

**HELLENIC REPUBLIC**  
**Report on EMF activities**  
**21<sup>th</sup> International Advisory Committee Meeting, June 2016**

Dr. E. Karabetsos  
Head of the Non-Ionizing Radiation Office  
Greek Atomic Energy Commission (EEAE)

**New policies and legislations**

- The Minister of Infrastructure, Transport and Networks has announced his intention to put into force a new legislation that will modify the current limits for the exposure of the general public in the vicinity of base stations and will introduce changes in the licensing procedure of antenna stations and enhance the involvement of the local authorities. The current safety limits for the exposure of the general public in the vicinity of all kinds of antenna stations are set to 70% of the 1999 EU Council's Recommendation values in all cases and to 60% of them for antennas located closer than 300 meters from the perimeter of schools, kindergartens, hospitals or eldercare facilities.
- In view of the harmonization of the national legislation with the Directive 2013/35/EU of the European Parliament and the Council on the minimum health and safety requirements regarding the exposure of workers to the risks arising from electromagnetic fields, the Ministry of Labour in cooperation with the EEAE presented the results of their common EMF measurement campaign (from 2014 to 2016), that depict the existing situation concerning occupational exposure in various working environments in Greece (focusing on the energy, telecommunication, medical, transport and industrial sector).

**Public concern and national responses - New public information activities**

- At the end of 2015, the operation of the *National Observatory of Electromagnetic Fields* (established by law in 2012) has started. The *National Observatory of Electromagnetic Fields* is a network of 500 fixed (480 broadband and 20 frequency selective) and 13 mobile (vehicle mounted frequency selective) measurement stations throughout Greece that continuously monitor the EMF levels from all kinds of antenna stations in the frequency range 100 kHz – 7 GHz.

Two public information workshops for the presentation of this network (with a total budget of 4,8 M€) have taken place in Athens and Thessaloniki in October 2015. The results of this national monitoring network which is operated and controlled by EEAE, are presented through a geographical information system in an interactive web portal (<http://paratiritirioemf.eeae.gr>).

The technical details for the deployment, the operation, the expansion and the maintenance of this measuring network as well as quality control procedures for the acquired results, and a technical regulation that defines the responsibilities of the municipal authorities that are involved in the operation of this network, the criteria for choosing the sites for the fixed monitoring stations, the criteria for the interconnection with the other existing monitoring systems in Greece and details concerning the presentation of results and the provision of services to the involved stakeholders and the public, are already defined in two decrees published in 2014 & 2015.

- According to the provisions of the national legislation, the antenna owners are billed with 220€ for each base station on an annual basis, as a fee for the verification of compliance of their emissions with the legislated EMF exposure limits. This verification is accomplished, by:

a) in situ measurements performed by EEAE or other authorized by it laboratories, in the vicinity of (at least) 20% of the antenna stations installed in urban areas every year. The results are uploaded to EEAE's web site (<http://eeae.gr/>). Until May 2016, the results of in situ measurements in the vicinity of more than 7200 base stations are uploaded, and b) through the measurements of the above mentioned national monitoring network (*National Observatory of Electromagnetic Fields*, <http://paratiritirioemf.eeae.gr>).

## Research

Research actions and programmes concerning biological effects, dosimetry and exposure assessment to electromagnetic fields are being performed in universities and research centers and are funded by the greek government, the European Commission and other international sources. Some new publications from greek researchers:

- Apoptotic cell death during *Drosophila* oogenesis is differentially increased by electromagnetic radiation depending on modulation, intensity and duration of exposure, Sagioglou NE, Manta AK, Giannarakis IK, Skouroliahou AS, Margaritis LH, *Electromagn Biol Med* 35 (1): 40 – 53, 2016
- Immune responses of a wall lizard to whole-body exposure to radiofrequency electromagnetic radiation, Mina D, Sagonas K, Fragopoulou AF, Pafilis P, Skouroliahou A, Margaritis LH, Tsitsilonis OE, Valakos ED, *Int J Radiat Biol*: 92(3):162-168, 2016
- Evaluation of occupational exposure to ELF magnetic fields at power plants in Greece in the context of European directives, Christopoulou M, Govari C, Tsaprouni P, Karabetsos E, *Radiat Prot Dosimetry* 167 (4): 502 – 512, 2015
- Clustering of excess health concerns for electromagnetic fields among health personnel: A quantitative and qualitative approach, Gerakopoulou P, Matsoukis IL, Giagkou N, Dessypris N, Cassimos DC, Petridou ET, *J Health Psychol* 20 (8): 1060 – 1072, 2015.