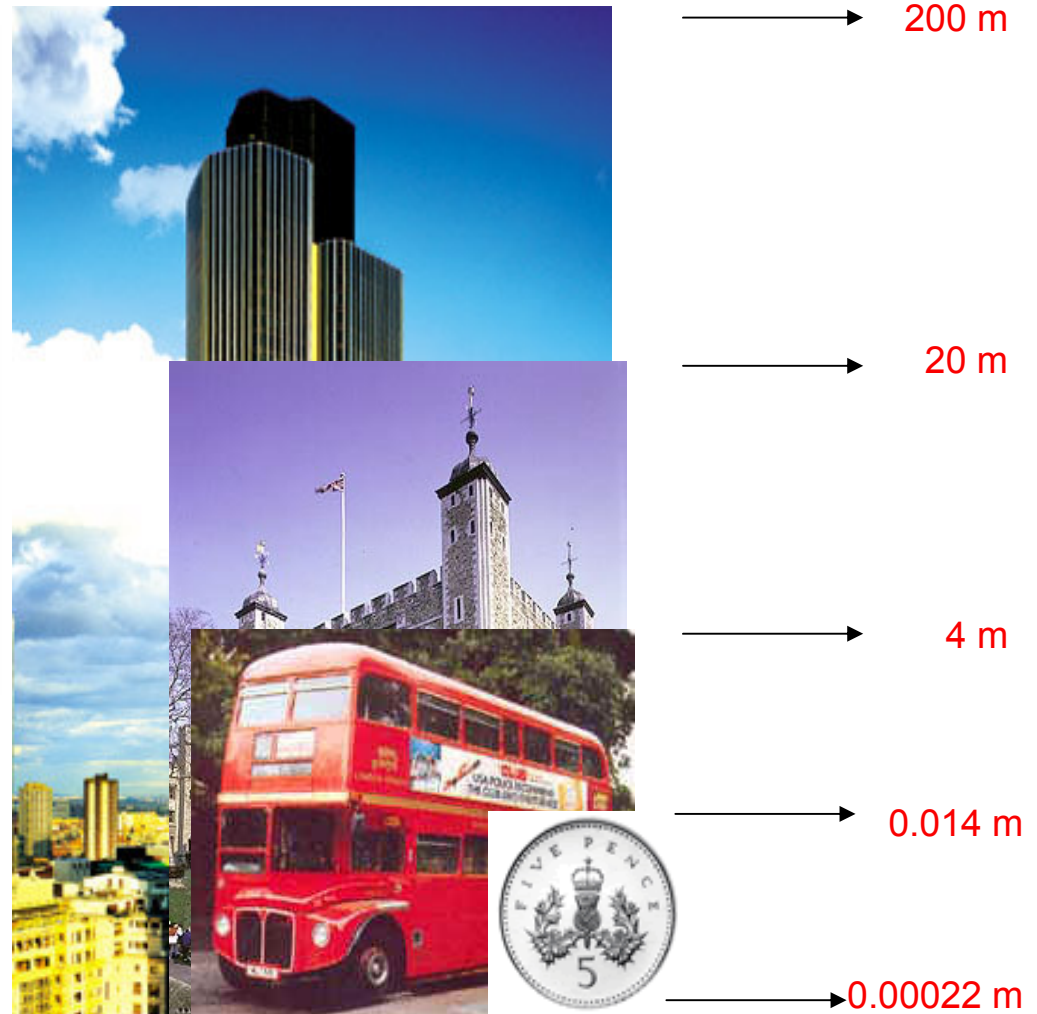
- Communications/Broadcast:
 - Broadcast radio and TV, navigation.
 - Fixed links, mobile and cellular systems.
- Industrial:
 - Plastics welding, induction heaters,...
- Health:
 - Direct: Diathermy, MRI, RF ablation,...
 - Indirect: Remote diagnostics, emergency alerts...
- Intrinsic to the operation of the systems.

Typical RF Exposures are Very Low



Source: ARPANSA (2000)

Median 1/17970 of ICNIRP general public level or 1/898,500 of the observed effects level.



Relative Scientific Certainty

- ◆ UK National Radiological Protection Board (1993/1999)
- ◆ Royal Society of Canada (1999/2001)
- ◆ UK House of Commons Science and Technology Committee (1999)
- ◆ UK Independent Expert Group on Mobile Phones (Stewart Report - 2000)
- ◆ Health Council of the Netherlands - GSM Base Stations (2000)
- ◆ Swedish Council for Work Life Research (RALF) (2000)
- ◆ French Expert Group ('Zmirou') Report (2001)
- ◆ Malaysian Communications & Multimedia Commission (2001)
- ◆ Australian Senate Committee EMR Inquiry (2001)
- ◆ USA General Accounting Office (GAO) Report (2001)
- ◆ British Medical Association (BMA) Board of Science and Education Interim Report (2001)
- ◆ Spain Campos electromagnéticos y salud pública (Comité de Expertos Independientes) (2001)
- ◆ German Commission for Radiation Protection (SSK -2001)
- ◆ European Committee on Toxicology, Eco-toxicology and the Environment (1998, 2001, 2002)
- ◆ Health Council of the Netherlands - Mobile phones (2002)
- ◆ Australian Radiation Protection and Nuclear Safety Agency (ARPANSA – 2002)
- ◆ French Parliamentary Office of the Evaluation of Scientific and Technological Choices (OPECST - 2002)
- ◆ French l'Agence Française de Sécurité Sanitaire Environnementale (AFSSE – 2003)
- ◆ Norwegian Radiation Protection Authority (2003)
- ◆ Swedish Radiation Protection authority (SSI - 2003)
- ◆ Health Council of the Netherlands – EMF Report (2004)
- ◆ UK Advisory Group on Non-Ionizing Radiation (2004)
- ◆ Nordic Radiation Protection Agencies (2004)
- ◆ Swedish Research Council (2004)
- ◆ UK National Radiological Protection Board (2004)
- ◆ French l'Agence Française de Sécurité Sanitaire Environnementale (AFSSE – 2005)

- Consensus conclusion is that no convincing scientific evidence of a public health risk exists.
- Each review identifies areas for further research – health protection or scientific curiosity.

Does Precaution Address Concern?

- Concern based on *objective* or *subjective* risks.
 - Science based advice for objective risks.
 - Information and trust building for subjective risks.
- In relation to precaution and EMF:
 - '*...precautionary state responses themselves play an active, even determining, role in the social construction of health risks...Balanced risk assessments need to consider the likely, often longer term, impact of politicising every possible hazard.*' (Burgess, 2002)
 - '*...any precautionary policy should consider possible countervailing risks such as increasing fear and unnecessarily spreading anxieties.*' (Wiedemann, 2005).

Conclusions

- New technology is not always dangerous.
- Prioritisation needed to avoid ‘crying wolf’.
- Address concern by building trust.
- For radio signals:
 - They deliver many important benefits.
 - There is relative scientific certainty.
 - In public areas RF signal levels are very low.
- New Zealand’s application of precaution:
 - *‘...Because the Resource Management Act is not a “no risk” statute, then the potential for risk is acceptable. That means the potential for adverse health effects will no longer be reason enough to decline a resource consent.’* (Ministry of the Environment & Ministry of Health, 2000)

