WHO International EMF Project

Report on EMF activities in Australia during 2011-2012

ARPANSA EMF Activities

ELF magnetic fields from electrical power infrastructure remain the main focus of public concern as seen by ARPANSA but a strong emerging concern has been the RF emissions from smart-meter technology. There is also much concern regarding mobile telephony and particularly amongst those living near proposed mobile phone and computer network base stations. The proposal to introduce millimetre-wave body scanners at airports has also been of concern.

Public Information

ARPANSA has continued publishing on its web site, summaries and, sometimes comments, on recent scientific papers dealing with EMF/EMR and health. The papers are selected on the basis of importance to the protection of health, on perceived likely interest to the wider public and where Australian research is reported. The summaries are available at http://www.arpansa.gov.au/RadiationProtection/EMR/literature/index.cfm.

To address recent concerns, ARPANSA has published two new short fact sheets on smart meters and the National Broadband Network fixed wireless base stations.

Base Station Measurements

To inform the public and to confirm the validity of the calculated predictions provided in the ARPANSA Environmental EME Report of exposure levels around mobile phone prepared by the industry, ARPANSA has continued its measurements of a small sample of mobile phone base stations with detailed results from 21 base stations, 105 measurement locations in total, being published on the ARPANSA web site. Results show that the calculated predictions used in the EME reports overestimate the maximum exposure by a small factor. They also show the wide variation that can be found even within 1 m of a given location. A small number of further measurements are planned for the coming year. The results from the survey are available at http://www.arpansa.gov.au/RadiationProtection/BaseStationSurvey/index.cfm.

Revision of RF Measurement Standard AS/NZS 2772.2

A revision of the joint Australian/New Zealand AS/NZS 2772.2 Radiofrequency radiation - Principles and methods of measurement - 3 kHz to 300 GHz was prepared by members of the TE-007 committee and published in May 2011. It provides guidance in regard to uncertainties, both computational and measurement methods of assessment and includes case studies.

ARPANSA Standard for ELF and Static Electric and Magnetic Fields

After completing a draft document, including exposure limits and precautionary guidance, ARPANSA was unable to gain approval by the state and territory regulators or to satisfy the cost-benefit requirements for nationally uniform regulatory standards. After being redrafted as a guideline and adjusted to harmonise, as far as possible, with the ICNIRP 2010 low-frequency guidelines, the revised document will be put forward for approval this year. To address issues raised during the development and consultation process some extensions to the ICNIRP guidelines, such as providing reference levels for the torso in occupational exposures, are included.

Research – EMF and Health

The majority of Australian research into health effects of EMF/EMR/EME over the last 7 years has been conducted under the auspices of the Australian Centre for Radiofrequency Bioeffects Research (ACRBR), funded through the National Health and Medical Research Council of Australia (NHMRC) from a levy on the telecommunications industry. NHMRC funds other individual research projects, some of which are conducted within the institutions contributing to the ACRBR. The ACRBR funding ceased in January 2010. NHMRC is currently considering applications for a similar Centre of Research Excellence in EMF/EMR, with their decision to be announced during 2012. Other funding comes from the GSMA, EPRI, EU framework and university sources.
Ongoing research includes the Australian arms of Mobi-Kids and INTEROCC, psychological outcomes of RF exposures, risk communications research, dosimetry studies and exposure assessments, thermal regulation, RF and EEG.

Recent publications from Australian research include:


Policies, Legislation and Standards

Review of scientific literature on health effects of RF EMR
ARPANSA is currently undertaking a formal review of the relevant scientific literature published since the release of the ARPANSA RF Standard in 2002 and is cataloguing original research papers on RF and health that have been published since the year 2000. An expert panel is being established to assist with this review and they are expected to report to ARPANSA’s Radiation Health Committee later this year. If the panel identifies there is scientific evidence that indicates the current exposure limits in the ARPANSA Standard do not provide adequate protection, this Standard will be reviewed and revised accordingly.

ACIF (Communications Alliance) Industry Code of Practice
Australia has an industry code of practice on Deployment of Mobile Phone Network Infrastructure (ACIF C564:2004) that specifies requirements for consultation and other matters in regard to the installation or upgrading of mobile phone base stations. One of these requirements is the preparation of the ARPANSA Environmental EME Report that provides predictions of maximum levels of exposure in the vicinity of a proposed base station. A review of the Code, including community participation, was conducted in 2011 and followed by a period of public consultation. It is expected the code will be in force in the near future after registration by the regulator.

Proposed amendments to Legislation
There were two bills before the Australian federal parliament that relate to the Telecommunications Act and the consultation processes in place for the deployment of mobile phone towers. The two parliamentary inquiries into the bills, each of which received a considerable number of public submissions, made recommendations that the bills not be passed by the parliament.

Conferences and Meetings

The Australasian Radiation Protection Society conference was held in October 2011 and included a session on ELF, covering issues related to residential magnetic fields and childhood leukaemia.

Swinburne University of Technology held a public symposium, “Science and Wireless” in November 2011 (previously hosted by the ACRBR). A keynote address on the IARC classification of RF fields was given by Dr Robert Baan and followed by a panel discussion. http://www.swinburne.edu.au/lss/bpsyc/science-wireless.html

ARPANSA was invited to speak at a guest speaker for a public information event in Jun 2011 on Radiation Awareness in Brunei Darussalam aimed at addressing public concern regarding mobile phone base stations.

www.arpansa.gov.au
lindsay.martin@arpansa.gov.au