

**Expert Advisory Board (EAB) on NIR,
Bulgaria, Ministry of Health**

International EMF Project

REPORT

**Online International Advisory Committee Meeting
WHO, Geneva, 8th – 10th June 2021
Geneva, Switzerland,
(for the period June 2020 – May 2021)**

I. General research activities in Bulgaria related to EMF health

Ongoing projects

Ensuring 5 years project sustainability - **Project BG 07: *Register of sources of EM radiation in residential areas***, Programme “*Public Health Initiatives*”, Reference: BG 07-PAF –NFM&FM EEA: “*Improving control and information systems in risk prevention and healthcare*”.

Funds: Norwegian Financial Mechanism and the Financial Mechanism of the European Economic Area 2009-2014

Research team: National Centre of Public Health and Analyses (NCPHA)

Duration: finished on 30 April 2017

Overall objective: *Improving public health through the development of healthcare information systems*. It includes 3 different electronic registers: one for the patients with diabetes, second for patients with rare diseases, and the third – for sources of EMF radiation in residential areas.

During the reported period, data of new sources of RF radiation, especially used for 5G technology was implemented into the electronic system. In addition, new method for calculation of the “zone of exposure” implementing the requirements of IEC Standard No. 62232 was developed on the basis of discussion with the industry (mobile operators).

International EMF Project, WHO: *Biological effects of static and time-varying electric and magnetic fields*

- Online meeting of the IAC, 8-10 June 2021;
- Collecting information on the problems about the public concern concerning 5G technology

EMF Forum – problems connected with the implementation of the Directive 2013/35/EU in practice.

- Monthly meetings (virtual) for organization of the European meeting of the Forum in November 2021
- Preparing a publication on practical application of the Directive 2013/35/EU – in preparation of the first draft

- Preparing a publication on RF exposure assessment on workplaces around dielectric heaters and plastic sealers – first draft ready for publication in Journal of Measurement

Project: *Study of the public concern with EMF exposure to the general population. Risk communication and risk management*

Funds: National budget: National Centre of Public Health and Analyses (NCPHA)

Research team: V. Zaryabova – Ph.D. theses. Supervisor: Prof. M. Israel, Ph.D.

Deadline: 2020, prolonged to 2022.

Overall objective: Analyzes of the reasons of public concern applying different methods as communication with the people, retrospective analysis of the complaints, questionnaire, EMF exposure.

Project *“Analysis and development of methods for measuring and exposure assessment of NIR in new technologies (mainly 5G)”*

Aim: Development of new methods for exposure assessment of EMF emitted by 5G technology. Public perception.

Objectives:

- Analysis of the world experience concerning exposure evaluation of EMF around 5G antennas
- Measuring equipment applied worldwide for exposure assessment
- Method for calculation of the “exposure zone” around sources of EMF used in 5G technology
- Method for measurement of the EMF values in residential areas (5G sources)
- Guidelines for measurement and evaluation of RF exposure for the regional inspectorates

Funds: NCPHA

Deadline: 3 years (starting on 2021)

Scientific forums and publications:

1. Scientific forums

International Conference on radiation applications, RAP2020, Greece, Virtual Online Conference, July 6-10, 2020

16th World Congress on Public Health, 12-16.10.2020, Rome, Italy

STOA online 5G Symposium, 31 May, EP

2. Publications

Israel M., P.Ivanova, Ts. Shalamanova, M. Ivanova, V. Zaryabova. *Exposure and risk assessment connected to the health and safety of workers in the production of electricity*, Proceedings of International Conference on radiation applications RAP2020/Virtual Online Conference, July 6-10 2020, DOI: 10.37392/RapProc.2020.12, 51-54.

Zaryabova V., Ts. Shalamanova, Hr. Petkova, M. Israel - *Control Policy of RF electromagnetic field in Bulgaria. Practical approach*, European Journal of Public Health, Volume 30, Issue Supplement 5, September 2020, <https://doi.org/10.1093/eurpub/ckaa166.1306>

Zaryabova V., Ts. Shalamanova, M. Israel. 5G technology. *Public concern and probable health consequences*, XIII National Medical Physics and Engineering conference NMPEC-2020 with international participation, Folia Medica, Vol. 62, Suppl. 2/2020, p.27, ISSN 1314-2143 (online)

Zaryabova V., Ts. Shalamanova, Hr.Petkova, M.Israel. *Public concern of electromagnetic exposure in Bulgaria - a case study*, Proceedings of International Conference on radiation applications RAP2020/Virtual Online Conference, July 6-10 2020, DOI: 10.37392/RapProc.2020.14, 59-63

II. New Policies and Legislation regarding EMF exposure

1. Development of new Ordinance with exposure limits and reference levels for EMF exposure to the general population – first draft sent to the Ministry of Health for public consultations

2. New method for calculation of the “exposure zone” around sources of EMF radiation in telecommunication

The method includes all kind of telecommunication sources used in 2G-4G, and 5G technologies.

3. Collecting data for the electronic register of communication sources of EMF radiation in residential areas.

Data were collected by measurements performed by NCPHA and by the Regional Health Inspectorates in residential areas.

4. Concerning the EU Directive 2013/35/EC for protection of workers against EMF radiation transposed in Ordinance RD 07-5, Official State Gazette 95, 2016, the efforts were directed through the European Forum, coordinated by the Federal Institute of Occupational Health in Dortmund, Germany.

5. The Council Recommendations 1999/519/EC on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) still is not in use in Bulgaria. The new draft of the Ordinance includes most of the requirements and reference levels from the CR.

III. Areas of public concern and national responses

The developed electronic registers for sources of EMF radiation and for complaints of individuals concerning the exposure are in use since May 2017, and they continue to be filled in.

The trend of reduction of the public concern – less people (less complaints), the same complaining people for a long period continued in the reported period. Much more fears are coming with the implementation of 5G technology. It is not in use yet but fake news and conspiracy theories are arising.

The main communication network in Bulgaria is built, and no many new stations are in construction. Mobile operators are starting the 5G technology, nevertheless that there is not enough information about its possible adverse effects on population.

IV. New public information activities:

Many publications in media, several interviews in social media, daily news, radiobroadcasting and TV were conducted at this period. Most of them are focused on 5G technology and its possible health risks. Some important appearances in media are the followings:

- European Parliament, STOA meeting “Health impact of 5G” and “Environmental impact of 5G”, 31 May 2021, Moderator Prof. Michel Israel, Bulgaria
- Interview on health impact of 5G – National radio

One big information activity during this period was the information for the EMF sources from the electronic register with data for the sources and EMF exposures.

Every year, the Ministry of Health issues annual report on the health of the nation, which contains chapter on non-ionizing radiation. There activities of the Expert Advisory Board on NIR, NCPHA, Regional Health Inspectorates are presented. The information included in the field of NIR the level of public concern, the state and changes in the

legislation for the working environment, results from measurements, results of EMF monitoring in the populated areas, analysis of the results, etc. The report is available to the public at the web site of the Ministry of Health.

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