

Information Overload – A Challenge in EMF Risk Communication

Frank Gollnick*, Gabi Conrad, Annette Hillebrand, Franz Büllingen, and Karl-Heinz Neumann

Working Group “EMF and Environment”, WIK – Scientific Institute for Infrastructure and Communication Services GmbH, Bad Honnef, Germany

*Corresponding author e-mail: f.gollnick@wik.org

INTRODUCTION

One result of a last year’s survey in Europe [1] was that nearly one third of EU citizens believe that electromagnetic fields (EMF) from high-voltage power lines or mobile phone masts have a serious effect on their health, and a further third of them think that these fields have some effect. Surveys among general practitioners in Austria, France, Germany and Switzerland [2-5] revealed that their knowledge about health risks from EMF is generally poor, at least one third of them don’t rule out that patients’ health complaints are due to EMF effects, they receive their information about this issue more from mainstream media than from other, more scientific sources, and they don’t feel well informed about the subject. Information given by authorities seems to play a minor role. On the other hand, from the vast amount of scientific knowledge gathered on this issue to this date, no clear scientific evidence for health effects due to weak EMF could be identified, and so far there has been found no reliable mechanism that could cause such effects. So the crucial question for policy makers and more general in risk communication is: Why is there such a large inconsistency between scientific evidence and public perception?

EMF Research in general is a difficult matter. It takes place in the overlap region of three quite different scientific disciplines: Biomedicine, Engineering, and Physics. Even for experts in these disciplines it is difficult to gain a total picture of all aspects, and it is even more difficult for the interested public. Sensational news in the media have great impact due to their broad coverage and attractive, easy to understand presentation. In contrast, in the public there is often general skepticism towards governmental risk assessment and regulations. As a result, there are deficiencies or lack of knowledge in the public about scientific evidence, the scientific approach and workflows, and about the steps and processes in risk assessment. Most important in this context is the general information overload in our media society, often leaving behind a confused public.

Many different actors like scientists, governmental and international authorities, the media, the industry, and critics keep spreading information about harms or safety of EMF via statements and their media in the public. In the public perception, this information presents itself in most parts as contradictory; it is doubtful whom to trust. The outward appearance and channel of information have become the determining factors, the quality of information is of minor interest and is hard to assess for non-experts.

METHODS / MEASURES

To improve this situation, since January 2010 and with startup money from the German Federal Ministry for Economics and Technology, the Working Group “EMF and Environment” at the Scientific Institute for Infrastructure and Communication Services (WIK) [6] has taken a package of measures. They lead to an improved information flow between scientists, experts and authorities on the one side and public representatives,

citizens, critical groups and the media on the other side (**Fig. 1**). The used methods are: daily extensive monitoring, analysis and transfer (translation to commonly understandable words) of EMF science results in the RF and ELF frequency range, and the public discourse around this issue. Sophisticated information mining and management, active networking, our own scientific experience and expertise as well as extensive editorial and data concentration work are the tools to fulfill these tasks. Science delivers lots of puzzle pieces for the overall picture of risk or non-risk of EMF; expert committees, authorities, and politics mostly focus on certain aspects in their statements, summaries and reports, which in most cases are not commonly understandable. The WIK “EMF and Environment” working group collects all these pieces, translates the extract from it for non-experts without biasing it, presents the information transparently and thereby offers help for non-experts to let them form their own opinion, thus providing competence to find an own way of risk behavior or – in case of public representatives – to advise the public competently in risk-related issues. These measures are completed by networking activities and organizing workshops or informative events as well as preparing reviews on certain EMF topics and designing and performing studies on risk communication per order.

