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Tunisia

Report on EMF Activities

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1. New policies and legislations

There isn't new legislation published. The 2008 inter ministerial circular organizing the BTS installation is actually under revision.

2. Research activities related to EMF

Few research activities related to EMF exposure and health risks are conducted in Tunisia until now. The principal research activities are cited above:

- **Latrach. R, N. Ben Chehida, A. Allous, H. Redid, A. Rejeb, H. Abdelmelek**. Effects of sub-acute co-exposure to WIFI (2.45 GHz) and Pistacialentiscus oil treatment on wound healing by primary intention in male rabbits. Veterinary Medicine and Science: 1-11. 2022.
- **Othman H, López-Furelos A, Leiro-Vidal JM, Ammari M, Sakly M, Abdelmelek H, Salas-Sánchez AÁ, Ares-Pena F, López-Martín E.** Exposure to 2.45 GHz Radiation Triggers Changes in HSP-70, Glucocorticoid Receptors and GFAP Biomarkers in Rat Brain. Int J Mol Sci. 2021 May 12; 22(10):5103.

- **Othman H, M Tanazefti, M Sakly, H Abdelmelek, M Ammari.** Behavioral impairments and biochemical alterations in brain following exposure to WiFi radiation and aluminum in rats**.** International Journal of Radiology and Radiation Oncology 7 (1), 006-013.

3. Policies and measures regarding the exposure to EMF and EMF risk management

The National Agency of Frequencies (ANF: www.anf.tn) is in charge of controlling the levels of the electric field strength on the BTS sites and radio environment around the country. Since 2008, more than 1200 measures have been done. All measures are below the 1998ICNIRP exposure guidelines, which are adopted in Tunisia. The measure on site covered all radiofrequencies between 30 MHz and 3 GHz (HF, FM, PMR, TV, Radar, GSM 900, DCS, DECT, UMTS). The total average of electric field strength is then compared with the lowest level of the frequency detected in site (fixed on the 1998 ICNIRP guidelines and adopted in Tunisia).

The last four years (2020-2023), ANF carried out 600 specific measurements distributed throughout the national territory. 84.94 % measures are below 2 V/m. The maximum level measured was 5.7 V/m.

In February 2022, ANF has finalized the installation of 16-fixed stations in 9 departments to control EMF exposure continuously in many towns in Tunisia. A web site dedicated to inform the population had created, and can be visited it at www.tunisia-emf.tn & www.champs-em.tn

4. Area and Public concerns and national responses

The people who are living near mobile phone base transceiver stations (BTS) antenna, considered to be the population with the highest risk of exposure.

The National Agency for Risk assessment (ANER/ ex-ANCSEP) received every year a number of complaints from neighbors of BTS stations. These complaints are treated by a working group who had met eight times between 2020 and 2023 and has treated 80 cases. In accordance of the inter ministerial circular, cellular phone BTS antenna should not be sited closer than 100 m to sensitive institutions (schools, kindergartens, hospitals, …).

5. New public information activities

When the Tunisia Government started the preparations of delivering the license for communication operators to install 5G network, ANER organized in October 2022 a national seminar untitled “5 G mobile networks and health” for professionals of different stakeholders (municipalities, regional departments of health, different ministries, etc…) and NGO to

promote their knowledge about these new technologies, the potential health risks, the procedure of complaint treatment and the control activities of exposure.

In November 2023, ANER participated in the Autumn School of Electromagnetic Compatibility in the Higher School of Communication of Tunis (EA CEM_IoT&IoT'23 SUP'COM) by presenting a communication untitled "the potential health effects of RF-NIR" for more than 150 engineering students and professors of telecommunications. In the other hand, ANF presented the results of control activities of exposure to NIR around BTS. It was the first time that a High school of telecommunications engineers introduces health effects of RF-EMF in a scientific event.

In May 2024, ANER participated in the 2nd National Congress of Radioprotection, organized by the Tunisian Association of Radioprotection (ATRP) in Sfax-Tunisia, by presenting a communication untitled "the potential health effects of NIR", with focus on healthcare activities, during the specific session on NIR for physicians and radioprotection technicians. More than 120 professionals from public and private health sector interested on radioprotection participated in the congress.