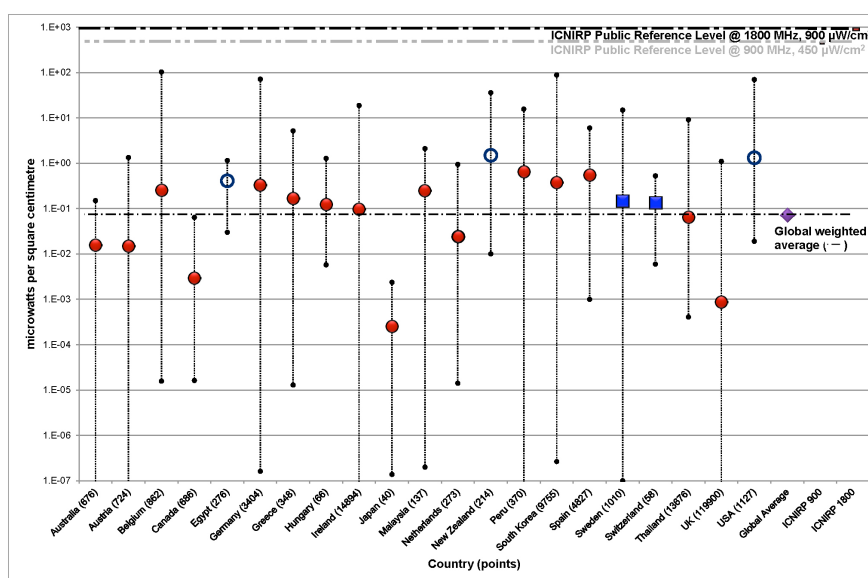




International Comparison of Base Station Exposure Levels (Updated)

Two recent studies^{1,2} have published comparative analyses of data from surveys of mobile phone base stations. The first study investigated more than 173 000 measurements from 2000 onwards in more than 20 countries across five continents. The second study contained almost 260 000 measurement points from seven African countries over two time frames from 2001 to 2003 and 2006 to 2012.

The key findings from these two studies are that irrespective of country, the year and mobile technology; RF fields at a ground level were only a small fraction of the international human RF exposure recommendations. Importantly, there has been no significant increase in typical measured levels since the introduction of 3G services and that the environmental levels have remained essentially constant despite the increasing number of base stations and deployment of additional mobile technologies.



The above illustration from the study shows that the global average was only 0.00073 W/m² which is almost 5500 times below the international guidelines of 4.0 W/m² at 800 MHz as recommended by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). The mean levels in African countries are similar to the reported levels for countries of Asia, Europe and North America using similar mobile technologies. The data are representative of outdoor environments at street level and may be different in other locations although it is the responsibility of those installing base stations to ensure that the RF exposure is below ICNIRP or other applicable limits in all publically accessible areas around the base station.

The results of the studies further support the advice provided by the World Health Organization in relation to base stations and wireless technologies:

*Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects.*³

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¹ Rowley and Joyner, Comparative international analysis of radiofrequency exposure surveys of mobile communication radio base stations, *Journal of Exposure Science and Environmental Epidemiology* 22(3): 304-315; (<http://www.ncbi.nlm.nih.gov/pubmed/22377680>)

² Joyner, Van Wyk and Rowley National Surveys of Radiofrequency Field Strengths from Radio Base Stations in Africa, *Radiation Protection Dosimetry* (2014) 158 (3): 251-262; (<http://www.ncbi.nlm.nih.gov/pubmed/24044904>)

³ World Health Organization. Base stations and wireless technologies, Fact Sheet No. 304.