Report of the workshop on EMF and Health:
Science and Policy to address public concerns

On February 11-12, 2009, the European Commission held a 1.5 day workshop on *EMF and Health: Science and Policy to Address Public Concerns*. The workshop was attended by more than 180 people. Reflecting the high interest generated by this issue, attendance would have been far higher (~250) had the venue been larger.

Participants came from all over Europe, but also from the USA, Canada, Japan and Israël. Other countries were represented by contact offices based in Brussels.

The main stakeholders were represented and participation was balanced: mobile telecoms industry, power transmission industry, WHO as well as representatives for standardisation, occupational health, user organisations, concerned citizens, academia and regulators.

The aim of the workshop was to generate conclusions that help orient the EU policy process regarding electromagnetic fields by means of a broad and constructive dialogue among all stakeholders.

The workshop was opened by Ms Paola Testori-Coggi, Deputy Director General of the European Commission Directorate General for Health and Consumers (DG SANCO). She noted that the workshop was timely and that it addressed a highly sensitive issue both in the EU and internationally. She noted that a protective EU regulatory framework is already in place and that exposure measurement remains a weak point.

The workshop programme and presentations are available online at:
http://ec.europa.eu/health/ph_risk/ev_20090211_en.htm?e

- Session 1 ("*The current EU regulatory framework*")

Ms Caroline Lucas, MEP, opened the session by referring to the 2008 resolution by the EP calling for a revision of the Council Recommendation 1999/519/EC and by informing the participants that the EP is drafting an own initiative report on EMF (Rapporteur: Ms Ries).

The presentations then described the current relevant EU legislation and product standards. The first presentation, given by Laurent Bontoux of DG SANCO, gave an overview of the Council Recommendation 1999/519/EC on the limitation of the exposure of the general public to electromagnetic fields (0 Hz – 300 GHz) and of the level of precaution embedded in it. It also gave an overview of Commission Communication COM (2000)1, explaining the position of the European Commission on the precautionary principle. Mark Bogers, from DG ENTR gave the second presentation and described in detail the EU Directives dealing with

products and equipment emitting EMF and how they ensure the safety of the products on the EU market. These so-called "new approach" directives rely on technical standards to achieve their objectives. In the third presentation, Phil Chadwick, from CENELEC, explained how these technical standards are developed by CENELEC and gave an overview of the many standards available. The session was concluded by a presentation of the EU legislation on worker protection by Georges Herbillon of DG EMPL and of the issues currently being addressed in relation to the use of Magnetic Resonance Imaging (MRI) for the implementation of Directive 2004/40/EC.

The discussion focused on technical issues. Some citizens were concerned about safety, in particular in an occupational context (e.g. firemen operating in case of emergencies). Others criticised the models used for developing standards. CENELEC clarified that product standards ensure compliance with the Council Recommendation in normal situations and assume worst case usage conditions. They however do not cater for abnormal exposures in emergency and disaster situations. For such cases, the workers protection Directive foresees for adequate training and protective measures.

A representative from the MRI alliance noted that care should be taken not to hinder the use of MRI and that MRI operators have been working close to them for more than 20 years without any sign of adverse health effects. In response to a question, the Commission also explained how the Commission came to rely on ICNIRP, an independent technical body, for its guidelines.

- <u>Session 2, ("*The latest assessments*")</u>

This session was chaired by Mr Peter Liese, MEP. It presented the conclusions of three recent major assessments of the potential health effects of electromagnetic fields: the latest SCENIHR opinion[1], EMF-NET[2] (an EU coordination action) and the BioInitiative Report[3]. The presentations were given by Mats-Olof Mattsson, Chair of the SCENIHR EMF Working Group, Paolo Ravazzani, Coordinator of EMF-NET and Michael Kundi, Member of the BioInitiative Steering Group.

A number of points were raised by the discussion after this session. First of all, there is general agreement that there are virtually no studies available on the environmental effects of EMF and that therefore no conclusions can be drawn on this topic. There is also a general agreement that the issue of electro-hypersensitivity is difficult to address, especially because of the consistent lack of support from research for a link between these symptoms and EMF exposure. It also became apparent that the main difference between the assessment of the BioInitiative Group and those of the other groups is at the level of the evaluation and interpretation of the same scientific evidence. The BioInitiative Group also combines risk assessment and risk management proposals.

- <u>Session 3 ("*Comparing assessment approaches*")</u>

Professor Jorn Olsen, epidemiologist from UCLA, chaired this session. He opened the session by providing an in-depth overview on epidemiological-methodological issues raised by the use of epidemiology in EMF research. The three groups that presented their conclusions in the

[1] http://ec.europa.eu/health/ph_risk/committees/04_scenihr/docs/scenihr_o_022.pdf
[2] http://web.jrc.ec.europa.eu/emf-net/index.cfm
[3] http://www.bioinitiative.org/

previous session then provided the details of the methods they followed to derive their conclusions.

The SCENIHR, represented by Mats-Olof Mattsson and Joachim Schüz, outlined its step-wise approach. It explained the methodological framework and the quality criteria it applied to all relevant peer reviewed scientific papers identified to perform its scientific assessment of the whole evidence available. The SCENIHR worked by building a consensus among the members of the group. The method described by Guglielmo D'Inzeo of EMF-NET, also based on discussion and consensus, was close to the approach used by the WHO to classify the available scientific evidence. It developed four levels of evidence. Michael Kundi explained that the BioInitiative Report is the result of the compilation of individual contributions by the authors. Each author took responsibility for his own text and no attempt was made to reach a consensus within the group. Unlike the other two assessments, one of the objectives of the BioInitiative Report was also to discuss international exposure limits, a risk management issue.