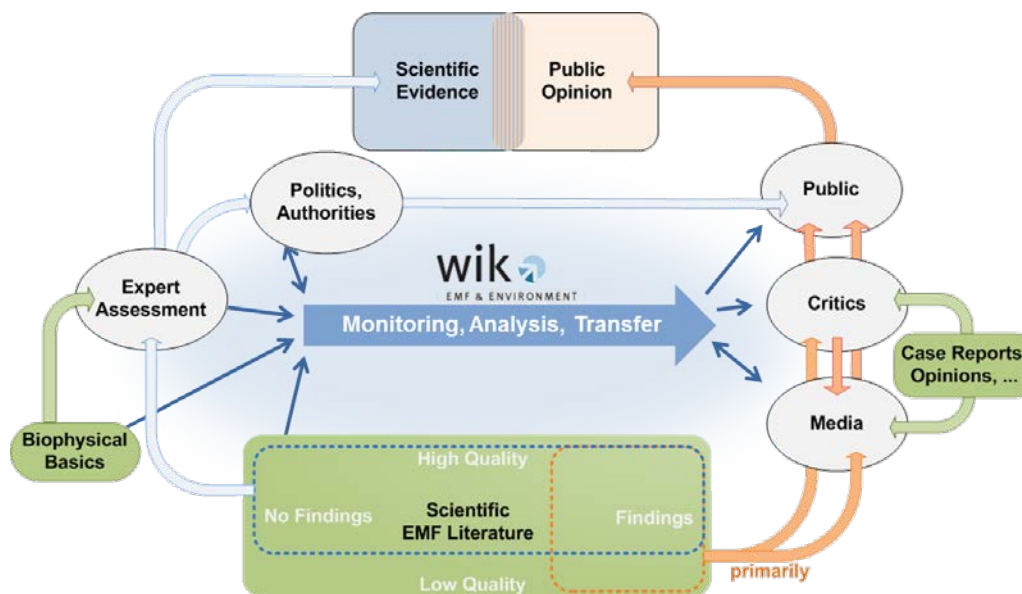


Figure 1: Improvement of information flow

RESULTS

The group’s **public, free of charge offer** includes (**Fig. 2**):

- The **website** with EMF general information and link lists for further reading;
- The **weekly electronic Newsletter “EMF Brief”** with current information about EMF science, politics and law, public discussion, technology, and upcoming events;
- The **quarterly Scientific Magazine “EMF Spectrum”** with international author contributions on interesting current EMF topics, written for the interested public in clear and understandable language.

In addition, **further non-public information** is accessible via an **Extranet** for clients (**Fig. 2**). It includes an up-to-date news service on a day-by-day basis, edited and evaluated from a scientific point of view. Part of this information is included in the free weekly “EMF Brief”. Furthermore, the Extranet includes a well-structured document collection that is being

extended permanently. Clients can find and download here from the thematically structured content: papers, comments, media articles, pictures, graphics, presentations, links to documents, and more. Extensive networking activities and the organization of workshops have been tackled also. So the group meanwhile serves as a known reliable and independent point of contact for EMF information. It positions itself complementary to already existing EMF information sources.



Figure 2: Public and non-public information offer of the working group

CONCLUSION

The challenge of information overload is addressed by the WIK “EMF and Environment” working group to improve EMF risk communication in the RF and ELF frequency range. The main measures taken are concentration and translation of scientific information / discourse into a commonly understandable unbiased extract, resulting in a range of freely accessible information products and a non-public (commercial) information center containing further background material. Networking, organizing events, and executing reviews or studies per order add to these activities. Stable financial support of such activities poses also a challenge in times of constantly declining budgets for EMF research and risk communication activities.

REFERENCES

- [1] Special Eurobarometer 347 (Electromagnetic Fields), Wave 73.3, June 2010
http://ec.europa.eu/public_opinion/archives/ebs/ebs_347_en.pdf
- [2] Leitgeb, N. et al., Wien Med Wochenschr, 155(9-10):237-241 (2005)
- [3] Souques, M. et al., Proceedings 10th EBEA Congress, Rome (2011)
http://proceedings.ebea2011.org/modules/request8cc8.html?module=oc_program&action=summary.php&id=5181
- [4] Kowall, B. et al., Int J Public Health, 55(5):507-12 (2010)
- [5] Huss, A. & Rössli, M., BMC Public Health, 6:265-275 (2006)
- [6] <http://www.wik-emf.org/home.html?&L=1>