

Spain

Report on EMF Activities

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Ministry of Health and Consumer Affairs

(1) Based on the "Spanish Report". Dr. David Sánchez-Hernández. Technical University of Carthagene. Dr. Pablo Fernández-Cid. Ministry of Industry, Tourism and Commerce and Dr. Alejandro Úbeda-Maeso. Bioelectromagnetis Lab. Hospital Ramón y Cajal. Ministry of Health and Consumer Protection.

1. General research activities related to EMF health

There are some Spanish Groups and Institutions dedicated to research:

Universidad Politécnica de Cartagena. Dr. David Sánchez-Hernández, Dr. Alejandro Díaz and Dr. Antonio Martínez-González (<http://www.gimre.upct.es>). Available at, <http://www.coit.es/asesoria/tecnica/tecnotas/campos.pdf>

Universidad Politécnica de Cataluña. Dr. Jordi Romeu and Dr. Antoni Elías (<http://www.tsc.upc.es>). Available at, <http://www.localret.es/dret/iradioc/docs/pctm.pdf>

Before that, the *Ramón y Cajal Hospital* has had a continuous research activity on EMF and health, which continues now under the Fondo de Investigación Sanitaria(Health Research, Spain) and other funds. A.Úbeda. "Response of Human Cell Lines NB69 and HepGz to 50-Hz Magnetic Fields: Mecahnisms of Cellular Response to Weak Fields ($b < 500 \mu T$) .

- Instituto de Física Aplicada. Consejo Superior de Investigaciones Científicas (CSIC). M. Martínez-Burdalo et al., at <http://www.ifa.csic.es>

- Departamento de Física Aplicada de la Universidad Complutense de Madrid. J.L. Sebastián et al., at <http://www.ucm.es/info/electron> . Several projects on dosimetry, assesment of biological and physical indicators related to human exposure to radiofrequency, rapid antibiotic susceptibility teting using dielectro -phoresis(RASTUD) EU, and others.

- Microwave Engineering, Radiocommunications & Electromagnetism Research Group. Universidad Politécnica de Cartagena. D. Sánchez-Hernández et al.

- Departamento de Tecnología Electrónica. Universidad Carlos III de Madrid. E. Olías et al., at <http://www.uc3m.es/uc3m/dpto/IN/dpin08/gsep/gsep/homepot.htm>

- Departamento de Anatomía e Histología Humana. Universidad de Zaragoza. M.J. Azanza et al., at <http://www.unizar.es> .

- Asociación ITACA. Universidad Politécnica de Valencia. E. de los Reyes et al., at <http://www.itaca.upv.es>

Departamento de Ingeniería Electrónica. Universidad Politécnica de Cataluña. EMC Group. P. Riu et al., at <http://www.upc.es/web/gcem>

Universidad Complutense de Madrid. Dr. Antonio Hernando. Available at, <http://www.todocancer.org/NR/rdonlyres/150DA169-CEB9-40FE-9625-CC7AF93A2714/0/ponenciaHernando.PDF>.

EMF de Sistemas de navegación, comunicaciones y vigilancia para la navegación aérea.(AENA).

Estudio de corrientes inducidas en el cuerpo humano por campos electromagnéticos de frecuencia industrial.(UCM) and others.

Other, EMF-related research institutions representing Spain at COST281

Unlike specific research plans of other EU countries, Spain has not initiated a dedicated-research budget to its National R&D Plan. Due to social concerns, research support was limited to a targeted line of research within the 2003 R&D Plan in two different strategies:

1. Priority research line on the National Biomedicine 2000-2003 R&D Plan: 'Human Pathology and its mechanisms related to exposure to toxic and contaminating agents and to radioelectric emissions and health'.
2. Priority research line on the National Information & Communications Technology 2000-2003 R&D Plan: 'Study of possible risks from radioelectric emissions in RF receivers'.

Additionally, in the National Information & Communications Technology 2000-2003 R&D Plan Call for proposals of 2003, a specific strategic action for 'Increasing security and confidence of citizens, users and companies on IT systems' was approved, which was very much related to public concerns on new BTS installations.

2. New public concerns and national responses

After a couple of years with fierce discussion to Spanish Regulatory Institutions against the installation of new BTS due to radioelectric emissions and public concern, in March 2003 the *Organización de Consumidores y Usuarios* (OCU), the Spanish User and Consumer Organization issued a statement, which was published in its monthly magazine, where the message transmitted to the use was one of calm and safety of citizens with current regulations. The statement was issued after a detailed study of available scientific literature and its own measuring campaign over BTS and high voltage lines. At that time there were 165 different local regulations and OCU called for a harmonization of the issue at the local level.