These presentations were followed by an intense and fruitful debate, sometimes very technical, that brought to light many important issues. The main conclusions that could be drawn from the discussion after this session were:

- In general, there is a bias in the published scientific literature against studies not reporting effects (publication bias).
- In order for scientific studies to be used for a proper assessment of health effects, their quality has to be assessed first. Bad studies must be disregarded, irrespective of whether they are "positive" or "negative". The mere respective numbers of "positive" and "negative" studies, without any further information on their quality, are irrelevant.
- In the case of EMF, the inherent methodological limitations of certain types of epidemiological studies make it very difficult to draw clear conclusions. While prospective cohort studies would be desirable to address certain questions, they are expensive and take a very long time (decades) to obtain results.
- The BioInitiative Group stated that it does not intend to establish a standard of evidence and that it does not claim to have proven any association between EMF and health effects. Its point is that there is enough evidence to call for the application of the Precautionary Principle.
- As the BioInitiative Report is a compilation of individual contributions, each under the responsibility of his/her author, several of these authors stated that they do not support the conclusions of the report.

In contrast to the expert groups established more formally such as the SCENIHR, the BioInitiative Group did not declare the interests of individual members, except for D. Gee.

- <u>Session 4 ("*Positions from the stakeholders*")</u>

This session was chaired by Mark Bogers from DG ENTR. The first part of that session was dedicated to the presentation of the positions of the workers, the concerned public (in particular the electro-hypersensitive people), and the telecom industry.

The representative from the European Trade Unions Institute called for the application of Directive 2004/40/EC as soon as possible and for the adaptation of work practices to technological development in order to minimize hazards. He also called for a sharing of best practices across the EU on the medical assessment of workers. Ms Eileen O'Connor, of the UK EMF Radiation Research Trust, made an emotional plea for more research on the issue, for a fast publication of the outcomes of research, for the information of the public about the location of the sources of EMF and for prudent avoidance. She also called for a small group of influential moderates to come together, in order to resolve the disagreements between the various assessments as a matter of urgency. Mr Christian Farrar-Hockley, from the Health & Environment Alliance, called for a moratorium on the deployment of new mobile networks and on the use of higher frequencies as long as the current scientific dispute around the potential health effects of EMF is not resolved. Mr Allan Freeman presented the good practice of the GSMA member companies and regretted the wide variability of regulatory measures across the EU member States. As last speaker of this part, Mr Michael Milligan presented the MMF view that there is consistent support at international level for ICNIRP's guidelines and that there is currently a worldwide trend for a regulatory adoption of these guidelines. He also insisted on the lack of evidence of health effects from mobile telecommunications equipment and networks.

The second part contained two presentations. In the first one, Mr Peter Wiedemann focussed on the five cardinal rules of risk communication:

- focussing on the right problem,
- helping the public to get the full picture,
- formulating straightforward messages,
- acknowledging the limitations of research and
- being aware of the possible side effects of communication.

He concluded on the importance of transparency, building trust and informed policy making. In the second presentation, Mr David Gee talked about the general EEA approach to precaution in the context of EMF.

The discussion led to the formulation of a few important points. One participant noted, in line with what Mr Wiedemann had said, that it is important to take a broad view and to take care not to displace the problems. For example, it would be counterproductive to increase exposure to ionizing radiation through X-rays because of restrictions on MRI related to non-ionizing radiations! Another participant remarked that it is important to look for pragmatic solutions for specific cases, in particular in occupational contexts by changing working practices.

It became apparent from the discussion that the co-funding of research by industry can reduce public trust in the results.

Some remarks also made clear that the recent French court case against Bouygues Telecom reinforces the public feeling that EMF are a danger and increases the public mistrust of regulatory authorities.

The fact that there is a large need for communication on EMF through the main media was also reinforced.

- ***Final debate***

The final debate highlighted a number of critical points:

1. The importance of technical standards.
2. The crucial importance of trust in this issue and the need to (re)build it for a very concerned fraction of the public.
3. To this end, the importance for expert bodies to follow strict criteria regarding transparency, the mandates they respond to, conflicts of interest, membership, expertise, process, openness to stakeholders and independence was raised.
4. The importance of the quality of scientific evidence.
5. The importance of being able to offer help to the people who feel affected by EMF, in spite of the consistent failure of scientific studies to make a link between their symptoms and actual exposure to EMF.
6. More research is needed, whenever possible fully funded by public authorities to avoid the deficit of trust brought by industry funding.
7. The BioInitiative Group announced that they would publish peer-reviewed papers regarding their process.

- Conclusions

Mr A. Rys, Director for Public Health and Risk Assessment at DG SANCO then drew some conclusions for the workshop. The main take home messages were that:

- this issue goes beyond the borders of the EU and requires international collaboration;
- in spite of the mass of scientific evidence already available, more scientific research is still needed to address the remaining data gaps, in particular cohort studies;
- it is important to give a mandate to the SCENIHR to formulate research advice that is more specific than what is available in its latest opinion; it is also necessary to gather information about research programmes supported by Member States and industry;
- the distinction between risk assessment and risk management must be made clear and maintained in the decision-making process;
- it is important not to forget to take the risk/benefit equation into account in the application of the Precautionary Principle;
- the protection of young children and pregnant women be always ensured;
- politicians must fulfil their roles and industry must cooperate with them;
- communication to the public in general about EMF, and consumer information on products emitting EMF in particular, is very important;
- the MRI issue should be resolved quickly;
- people declaring themselves electro-hyper-sensitive need help, independently of the question whether their symptoms can be attributed to exposure to EMFs;

- it is important for the Commission to engage with groups presenting different points of view.