

Minutes of the Seventh International Advisory Committee Meeting

The International EMF Project

World Health Organization

6-7 June 2002, Geneva

Meeting convened on June 6 at 09:00

Welcome

Mr. Denis Aitkin, Chef de Cabinet and Head of the Director General's office, welcomed the delegates to the International Advisory Committee (IAC) meeting. He mentioned the public concern over exposure of ELF and RF fields in the global community and describes risk to health as an important milestone and the topic of the 2002 World Health Report.

1. a) Election of Chair and Vice-Chair

Delegates appointed Dr. Tom McManus as Chair, Dr. S. Ayrapetyan as Vice-Chair and Dr. Emilie van Deventer as Secretary/Rapporteur.

1. b) Adoption of agenda

The agenda was adopted by consensus.

2. a) Project organization

Dr. Repacholi extended his welcome to the 7th IAC meeting as Coordinator of the new Radiation and Environmental Health Program. He mentioned that WHO has made its radiation program a priority, and expanded the programs in ionizing as well as non-ionizing radiation. Leeka Kheifets is the Head of the Radiation Program and Carlos Dora is in charge of Health Impact Assessment. Dr Repacholi introduced the staff working in the Project, described the role and terms of reference of the International Advisory Committee and the Project activities.

2. b) Project update

Dr. Repacholi summarized the major current activities of the EMF Project. He mentioned the completion of several scientific journal publications (5 papers since last year) and the handbook on risk perception and communication. After finalizing planned scientific reviews, science updates are now given at regional meetings. A Research Co-ordination Committee meeting in Cape Town in December 2001 indicated several areas requiring further research. From now on, the Project is undertaking focused reviews on topics of current interest, such as the effects of temperature on the human body (workshop held in Geneva, March 2002). Other topics of interest are the possible effects of EMF exposure (particularly RF) on children, the implication of the IARC classification of ELF magnetic fields as a 2B carcinogen, the application of the Precautionary Principle, and study of basic mechanisms.

Dr. Repacholi gave an update on the process of standards harmonization and mentioned that a first draft of the "Framework for Establishing Standards" had been completed. He reminded the delegates of the goal and schedule of this activity, and mentioned that information on worldwide standards is now available on the EMF Project website (www.who.int/emf) thanks to the efforts of Dina Simunic (Croatia). He also informed the participants that the Project website is being updated to the new WHO format and should be available in about a month. There had been a pause in the number of fact sheets released by WHO on the topic of EMF and health, but hopefully there will be a number of fact sheets available soon.

There was mention of the need for more research, especially after the IARC classification. The WHO EMF *research agenda* is being revised and will be available on the website. The *research database* on the WHO website is updated monthly, and features a link to the IEEE database. He indicated that the health risk assessment was underway and the overall completion was anticipated by 2007 (ELF by the end of 2003, and RF by 2006).

Dr. Repacholi brought up a series of question to the delegates:

- Do you want to proceed with the development of the detailed scientific and general Monograph on risk perception, communication and management or is the new Risk Handbook sufficient?
- Given the public concern surrounding the EMF issue, should WHO prepare a statement on the feasibility of conducting valid scientific studies on mobile telephone base stations?
- The Thermal Workshop was restricted to experts in the field: Should future workshops, such as one on Sensitivity of Children to EMF be open?
- Are there any other projects or information needed by IAC members that is not currently being provided?
- Is the website adequate and informative?
- Should EMF management activity develop model legislation?

[Dr Repacholi's presentation](#)

3. a) Highlights of National Concerns

Netherlands (E. van Rongen): In 2001, the Health Council of the Netherlands released a report on NIR which included an update on ELF (www.gr.nl). The Minister of Public Housing, Spatial Planning and the Environment has informed local authorities that it may be wise not to build housing in areas where magnetic fields exceed 0.4 μ T. As for RF, the National Antenna Policy was approved by the Parliament in 2001. A National Antenna Bureau (www.antennebureau.nl) has been set up which acts as national control and information point and as a keeper of a register containing all technical data. The Health Council's EMF Committee has published a report on mobile phones, concluding that these are without health effects and that there are no reasons to limit their use by children.

