

National Institute for  
Hygiene, Epidemiology and Microbiology  
*PAHO/WHO Cooperating Center for Health in Housing*

***21st International Advisory Committee (IAC) meeting***

**ANNUAL NATIONAL REPORT**

***2015 Short Report***

***RF and MW fields***

***On regard the 2015 National Report on Public Health activities on EMF conducted by entities connected to the Ministry of Public Health***

**General research activities in your country related to EMF health**

**Research Projects**

Extremely low frequency fields in electric distribution substations and electric generation sources at Havana City.

Magnetic component of ELF EMF was measured in job places, interior and outside, electrical substations and generation sources through a research conducted by the Institute of Worker Health (INSAT) with cooperation of INHEM with a tutorship for a Master Degree. Measurement of magnetic component was conducted inside station facilities and over streets at points until 300 m away. It was found field strengths that exceed limits recommended by ICNIRP 98-WHO guidelines. So, it constitutes a sanitary constraint not only for workers but also for the public who resides in the neighborhood. Research supports design of strategies for security and health at work place and also for residents living near electric facilities exposed to ELF EMF.

A cross sectional research to be conducted by INHEM on the influence of exposure to ELF - EMF in the proximity of an electric generating station is in a design stage on regard possible effect on global cardiovascular risk of exposed population aged 40 - 70 years old.

## **Ultraviolet radiation**

Insolation and skin cancer in Cuban territory.

Insolation was assumed as a tracer variable of UV exposure. Insolation recorded on a daily basis was accumulated in monthly time series. So, research was devoted to describe insolation according monthly time series. Incidence rate of skin cancer (2006 – 2011) at municipal scale was obtained from the national cancer disease registration. Insolation series compiled information from 53 heliographic stations considering data of 32 years registered by Campbell Stokes instruments (1981 – 2013). Monthly insolation averages showed no trend but first order persistence was unanimous. Annual seasonality appears in all series. A Linear univariate model fitted was significant (0,05) assessing place, month and year as factors but also were significant some first order interactions. Maximum insolation appeared in coasts, marshes and inland plains, with minimal in mountainous areas. April was month of greatest insolation, but geographical range is not wide.

Overlapping insolation with skin cancer rates show no close linkage (GIS). Log of cancer rate at municipal scale was a function of proportion of white people squared, proportion of old people squared and proportion of urbanization linearly. Females predominates among patients at a proportion of 1,24 (females/males).

## **New policies and legislations regarding EMF exposure**

The National Institute for Worker Health is discussing on the possibility of establishing an standard for restricting exposure to ELF - EMF considering occupational hygiene concerns.

The resolution of the Ministry of Communications on behalf exposure control to Radiofrequencies, which include proposal of algorithm for estimating wave propagation, with the aim of establishing limits for public health protection is still under way.

### **Areas of public concern and national responses**

National Electric Union is interested on promoting a national sanitary standard devoted to exposure control of ELF-EMF.

### **New public information activities**

National Electric Union, which belongs to the Ministry of Energy and Mines, after identification of areas of high magnetic induction, socializes information to workers with the aim of promoting health protection.

National Institutes of Worker Health and Hygiene, Epidemiology and Microbiology wish to continue encouraging research on the influence of exposure to non ionizing radiation in worker and population health.