To date the Ministry of Industry has only distributed an initial draft of the environmental-study normative for *Ley 54/1997*, wherein a corridor free from residential areas directly below these lines and with some projection on the sides is envisaged. Even if this is solved for future high voltage lines, there is a question mark on existing high voltage lines on urban areas, and this is yet to be discussed on parliament, although some Autonomous Regions, like Madrid through Decree 131/1997, have already published specific regulations for a progressive reduction of these lines and ways to move them away from urban areas. Other Regions, like *Extremadura, Asturias, Castilla-León or Castilla-La-Mancha*, have accepted the suggestion of the Spanish Ombudsman and have initiated public funding, limited to a few municipalities (cities,towns), for moving these lines. On the other hand, Regions like *Murcia or Valencia* have rejected the Ombudsman's plan for existing high voltage lines, simply awaiting the normative for future lines.

Later in 2001, after an agreement with the Ministry of Science and Technology, the *Colegio Oficial de Ingenieros de Telecomunicación* (COIT), equivalent to the IEE in the UK, created a

Working Group on radioelectric Emissions and published its recommendations in an extensive and multimedia work available at <http://ww.coit.es/>

The COIT, along with *Colegio Oficial de Ingenieros Técnicos de Telecomunicación* (COITT), has developed a procedure to verify all EMF emission compliance certificates before being submitted to the Ministry of Industry. The Ministry requires for all certificates to receive the OK of either COIT or COITT. Within COIT, the Association of Galicia has initiated, with support from the Regional Autonomous Government of Galicia, a web page for public queries regarding EMF and health issues.

<http://www.infonegocio.com/nortideas/telefonía.htm>

Similarly, after much interest, research and an general report in 1999, the Spanish Ombudsman Office published a specific EMF report in 2001. The report was basically orientated on high voltage lines effects on human health and some aspects of the Spanish Electric Law (*Ley 54/1997*), wherein a specific environmental-effect study is compulsory for new high voltage lines projected over more than both 15 km and 220 kV. Since the required utter regulation for this compulsory study has not yet been published, it does not come into effective way in practice, which is the subject of the Ombudsman Report.

2. New policies and legislations regarding EMF exposure

The Ministry of Health and Consumer Protection published a detailed report on EMF and human health prepared by independent experts chaired by Dr. Francisco Vargas and Dr. Alejandro Úbeda in May 2001, which included conclusions and recommendations. After reviewing the huge amount of scientific information available at that time, the Board of Independent Experts considered that exposure to EMF within the limits established in the Recommendations of the Council of Health Ministers of the European Union (CHMEU) concerning exposure of the general public to EMF from 0 Hz to 300 GHz could not be declared to produce adverse effects on human health. Therefore, the Board concluded that fulfilment of the Council's Recommendation was sufficient to guarantee protection of the population, and backed the adoption of this Recommendation as compulsory in Spain. The report is available both in Spanish and English from the Ministry of Health web page <http://www.msc.es>

After that, the main initiative took place in September 2001 with the publication of the Royal Decree 1066/2001, regulating conditions to authorize and control radioelectric emissions of EMF throughout the country, and its practical implementation with the publication in January 2002 of the CTE/23/2002 Ministerial Order. Both regulations comply with the EMF EC Recommendation of July 1999.

The Royal Decree 1066/2001 was later amended by corrections 19998 of October 2001, 7198 and 7364 of April 2002.

The Ministerial Order CTE/23/2002 was also partially amended by correction 9436 of May 2002.

Following instructions of those two documents and their corrections, the Ministry of Health and Consumer Protection updated its report in September 1, 2003, ratifying current Spanish regulation as satisfactory for human health protection and introducing risk communication and perception issues in its recommendations as far as mobile communications is concerned.

This updated report by the Board of Experts on the topic "Updated Evaluation on EMF and Public Health" was published is available at:

http://www.msc.es/medioambiente/agenfisicos/campos_em/pdf/informecem_08_2003.pdf

It is compulsory for this Ministry to issue summary updated reports on human exposure to EMF and health every three years.

Likewise, following instructions on the Spanish legislation, the Ministry of Science and Technology issues a yearly report on the authorization, installation, measurement and inspection campaigns. The first and only report up to now was published in April 2003, analysing 17.700 BTS for mobile communications and other 1.519 radio transmitters up to June 2002, where all measurements indicated emissions levels below reference levels.

Some Spanish Autonomous Regions have adopted additional regulations.