Canada (A. Thansandote): Base stations are still an issue of public concern. Fewer inquiries on cell phones and power lines have been received by Health Canada (HC), but workers are more concerned about their occupational exposure. HC has published a number of fact sheets available on their web site (www.hc-sc.gc.ca/english/iyh/index.html). Industry Canada is finalizing the evaluation of EMF (RF) in Toronto. Research by government (HC), utilities (Hydro Quebec) and academia (University of Ottawa) are ongoing.

Japan (C. Ohkubo): There are several ongoing studies on the effect of RF on biological systems. The radio-radiation protection regulations for human exposure to EMF in Japan are consistent with ICNIRP guidelines. Legislation of SAR guidelines have been introduced in 2001. The Ministry of Economy, Trade and Industry (METI) is studying the biological effects of power frequency MF exposure.

Republic of Korea (J-K. Pack): To deal with increasing concern with EMF exposure, a long-term plan for risk communication has been developed (website, video tapes, special events). Four separate ordinances related to EMF exposure are in effect since January 1, 2002 (exposure limits, measurement methods for EMF intensities and SAR values, and installations and devices to which the exposure limits apply). As of April 1, SAR limits are applied to new mobile phones, and use of hands-free devices has been required while driving since July 2001. Several research projects are ongoing, including a 5-year EMF project launched by the Ministry of Information and Communication in 2000, with a budget of \$8.5 million over that period.

Cyprus (A. Georgiu): There is a major concern from exposure to a UK military base. They are in the process of carrying out study with a UK Professor from Bristol University, but the protocol has not yet been finalized. There is interest in exposure of mobile phones from children.

Taiwan (C-Y. Li): Observer to meeting. Taiwan has passed its first EMF regulations in 2000, similar to ICNIRP, but concerns have not stopped: there are requests for more studies by the public and legislators. Results from studies performed over the past several years are not consistent. Standard harmonization should be helpful to formulate national regulation policy.

Peru (V. Cruz): There is rising concern about possible adverse health effects from mobile phones, PCS towers and power lines. In March 2001, a commission was set up for the study and proposal of standards for NIR. Several studies on the socio-economic impact of setting up standards and environmental impact of EMF facilities have been undertaken. Field measurements of RF facilities as well as transmission and distribution lines have been made.

Singapore (S. Chong): There is heightened public concern regarding mobile phones and base stations. The Health Sciences Authority from Singapore has published brochures on the present scientific knowledge based on WHO Fact sheets, and announced that ICNIRP guidelines will be adopted in Singapore. In tandem, the consumer protection association has asked mobile phone manufacturers to test their phones and label them with SAR values. INFOCOM (involved in licensing activities) will come out in July with mandatory SAR values. They are in the process of drafting regulations, which hopefully towards the end of the year will be put into legislation.

Philippines (A. Peralta): The RF standards drafted last year are based on ICNIRP guidelines. They have been revised and are awaiting approval. Next year, a draft legislation "Device and Radiation Health Act" will be filed in the House of Representatives. Ms. Peralta asked to receive copies of existing relevant legislation from other countries to help improve the draft bill. In April 2002, for the first time a training course on RF fields was given with participation from industry, the Department of Health and international speakers. Public concern about EMF has not abated.

Malaysia (H. Wang): Currently, there is national concern regarding the health of workers and public from EMF exposure. In 2001, the government obtained help from WHO through consulting from Australia to recommend appropriate national policies and to develop standards. They are in the process of identifying areas of research relevant to the Malaysian environment.

Coffee Break (10:40- 11:00)

South Africa (B. de Villiers): The highlight of 2001 was the WHO/ICNIRP meeting in Cape Town in December. This led to many positive developments and the South African Bureau of Standards is now embarking on a program to address cell phones. However, it is recognized that EMF is considered a small health risk compared to other pressing health issues, but the maintenance and development of expertise and support are still important to provide for the future. General guidelines and draft examples of standards and legislation regulations, as proposed by Dr. Repacholi, will be of great benefit to developing countries and should be encouraged. Prof. De Villiers expressed the region's sincere gratitude for having held a meeting there and recommended that meetings in developing regions continue.

