



Project no.

**SSPE-CT-2004-502173**

Project title

**EMF-NET: EFFECTS OF THE EXPOSURE TO ELECTROMAGNETIC FIELDS: FROM SCIENCE TO PUBLIC HEALTH AND SAFER WORKPLACE**

Instrument:

**Co-ordination action**

Thematic Priority:

**Priority 8, POLICY ORIENTED RESEARCH – AREA 2.3, Call Identifier FP6-2002-SSP-1**

## **WP7 Deliverable report D32. Inventory of EMF research in Central European countries**

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Organisation name of lead contractor for this deliverable:

National Centre of Public Health – National Research Institute for Radiobiology and Radiohygiene (NIRR), Department of Non-Ionising Radiation, H-1221 Budapest, Anna u.5, Hungary

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<b>Dissemination Level</b>		
<b>PU</b>	Public	<b>PU</b>
<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	

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## **WP7 Task Working Group**

*Chair:* György Thuróczy (Hungary)  
*Co-chairs:* Dina Simunic (Croatia)  
Peter Gajsek (Slovenia)

## **Country representatives**

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Croatia:	Dina Simunic
Czech Republic:	Ludvik Pekarek
Estonia:	Hiie Hinrikus
Hungary:	György Thuróczy
Lithuania:	Ingrida Uloziene
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Slovak Rep.:	Oto Osina
Slovenia:	Peter Gajsek
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## Objectives

- The Work Package 7 (WP7) of EMF-NET (*Monitoring of EMF research plans*) is part of Main Task 5 (*Observatory function and monitoring*).
- The aim of WP7 is to monitor the research and co-operative activities within the new EU Member States, candidate countries and other Non-EU Member countries (*investigated countries*) and collection of the available information on the *research activities* related to EMF.
- *Monitoring* the participation of *investigated countries* in EU research programs.
- Evaluation of EMF research activities and research topics.
- Overview the *rationale and scientific basis* of health policy.
- Searching ways to improve the harmonisation and collaboration among research groups and countries

## Monitoring

Within the WP7 monitoring process various sources of information were used:

Panel meeting of the representatives of countries,  
Questionnaire to collect the available information on the *research activities*  
Databases  
Personal communications

### Questionnaire

*Fourteen questions* were delivered by e-mail to the competent persons by countries with the following main topics (*see the Questionnaire in the Annex*):

- *Participation* in EU FP5/6 and/or bilateral Research Project (*3 questions*)
- Information on *national research* in the EMF (*5*)
- Other *non-research related* questions (*4*)
- *Knowledge* on international projects (*2*)

### Monitoring by databases

Completing the questionnaire a searching on relevant information in *databases* also has been made on the:

- WHO EMF Project (<http://www.who.int/emf>)
- FGF-*femu* - RWTH Aachen (<http://www.femu.de/>)
- COST281 (<http://www.cost281.org>)
- EIS-EMF (<http://www.jrc.cec.eu.int/eis-emf/home.cfm>)
- Bioelectromagnetics Journal (<http://www3.interscience.wiley.com>)
- PubMed (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>)

## Countries and responses

Fifteen countries were asked by the questionnaire:

- *New Member Countries:* Cyprus, Czech Rep., Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia
- *EU Candidate Countries:* Bulgaria, Croatia, Romania, Turkey
- *Other non member:* Russia

The result of questionnaire was presented by the chair of WP7 Task Working Group at the meeting co-organised by EMF-NET “*Workshop on EMF Health Risk Research Lessons Learned and Recommendations for the Future*” was held in Centro Stefano Franscini, Monte Verita, Switzerland, November 20-24, 2005. (see: <http://www.itis.ethz.ch/mv>)

## **Evaluation of questionnaire:**

*General comments:*

- In some cases it has been difficult to collect all information from responders. Probably the data provided by the representatives may not be complete due to the limited available information
- Information about the funding (amount and sources) was in some cases not available at all.
- No responds were available up to date from Cyprus, Malta, Latvia, Russia (4/15). Personal contacts were established with representatives of missing countries recently.

*Participation in EU FP5/6 and/or bilateral Research Project:*

- *Leading EU project:* No leading of EU EMF projects by investigated countries
- *Participating in EU project:* The laboratories from the investigated countries participate in 8 EU project consortium form 4 new member countries.
- *Bilateral project with EU country:* Two bilateral cooperation were recognised between EU and investigated countries.