After being addressed by several institutions and associations, the *Comisión del Mercado de las Telecomunicaciones* (CMT), the telecommunications control organism similar to the FCC in the USA, made a statement of position in January 2003 as a response to the National Spanish Association of Electronics Industries (ANIEL, presently AETIC), where in Local Governments were excluded to take any action as far as radioelectric emissions and criteria for requiring responsibility insurance are concerned, giving full regulatory control to the State (Ministry), while urban criteria affecting the installation of new BTS and the extra requirement of providing city-specific deployment plans were to some extent awarded to Local Governments providing the principle of proportionality of decisions to consequences is maintained. That gave an undefined way for future station deployment, which is yet to be solved and in fact many trials are ongoing between Local Governments and Stakeholders.

AETIC has created a working group to promote the development of telecommunications infrastructure (CDIT), and has a web page on mobile communications and health issues.

In November 2003, radio-electric emissions were specifically addressed in the new General Telecommunications Law (*Ley 32/2003 General de Telecomunicaciones*), and the creation of a National Expert Round Table for the Promotion of the Information Society to deal with the EMF and Health issue and the National Radio-communications Agency was approved. To date, these two organisms are yet to be born.

Regarding Standardization Organization, the Spanish equivalent to ETSI, AENOR, created a committee on electromagnetic fields in the human environment, CTN215, which deals with the standards of CENELEC TC106X, and has been very active with two to three meetings a year and basically adopting all CENELEC standards with few comments. See <http://www.aenor.es>.

3. Areas of Public concern of EMF

In this moment the main concern is about the risks related with the UMTS installations. The companies have declared to have difficulties to provide an appropriate communication coverage because the owners do not accept the antennas to be installed on their buildings.

Some times the news are very alarmist about papers related with EMF.

One important initiative to date was a recent nationwide survey prepared by the *Asociación Española Contra el Cáncer* (AECC), the Spanish Association against Cancer. The survey was performed by *Demoscopia* a well reputed survey-specialist company, the results were made public by a report in an *ad-hoc* meeting. The main conclusion is that, while for the general public mobile communications base stations are a synonym to cancer, with percentages increasing as user lives closer to the BTS. Yet, another conclusion is that there is no proven link between the two, and that research must continue while current legislation is adequate to protect the public health.

For more information on AECC contact elixabete.alvarez@ketchum.com, <http://www.todocancer.com/ESP/Programa.htm>

4. New public information activities

More recently, the Spanish Ombudsman Office has issued a statement in 11/04/2004 wherein it is declared that the health of the population is appropriately protected from EMF emissions by the current Spanish legislation and that concerns by general public, nearly on the verge of superstition, are not justified. See <http://www.defensordelpueblo.es>.

In early 2004, the Ministries of Health and Consumer Protection, Science and Technology and Internal Affairs published a leaflet to reduce the continuously increasing mobile handset theft figures.

Apart from these leaflets, no other initiative has yet been announced.

At the Regional level, the Autonomous Region of *Murcia* has published, in co-operation with the Technical University of Carthagene, three detailed reports on EMF and health, for the general public, local governments and installation companies for employer's protection. These reports can be found at: http://www.coit.es/asesoria/tecnica/tecnotas/emision/4_2003/cartagena.htm The reports were made public along with the results of an measuring inspection campaign.

The Autonomous Region of Castilla –León (Consejería de Sanidad) in cooperation with the University of Valladolid has carried out (2004) a comprehensive assesment to mesure 600 emissions point of broad band. (" Estudio del ambiente electromagnético debido a las emisiones de ondas de radiofrecuencia en Valladolid")

Mobile communications companies also initiated an advertising campaign on radio an TV about safety of mobile communications.

A few municipalities (cities,towns) have developed risk information tools regarding EMF. It is worth mentioning here a leaflet and a telephone line for information on EMF-health issues (for one month only) set up by the Town Hall of *La Coruña*, in *Galicia*, in cooperation with *Caixanova* in February 2002. The scientific information included in the leaflet was prepared by the *La Coruña* Scientific Museums Staff.

After the Spanish Royal Decree, mobile communications stakeholders have had to spent over 15 M€ on the measuring campaign in 2002 to comply with the new regulation. This amount has been decreasing annually to about 2.5 M€ in 2003 and 1.5 M€ in 2004. General opinion around different operators is that this strong effort has only soften pubic opinion and that deployment of UMTS base stations and compliance with license-linked compulsory coverage plans is at risk.

All operators have included EMF information and brochures in their web pages, and free EMF information numbers and email contacts.

-Telefónica Móviles: 1437 medioambiente@tsm.es
<http://www.empresa.movistar.com/70/totalEngls.html>

- Vodafone: 607 100199,
<http://www.vodafone.es/Vodafone/LaCompanya/LaCompanya/0,2600,7590,00.html>

- Amena: Contact through form in web page
http://www.amena.com/amena/acerca_de_amena/amena_y_el_medio_ambiente/

Apart from information provided by the Administration, an unofficial popular website with information regarding EMF is <http://www.sociedadmovil.com/smovil/index.jsp>.