Belgium (M. Hinsenkamp, L. Verschaeve): Research on EMF in Belgium is actively carried out on ELF (50Hz) and is supported by electric industry (there is no governmental support). As for RF, there is concern in Belgium, but no national funding. Funds mainly comes from EC (COST 281) for research. Standards are based on politics rather than science. The government is preparing a brochure and website on RF fields and mobile phones/base stations. Research is performed on the topic of *Lipoatrophia semicircularis*..

France (R. de Seze): Public concern is primarily about base stations. A campaign of measurements of RF fields around base stations was performed by ANFR (www.anfr.fr), with only one site above EC recommended limits. In terms of research, the COMOBIO program is finished and a new program COMOBIO-PLUS is in preparation that will better define the possible health consequences of effects on the brain from local exposure to EMF. Participation to European projects has increased. High interest is shown in the topic of Health/EMF through large attendance at conferences on this topic. A leaflet on "Health and Mobile Communication" designed for the general public is now published by the Health Ministry. A regulation has been published on May 3, for television and radio communications, based on the EC recommendation. A standard is in preparation by UTE in view of the European Directive.

Hungary (G. Thuroczy): The Ministry of Health has released a new regulation on EMF similar to EU guidelines. Some ministries have accepted, other are looking into the measures. The government has released a new law on telecom giving more power to local governments to decide on base stations. Public concern is most acute with respect to base stations, and then ELF transformers. Some of the WHO fact sheets have been translated in Hungarian. On 13-15 November 2002, there is a meeting on the topic and all are invited.

Spain (Ribas): There are 8 groups working on EMF research, in connection with EC COST 281 action.

Israel (S. Ghelberg, S. Kandel): EMF is a problem in Israel and has therefore stimulated research. Guidelines are based on visibility rather than health effects both for power lines (limits for construction <10mG) and for base stations (10% of ICNIRP guidelines). There are about 5000 base stations set up with a system of permits. A new national infrastructure plan was approved 2 months ago, and a new law instated regarding manufacturers who must provide the SAR for new phones. Research is being done in Israel for workers by the Ministry of Labor, to be finalized in 2 years, followed by an epidemiological study. A study was done in Haifa on RF transmitters where levels from base stations were found to be lower than 1% of ICNIRP limits.

Turkey (N. Seyhan): There is an economic crisis in Turkey. In 1999, there was a symposium on "Electromagnetic Pollution", and since then Turkey has been involved with the EMF Project. Turkey has since defined standards for the EMF spectrum starting at 10 kHz, using CENELEC and ICNIRP guidelines. Different ministries (ministry of health, transportation, environment, ..) have chosen different standards.

Croatia (D. Simunic): There has been an EMF related law since 1999. Bylaws are yet to be approved by the Ministry of Health, while new ones are being set by the Ministry of Telecommunications. Concern over base stations is high, to the point that a military radar had to be moved away. Medical check-up of employees in radar facilities is continuing. Because of public concern, the Ministry of Health will most likely organize seminars on medical aspects of EMF.

China (Q. He): New EMF standards are being developed in China. Limits of exposure will be discussed at the conference in Guilin during April of next year.

Ireland (T. McManus): Concern about existing facilities is decreasing, but public objections continue on new transmission lines and phone masts. A new law was introduced that exempts the need for planning regulation on masts. A survey of 400 sites selected by the public will be measured to appease the public.

Armenia (S. Ayrapetyan): Several research projects are being undertaken in different parts of the country.

Russia (Y. Grigoriev, Kucherenko): Concern of EMF is current in Russia. Studies on EMF are managed by RNCNIRP. A conference on EMF and Human Health is to be held in Moscow and St-Petersburg in September 2002 which Drs. Repacholi and Kheifets will attend. The Ministry of Health is interested in the development of new guidelines and methods of control, as well as the analysis and establishment of standards for the protection of the public and workers.

Italy (P. Vecchia): Italy is very active in EMF research, with several national and international programs (including COST 281). In terms of regulations, the Italian government passed a law in February 2002 regarding protection from EMF. The new government did not endorse the previous law, and is interested in re-instating the ICNIRP guidelines. An international commission was appointed to review the Italian regulations based on scientific evidence.

