

ANNUAL REPORT FROM TURKEY

NATIONAL ACTIVITIES ON HEALTH EFFECTS OF ELECTROMAGNETIC FIELDS

Through the last decades users of mobile phones had an accelerated increase in Turkey as in worldwide. By the technological developments the mobile phone users reached to the number 67.680.547 and the 3G technology users had reached the number of 41.798.432 in Turkey. These numbers corresponds to %89,517 penetration in the name of mobile technology usage. And also with this increase the number of base stations had risen to the number 83.817 (April 2013 Data).

General research activities related to EMF health :

Many academic people and their research groups are also engaged in some branches of Turkish Chamber of Physicians. There are some academic research institutions in various public and private Universities to investigate the effects on electromagnetic fields on cells and organs. Most frequent studies focus on small experiments and are conducted around the effects of 50Hz transmission lines, household goods, wireless modems, cellular communication base stations and handy phones.

In Turkey, biological effects of electromagnetic radiation has also been increasingly studied and ongoing research activities are continued with increasing pace. Although, many different radiation frequencies are under consideration, most of the research activities focus around 50 Hz TV broadcasting frequencies, 900 MHz, 1800 MHz, 2100 MHz and 2450 MHz. The research institutions are Universities and the results are published in national and international journals. Besides, some groups also plan to deal with electromagnetic radiation accompanied with ultraviolet and infrared light incidence.

New policies and legislations regarding EMF exposure :

The regulating institution on Communication Technologies (BTK) is a special department that works on measuring the field intensities. The institution follows the most recent guideline stated on the International Committee on Non-ionizing Radiation Protection. The Ministry of Environment and The Ministry of Transportation, Maritime Activities and Communication have published regulations based on ICNIRP Standards and regulations. In 2011 they had prepared "Limiting, controlling and directing Electromagnetic field intensity caused by the electronic communication devices by taking the international limits" regulations. And these regulations came in to effect by the time they had been published in official journal in April 2011. By these regulations the limit of the electromagnetic fields caused by the base stations is taken as $\frac{1}{4}$ of the value which ICNIRP recommended/10,23 V/m).

Areas of public concern and national responses:

The Government and Ministry of Health is paying utmost attention to raise public awareness to the health effects of electromagnetic fields. The regulating institution on Communication Technologies (BTK) has a special division on measuring the field intensities on the country. Many non-profit institutions are actively engaged in disseminating information to public. An example to one of these institutions is Temkoder (Prevention, Measurement of Electromagnetic Pollution and Training Organization). A recent Project funded by Ministry of Internal

Affairs, has been accomplished by Temkoder . In this Project, many secondary schools were visited to train the pupils about safe usage of cellular phones. The awareness of the pupils were surveyed, presentation were performed and the results of the Project has been disclosed in a workshop held in March 2013. Similar NGO's have been organizing activities to inform the society and raise public concern.

New public information activities:

Effects of electromagnetic radiation are frequently shared with public by Universities, Chamber of Electrical and Electronics Engineers, Chamber of Medical Physicists, Technology Informing Platform. Also Ministry of Health has published booklets about Electromagnetic field exposures, mobile phones, wi-fi technology and their health effects.

Moreover, many researchers and TÜBİTAK have recently published several books and reports to point out to be cautious about long term effects of non-ionizing radiation from cellular systems.

Non-Governmental Organizations, like Temkoder, Turkish Electrical and electronics Chamber, Chambers of Physicians are sensitive on the issue of health effects on electromagnetic fields. Workgroups have been formed in the body of these NGO's. These groups have organized public awareness meetings to inform the society about the effects of electromagnetic fields on health. Turkish Electrical and Electronics Engineering Society is organizing meetings on recent issues on electrical, electronics and computer engineering issues including effects of electromagnetic fields. And also NGO's are organizing meetings with schools and public in order to educate them.

There is increasing concern in the society as well. **And in order to decrease these concerns Ministry of Health Plays an important role by organising international meetings in addition to promoting other awareness activities by;**

- **preparing and distributing leaflets**
- **sharing all current scientific data by web site and by press releases through visual and printed media**

Individuals or institutions may apply for surrounding electromagnetic radiation measurement around themselves. The application procedure and regulations are well defined. In the case where an applicant feels that an unsafe situation may be observed, independent measurement teams are present in at least two different Universities and the way to local Courts for suitable lawsuits is open.

New Implementations

- **The Ministry of Health is working on new regulations about prohibiting cell-phone usage under 14 year-old children.**
- **The Ministry of Communications and Maritime Affairs has already started a pilot Project by monitorizing Electromagnetic fields around the schools.**

- **The Ministry of Communications and Maritime Affairs has implemented a new project which allows the public to learn about the electromagnetic field measurements around their dwellings by using their ID numbers.**