*Information on national research in the EMF:*

- *Number of research teams on EMF:* Altogether 67 research teams were recognised within the investigated countries
- *EMF research funding per year:* Approximately 840 kEuro/year the total funding of all investigated countries, average project funding by country is 120 kEuro.
- *Percentage of main areas of the EMF frequency range that are now being investigated:* Average percentages, ELF (~23%) RF (23%) , mobile phones (47%), other (7%).
- *Ranking of main research topics that are now being investigated in the investigated countries:* Dosimetry (1), exposure assessment (2), nervous, cognitive and sensory systems (3), medical applications (4), genotoxicity (5), modelling (6), others (7)
- *National EMF program:* No national EMF program has been established in the investigated countries.

*Other non-research related questions:*

- *Ranking of main EMF topics that are in the focus of the public interest:* Base station and broadcast mast (1), mobile phone (2), Power lines and transformers (3), EHS(4), children and EMF (5),
- *Penetration of mobile subscribers:* Average is over 70%, by students(under 18y) over 90%
- *Mobile services:* 2G and 3G in all countries
- *Informative EMF web pages for public:* Managed by government in 3 countries, by industry in 2 countries, by NGOs in 2 countries

*Knowledge on international projects*

- Application of the WHO EMF research agenda and research priorities: The WHO Research Agenda is used in the research work in 6 countries.
- *The knowledge of the EMF-NET projects:* The knowledge on EMF-NET project within experts and/or governmental agencies and/or stakeholders available in 6 countries but the information is not sufficient.

## **Conclusion**

- No *national EMF research programs* in any new or candidate EU member countries.
- *Many new EU member countries are not involved in any EU FP research projects (or consortiums), nor in bilateral projects.*
- The research topics are *frequently focused* on the exposure assessment, dosimetry and effects on nervous system & cognitive functions.
- The publications in international journals are less than awaited maybe due to the *concepts and quality of research.*
- The *knowledge* of the EU research projects should be improved.
- The *dissemination of scientific information* in the examined countries should be improved by *Internet websites.*
- DTS suggestion> The Regional EMF-NET meetings organized by WP7 would help in encouraging national governments for a need for national EMF research program.

## **Forthcoming activities**

- All available data will be gathered in an Excel table and will be circulated within the national representatives (similarly to WP6).
- Next panel discussion will be organised during the meeting "*The role of EMF dosimetry in high quality risk assessment*" to be held in Ljubljana, Slovenia, and Zagreb, Croatia from 13-15 September 2006 ([www.albatros-bleed.com/emf2006](http://www.albatros-bleed.com/emf2006))
- Key topics of the *rationale and scientific basis* of health policy will be discussed and evaluated by the representatives of countries and chairs of WP7 Task Working Group.

**ANNEX: Questions regarding the EMF-NET WP7**

- 1) Do you have research groups in your country that participates in EU FP5 and/or FP6 EMF related Research Projects?
  - If yes, please list the names and duration of the projects.
- 2) Do you have research groups in your country who co-ordinates (lead) EU FP5 and/or FP6 EMF related Research Projects?
  - If yes, please list the names and duration of the projects.
- 3) Do you have research groups in your country that have bilateral research program with EU member research group in EMF related Research Projects?
- 4) Do you have national research program for EMF in your country?
  - If yes, how many research groups are involved in the program?
  - Please, list the main topics and/or main Working Packages of the program
- 5) Please, estimate, how many research groups are involved in the EMF research in your country? *(You should take into account the universities, governmental institutions (agencies), industrial research groups, non-governmental organisations/NGO-s, etc.).*
- 6) Please, list the main research topics that are now being investigated in your country. *(for example: genotoxic studies, exposure assessment, research on nervous systems, etc....).*
- 7) Please, list the main areas of the EMF range that are now being investigated in your country *(for example: ELF, RF, Mobile phones, etc...)* Please try to estimate the percentages of each area within the whole EMF research.
- 8) Please, try to estimate the whole funding/year (in Euro) for the EMF research in your country.
- 9) Please, give any information about the application of the WHO EMF research agenda and research priorities in your country (see: [www.who.int/emf](http://www.who.int/emf)).
- 10) Please, list below the main EMF topics that are in the focus of the public interest.
- 11) Please, estimate the penetration of the mobile users in your country (%), and try to estimate the penetration within the children/students below 18 y.
- 12) Please, give information on the mobile services in your country (GSM, 3G).
- 13) Please, give information if available about the knowledge of the EMF-NET projects within the
  - experts and the researchers,
  - governmental agencies
  - stakeholders *(industry, NGO-s,)*
- 14) Do you have informative EMF web pages for public in your country? If you have many web pages related to EMF please describe the owner *(government, industry, university, NGOs etc...)*.

Please give any more information/questions about the EMF research in your country that may be interesting for this monitoring.

For more details please visit: <http://www.itis.ethz.ch/mv/downloads/DAY3/3K-Thuroczy-s.pdf>