Finland (M. Hietanen): EC recommendations were implemented in May this year as a decree of the Ministry of Health. For the first time in Finland, there is now a governmental decree for ELF for public exposure (for workers they apply ICNIRP guidelines). They have modified ICNIRP guidelines for pulsed RF fields. They are very active in EMF research, including the INTERPHONE study. Recently, 3 studies were published which had real effect on daily life (1) safety of mobile phones in hospitals in terms of interference, concluding that TETRA has shown trouble but GSM 1800 seems ok (2) hypersensitivity:

many symptoms but no difference between exposure and no exposure (3) Registry based on risk of RF brain cancer (epidemiological study). They are preparing a practical guidebook for EC on occupational exposure (for hygienists and other health professionals).

United Kingdom (A. Barrett): Concern about base stations (children sensitivity, brain tumors) and TETRA system for emergency teams remains high. Implementation of recommendations made in the Stewart report (2000) is ongoing with audit of 100 base stations near schools. There are £7.4 M earmarked for EMF, £4 M for research. Research on occupational exposure to EMFs is ongoing. The UK is also involved in the INTERPHONE study. Investigation on IF and RF sources for workers will be funded by UK government and industry.

Slovenia (P. Gajšek): There was a seminar on EMF held in Ljubljana last week. Public concern is high over the siting of base stations, fueled by the media. The Ministry of Environment is revising the 1996 Ordinance on EMF. An Act on NIR is being prepared by a group of experts to address all subjects related to EMF and health issues.

Switzerland (M. Moser): Precautionary limits on emission limits were introduced 2 years ago in the Swiss regulations. The Federal Office for the Environment was to work out these recommendations with mobile phone operators and NGOs. Interpretation of definitions is still an issue (one vs. several sources, how to measure and treat uncertainties,...). A survey is being conducted nationwide to get ideas for further research. It seems that sensitive and concerned people are more satisfied using self-help groups rather than listening to WHO or the Federal office.

Poland (S. Szmigielski): Occupational standards were implemented in July 2001, based on levels close to ICNIRP guidelines. Several research projects are being performed. Public concern is also high in Poland.

Sweden (G. Anger): In terms of regulations, a General Advice on limitation of exposure of the general public to EMF has been circulated for consideration and will be issued by the Swedish Radiation Protection Authority (SSI) later this year. As for occupational exposure, there are regulations from 1987 regarding the range 3 MHz-300 GHz, and new regulations covering the whole NIR range will be introduced based on ICNIRP guidelines. The document regarding the precautionary principle for ELF EMF published in 1996 by the Swedish consultation group for EMF is being revised. In terms of research, active scientists include Hardell and Hansson Mild (epidemiological study) and Ahlbom et al. (IARC INTERPHONE study). As for public concern and information, there is worry about the upcoming 3G technology and several meetings with different stakeholders have been set up over the last year. An information brochure on RF is going to be issued soon.

Bulgaria (M. Israel): There was an Eastern European Regional EMF meeting and workshop in Varna in April 2001, and the proceedings from the meeting are available in print and on the WHO website. Other activities are included on the website (www.who-emf-bulgaria.dir.bg.) In terms of ongoing or finished research projects, there are two research projects related to RF, and a project on standard harmonization (East vs. West standards).

Austria (N. Leitgeb): Austria has very similar standards to ICNIRP, and is in the process of specifying some terms (e.g. occupational people). A group of concerned citizens has put pressure to use the *Salzburg limits* (1000 below ICNIRP). A solution for emission regulation has been proposed but has not been accepted yet: rather than defining limits, one would endeavor to use the minimization principle where providers would have to justify why their limits are stronger than 1/100 of ICNIRP. Site sharing is encouraged rather than conflicting limits.

Czech Republic (L. Pekárek): Since January 2001, a new EMF standard based on ICNIRP levels has been enforced, which is much less stringent than the previous one. Public concern is high in the areas of mobile phones and base stations as well as power lines and childhood leukemia. Occupational exposure is a chief effort of the public health service as no regulations existed before January 2001.

Namibia (K. Shangula): New member. Namibia has two major programs: the rural electrification, and developing telecommunication and radio communication infrastructure. These should provide for development and bring services to formerly neglected areas. The health impact of these topics is not yet appreciated. There is growing public concern about cell phones. No regulation is in place at the moment.

