IAC – EMF Project Meeting
Germany - National Report 2017

1. Governmental Activities

With the Digital Agenda 2014-2017, the German Federal Government has developed a comprehensive concept on how the further development of digitalization should be designed, supported, and monitored. In many areas of life and work, however, this digital change is also linked to the development and expansion of infrastructures transmitting information wirelessly. This is liable to lead to an overall higher exposure of the population.

This process is connected with the development of the digital infrastructure, for example the fifth generation of mobile communication networks. In the future, the number of devices and equipment will increase strongly - including those sources of EMF which are operated near the human being. In order to pay attention to the precautionary principle, it is also important to include environmental and health-care digitalisation from the beginning. The aim is to permit only as many fields as necessary, given the full development of all technical possibilities. This protects the citizens and leaves the necessary "space below the limits" for the safe operation of future mobile technology developments. Simultaneously, the acceptance of digitization within the population is encouraged with such proactive approach.

2. Research Activities

Together with the Federal Office for Radiation Protection (BfS) two international workshops in relation to static and low frequency field exposure were organized in autumn 2016. The 5th International Workshop on the "Causes of Childhood Leukemia" focussed on new insights on predisposition, single steps towards open leukemia, the role of the immune system and data from new animal models. The second International Workshop was on "Action and perception thresholds of static and ELF magnetic and electric fields and contact currents in humans – current state and research recommendations." The aim was to summarize the recent state of scientific knowledge and to identify research gaps. Based on the results, further research will be initiated.

Both workshops are related to the research needs as seen in connection to the expansion of the national power grid and are part of a planned research program, which will accompany the power grid expansion in Germany. A public presentation and an opening event will take place at 11 July in Berlin. The actual state of knowledge and about 35 suggested scientific research projects will be presented and discussed.

Further research activities are performed within the regular resort research program. In addition to the research on static and ELF fields from power lines the focus was on wireless communications and new technologies.

Finished projects:

- Divergent risk assessments in the field of mobile communications.
  The final report provides an overview of major risk assessments in the field of potential health impacts of electromagnetic radiation from mobile communication systems as performed by various institutions (scientific, public and political) without evaluating the assessments in terms of scientific content. It also offers insights into the

data and risk assessment processes used by the selected institutions. (urn:nbn:de:0221-2017050314269)

- Evaluation of the EMF-Portal and differentiation of findings and recommendations for its further design. (Report under evaluation)
- Synergistic effects of radiofrequency electromagnetic fields in combination with carcinogenic substances – cocarcinogenity or tumour promotion? (Report under evaluation)

Ongoing projects

- Effect of high frequency electromagnetic fields on brain activity, sleep and cognitive performance in elderly men.
- Establishment of a data exchange platform for acute childhood leukaemia.
- Childhood leukaemia - Influence of the immune system on the development of the disease (experimental study in a suitable animal model).
- Refined evaluations on the dosimetric assessment of an animal laboratory-study on radiofrequency electromagnetic fields.
- Exposure and effects of electromagnetic fields of new technologies in the intermediate frequency range - a systematic review.