New Zealand (J. Turnbull): Standards and environmental guidelines were introduced 2 years ago, which follow ICNIRP guidelines and incorporate a version of the Precautionary principle (no cost low cost). A local expert committee met twice since the guidelines came into effect and recommended that standards are fine. A report by Dr. Neil Cherry on ELF and childhood leukemia was summarized and reviewed by Professor Elwood. There was a brief interest on the part of the media in mobile phones shields.

Lunch (12:40-14:00)

EMF Project web site update (Jillian Reichenbach)

The concept of good sites vs. bad sites was discussed, a monthly report of the EMF website was shown, and a proposed a new layout for the EMF website presented. She also requested information updates from collaborating institutions.

Discussion: Several suggestions were given, e.g. that the home page be set within the span of the screen, (i.e. no scroll needed), that all standards be scanned in, the use of back and forward arrows, and that after linking to other web sites, one should be able to return to the original page.

3. b) Collaborating Organizations

National Institute for Environmental Studies, Japan (M. Kabuto): As a collaborating institute, they have been working on ELF-EMF effects, especially through an epidemiological study and in-vitro experiments. A 3-year case-control study on childhood leukemia was completed in March 2002. An inter-ministry conference in the Japanese government will be held to discuss the political implications of the results, and Dr. Kabuto will introduce the research results and the WHO EMF Project.

NIEHS (M. Wolfe): They just completed an update on a Q&A document (original published in 1995) on exposure to EMF ELF with a review of EMF Rapid programs (hard copy and on website). The National Toxicology program has decided to study health effects of exposure to RF, with other experts in NIEHS and NIST (National Institute of Standards and Technology) to develop exposure system to be used in long term toxicology studies of rodents.

NATO (M. Murphy): There is currently a meeting in Brussels, where they are finishing a new version of a standard on RF exposure and overexposure.

USAF Laboratory, Brooks AFB, USA (M. Murphy): There are currently 14 research projects underway. Presentation of two studies was made: research update on peak electric fields, and human response to RFR exposure in terms of thermal response (from Dr. E. Adair lab). They have invested money in research in Russia, but no results yet. Several meetings have had to be cancelled because of Sept. 11 events.

International Electrotechnical Committee (G. Goldberg): The situation of the EMF technical standardization work in IEC, CENELEC and ICES was reported, and it was noted that none of these bodies develop biological standards but rather they dedicate their work to technical matters. There are three kinds of standards: basic standards, generic product standards and product-related standards.

US Food and Drug Administration (H. Cyr): Dr. Cyr takes over as acting representative for Dr. Russell Owen, who has moved to the US Environmental Protection Agency (EPA). The Cooperative Research and Development Agreement (CRADA) with Cellular Telecommunication and Internet Association (CTIA) continues. On request from the US government, there is a new joint website with the FDA and FCC (Federal Communication Commission): www.fda.gov and www.fcc.gov. There is a high profile lawsuit going on, with Dr. Christopher Newman suing Motorola for a brain tumor allegedly coming from the use of mobile phone for \$720 M (see article in Science magazine, 16 November 2001, vol. 294, pp. 1440-1442).

ITU (J Katona-Kiss): Three reports are of interest in terms of EMF, including Study Group 5 which is responsible for undertaking studies related to EMF phenomena that can cause damage or disturbance to telecommunications installations, injuries to telecommunications personnel or health effects to populations. The main SG5 objective is to define protective measures and installation techniques by means of recommendations, directives and handbooks in order to limit damages described above. It decided that it should provide guidance for compliance with existing EMF limits, rather than developing new limits. Recommendation K52 was mentioned. SG5 is becoming more international with a meeting in Geneva, Budapest and in Australia this year. A report from Bahrain was also mentioned, which describes measurement results from radiated fields of base stations in that country.

PAHO (C. Borrás): South and Latin Americas are still very interested in EMF and health effects, but other concerns are of greater importance at present.

WHO Europe (M. Martuzzi): There is interest in the scientific side of EMF and health, but they have concentrated on the application of precautionary policies. There was a workshop on the topic last year, and the report just came out. There is a lot of work to be done, starting with definitions. They are preparing a workshop to be held in conjunction with the meeting of International Society of Environmental Epidemiology in August in Vancouver. The European Region of WHO (51 countries) is organizing the Inter-ministerial Conference in Budapest in 2004 that includes all ministries of Health (held every 5 years). Many countries have expressed interest in the Precautionary Principle, and EMF could be used as a case study.

COST 281-European Commission Initiative (N. Leitgeb): In September of last year, the European Research Coordinating Action was established, devoted to possible health implications of mobile telecommunication technology. It has been very active since then. There was a meeting with Japan, Korea and US in November last year Brussels to establish contact. They issued a statement in response to Mr. Hyland comments brought to the European Parliament. A first workshop was held in Rome in May on two topics, i.e. emerging technologies and effects of EMF on children (www.cost281.org). The next workshop will be held in November in London.

ICES (T. McManus): Over the past 12 months, there has been growing international membership and activities outside the US (over 100). New and revised exposure standards over 0-300 GHz are in preparation. In November 2001, ICES held its second meeting in Europe, in Luxembourg. The first ICES standard for ELF (0-3 kHz) is at the balloting stage. In the radio-frequency range (3 kHz- 300 GHz), a full review of the old standard C95.1 standard is well underway.

4. Discussion of key issues

4. a) Standards (M. Repacholi)

Dr M Repacholi invited comments from the IAC members on the “Framework for Developing EMF Standards” document. A number of countries are coming up with new standards, and thus it is important to share information as to how these were derived. He asked countries which come out with standards vastly different from international guidelines to explain to WHO the *scientific* evidence that they have used (as opposed to *political* reasons). He stressed the fact that WHO wants to make sure that standards are beneficial to health. Dr. Repacholi invited delegates to keep in touch on the topic. Several countries have shown interest in model legislation, especially countries that do not have the resources to develop legislation themselves.

4. b) Feasibility of studies on base stations (L. Kheifets)

Dr L Kheifets postponed the discussion on the Precautionary Principle. Instead, she put to the audience the question of “Are rigorous studies of populations about base stations possible? Can we do good studies or better studies along these lines”.

[Dr Kheifet's presentation](#)

Coffee Break (15:40-16:00)

4. c) Handbook on EMF risk communication (E. van Deventer)

Dr. van Deventer presented the new WHO handbook on risk communication and perception about EMF which is due to be out within a couple of months

[Dr van Deventer's presentation](#)

Discussion: Dr. Repacholi posed the question to the delegates on the need for a more general and scientific document, i.e. a Monograph on risk communication with EMF as one of several case studies. After discussion, it seemed that there was no need for such a publication. Some participants showed interest in translating the Risk Handbook in other languages (e.g. Peru). The New Zealand delegate mentioned a paper by Peter Sandman as a useful document on risk communication with respect to EMF.

4. d) Research priorities (L. Goldstein)

Dr. L. Goldstein invited feedback from delegates as to research priorities and needs on the EMF topic. He described new technologies and new scientific topics as well the use of the Precautionary Principle as a vehicle to encourage scientific research

[Dr Goldstein's presentation](#)

Discussion: A large number of comments and questions were raised. With the wide array of research topics put forth, there seems to be little time to study them before the EHC evaluation. It is hoped that IARC will have finished its INTERPHONE study before the RF risk assessment exercise. In terms of the current research agenda on the website, not all topics have been studied, but an update on research priorities was requested by many people. The topic of chronic exposure studies was raised, but Dr. Goldstein mentioned that it was easier to start with acute exposure. One of the IAC member felt that it is not the role of WHO to set research priorities, but rather to deal with risk communication. Science being slower than technology; WHO would have to disseminate information as to what can be extrapolated from current knowledge. Also, it was mentioned that children were already taken into account by ICNIRP guidelines. Another member recommended that WHO should educate industry to identify health effects of their new technologies. Also industry should fund research as they are stakeholders who will gather most of the financial benefits. The issue of the Precautionary Principle was brought up, as it seems to some that WHO is revisiting the position it had in the Backgrounder (Fact Sheet 184)

Meeting adjourned on June 6 at 17:45

Meeting reconvened on June 7 at 09:00

5. Review and approval of draft information sheets

Dr. Repacholi introduced the different fact sheets and mentioned that several of them had already gone through IAC review. There has been a stop in issuing fact sheets because of internal concern regarding the incorporation of policies in fact sheets. Dr Repacholi mentioned that the goal of this discussion was to get the seal of approval from the IAC before sending the fact sheets for WHO approval.

A considerable time was spent reviewing and suggesting changes to the following draft WHO fact sheets

- Environmental impacts of EMF
- Electromagnetic Hypersensitivity

Coffee Break (10:35-11:00)

- Intermediate frequencies (IF)
- Microwave ovens
- Medical Response to radio-frequency (RF) overexposure

6. Discussion on process of static and ELF field risk assessment (Dr L Kheifets)

The process and goals of the WHO Environmental Health Criteria on ELF fields were presented. It complements the already published IARC monograph which classified ELF magnetic fields as a Group 2B agent. This classification represents an agent or exposure that is “possibly carcinogenic to humans”. The overall schedule of activities until end of 2003 were shown.

[Dr Kheifet's presentation](#)

Discussion: It was noted that it is difficult to compare different agents that have the same IARC classification because of the different doses required to have a health effect (e.g. coffee). Also, the question of the big difference between exposure at which IARC classification was made (i.e. 0.4 μT) and exposure limits (i.e. 100 μT) was posed. One problem mentioned was that of making the leap between risk assessment and policy making. Policy makers do not usually understand the scientific language. Therefore a risk description or judgement needs to be clearly addressed and this could be the role of WHO. The IAC was invited to provide comments on the risk assessment process. The EHC will be only one of the many outputs of this exercise, including brochures, fact sheets, journal papers, and other.

7 Other business

7 a) Upcoming meetings and future activities (Dr L Kheifets)

- The Bioelectromagnetics Society 24th Annual Meeting, Quebec City, Canada. 23-27 June 2002
- Biophysical Mechanisms of EMF interactions: Deterministic Molecular and Cellular Properties, Mount Holyoke College, South Hadley, MA. 21-26 July 2002
- 3rd International Conference: EMF & Human Health, Fundamental & Applied Researches, Moscow & St Petersburg. 17-25 September 2002
- 2nd International Workshop on Biological Effects of Electromagnetic Fields, Rhodes, Greece. 7-11 October 2002
- WHO Workshop on Finalizing framework for harmonized EMF Standards, Guilin, Guangxi, China, rescheduled for 19-23 April 2003

Discussion: It was mentioned by the WHO Europe representative that a meeting on policy setting should be part of the EHC process, and should include cultural view and diversity. Dr Kheifets mentioned that the EHC really was supposed to be a general framework.

7 b) Time-table of activities (Dr L Kheifets)

This was discussed in general terms to provide participants with an overview of upcoming meetings. It is scheduled for the ELF and static field reviews to be completed by 2004 and the RF reviews by 2006.

7 c) Progress on funding (Dr M Repacholi)

Every year, contributions are around \$700,000 for the WHO EMF Project. WHO has changed to an automated system (biennium 2002-2003). Running this program will require \$2M over the next two years, therefore there will be a shortfall of \$500,000. The Project also receives in-kind contributions (e.g. Eric van Rongen seconded from the Health Council of the Netherlands, EC funding for the Risk Assessment exercise, etc.). Dr Repacholi did not ask countries to increase contributions, but mentioned that it was a good time and opportunity to provide funding or in-kind. One of the large budget items of the EMF Project is the financial support of scientists from countries whose travel expenses are covered to join in WHO meetings.

Other business

- Publications from main magazines are coming out in different countries (e.g. *Science et Avenir* magazine, in France) and tend to fuel the debate. The IAC members were encouraged to promote a balanced debate in each country and are encouraged to mention the WHO EMF Project and use WHO documents.
- Request for the EMF leaflet was mentioned, but it was deemed dated and should be reprinted. Also, a poster for EMF Project is under discussion.

- The fact sheets are very important for information purposes, and have even been used in court testimonials in some countries. The issue of translation and rights was brought up by one of the members.
- No date was set for the next meeting, but it is anticipated about this time next year in Geneva.
- Dr. McManus thanked the vice-chair, Dr. Ayrapetyan, and rapporteur, Dr. van Deventer, as well as Drs. Kheifets, Goldstein, Repacholi and van Rongen.
- Dr Repacholi thanked Dr McManus for a job well done and Sarah Bullock for excellent meeting organization, as well as Drs van Deventer and Ayrapetyan, and the participants for making the meeting a success.

The meeting was adjourned at 13:25 on June 7, 2002