

ICNIRP ACTIVITIES

REPORT 2014

Introduction

This report summarizes the activities of the Commission for the period between January 2014 and December 2014.

ICNIRP Structure – Election to Commission and SEG

In 2014 elections to the Commission and the SEG took place. The Commission had one vacancy left. The election took place at the Annual General Meeting, 12-14 November 2014, Wollongong, Australia. The four candidates put forward by the Commission members were Brian Lund, Sharon Miller, John O’Hagan and Tsutomu Okuno. Brian Lund was elected. His specific expertise is in optical radiation. At the same meeting three new experts were elected to the Scientific Expert Group: Masami Kojima, Simon Mann and Sharon Miller. All accepted their elections. The profiles of the new members are available at www.icnirp.org.

ICNIRP Scientific Secretariat

The Scientific Secretariat is based in Oberschleissheim, Germany. It keeps the records of the Commission, provides administrative support, responds to scientific and other requests, prepares and organizes workshops both scientifically and logistically, coordinates the activities of the Commission including communication and partner contacts, liaison with the publishers and manages its finances.

Declaration of personal interests

The declarations of personal interests are filled in by all commission and SEG members. The declarations of personal interests are screened and evaluated by the Board and Commission with the objective of safeguarding ICNIRP’s scientific independence. All declarations of personal interests are available on the ICNIRP website at www.icnirp.org.

Commission Meetings

The Annual General Meeting was held in Wollongong, Australia, 12-14 November 2014 in conjunction with the joint Workshop on RF Fields and Health Effects.

The agenda of the Annual General Meeting (AGM) in 2014 included managing all administrative and other commission businesses, such as the coordination of all project groups’ activities as per the work plan, the budget approval and the screening of the declaration of personal interests.

This year also elections to the Commission (to fill the last vacancy) and to the Scientific Expert Group took place (see above).

Scientific topics, in particular related to radiofrequency, were discussed primarily within the project groups organized around the AGM. The PG chairs reported to the Commission on their current and future activities which were approved by the Commission thereafter.

Executive Board Meeting

The Executive Board (chairpersons and secretariat) met in Munich on 22 May 2014. Scientific and administrative issues were discussed, including the organization of the upcoming elections, workshops and meetings.

Work plan: activities of the Project Groups

Guidelines for limiting exposure to electric fields induced by movement of the human body in a static magnetic field and to time-varying and electric fields below 1 Hz

The Guidelines for Limiting Exposure to Electric Fields Induced by Movement of the Human Body in a Static Magnetic Field and by Time-Varying Magnetic Fields below 1 Hz are established for the protection of workers moving in static magnetic fields or being exposed to magnetic fields with frequencies below 1 Hz. The objective is to prevent peripheral nerve stimulation and to minimize the possibility of vertigo and perception of visual sensations (magnetophosphenes). They fill the gap between the Guidelines on Limits of Exposure to Static Magnetic Fields (Health Phys 96(4):504-514; 2009) and the Guidelines for Limiting Exposure to Time-Varying Electric and Magnetic Fields (1 Hz - 100 kHz) (Health Physics 99(6):818-836; 2010). The guidelines were published in Health Physics and are available on the ICNIRP website.

-> *Publication: Guidelines for Limiting Exposure to Electric Fields Induced by Movement of the Human Body in a Static Magnetic Field and by Time-Varying Magnetic Fields below 1 Hz. Health Physics 106(3):418-425; 2014.*

Guidelines for limiting exposure to high frequency fields (100 kHz -300 GHz)

Work towards an update of the Guidelines for limiting exposure to high frequency electromagnetic fields (100 kHz – 300 GHz) is ongoing. Publication of the ICNIRP guidelines is connected to the WHO risk assessment, which will be issued in the Environmental Health Criteria (EHC) as a joint collaboration with ICNIRP and ILO. 2014 the Project Group met on the occasion of the Annual General Meeting in Wollongong to continue drafting the document.

-> *Workshop on RF fields health effects and standards, 11 November 2014, Wollongong, Australia*

In conjunction to the PG activities a Workshop on RF fields health effects and standards, 11 November 2014, Wollongong, Australia was organized jointly with ACEBR (Australian Centre for Electromagnetic Bioeffects Research) and ARPANSA (Australian Radiation Protection and Nuclear Safety Agency) and hosted by the University of Wollongong, Australia. The aim was to discuss the latest evidence of health consequences from exposure to radiofrequency (RF) fields, and their relationship to ICNIRP's current updating of the HF guidelines.

Radiation Protection Philosophy

A Project Group was set up to update the ICNIRP statement on “General approach to protection against non-ionizing radiation”.

-> *Workshop on „Radiation Protection Principles“, 27 June, Geneva 2014, Switzerland*

Within the Project Group activities, a workshop was jointly organized with ICRP, ILO, IRPA, and WHO. The main objectives of this workshop were to identify similarities and differences in ionizing and non-ionizing radiation protection principles, in order to discuss the feasibility

of a reasoned and logically consistent framework across the ionizing and non-ionizing radiation spectrum. The differences in endpoints in ionizing and non-ionizing radiation (associated with stochastic and deterministic processes respectively) were discussed, as well as the approaches towards safety/uncertainty factors, for both workers and the general public; different protection concepts for workers and the general public may be needed for ionizing and non-ionizing radiation. Further, the important issue of whether the principles of justification, optimization and limitation that govern ionizing radiation protection can or should be applied for non-ionizing radiation, were also in the focus.

The result of the workshop will be considered in the update of the ICNIRP statement on General approach to protection against non-ionizing radiation.

More information on the Workshop are available [here](#).

Guidelines on Ultrasound

A Project Group was set up to draft a revision of the former IRPA/INIRC Ultrasound Guidelines (including recommendation for patients). A publication is planned within the next few years.

Guidelines on Data Gaps

A Project Group on "Data gaps identified during guidelines' development" was set up to draft a research agenda for the whole NIR spectrum, based in particular on the gaps identified during guidelines development. The ICNIRP research agenda aims at identifying knowledge gaps relevant for giving protection guidance. The Project Group met in Geneva in 2014 for a kick off meeting to outline the extent of the work.

NIR Exposure for Diagnostic Purposes

Following the discussion held at the Workshop on NIR applications in Medicine, 2 December 2012, Bonn, Germany, a Project Group on "Intended human exposure to NIR for diagnostic purposes" was set up to draft a statement. The Project Group started its work and met this year at the Annual General Meeting. A first draft was developed.

NIR Exposure for Cosmetic & Non-Medical Purposes

A Project Group on "Intended human exposure to NIR for cosmetic and other non-medical purposes" is set up to draft a statement.

Communication - Website Improvement

ICNIRP at its Commission Meeting in Edinburgh decided to re-launch its website in order to improve ICNIRP's visibility and communication with users and to streamline the internal business processes linked to the online activities (i.e. consultation and newsletter).

The website re-launch took place in September 2014. The feedback received by the Secretariat was very positive. The project is to be continued in 2015 with a few improvements expected in the back end (newsletter) and the provision of additional content. The

development of an intranet is not yet considered a priority. The Commission will continue relying on free systems and email exchange.

Workshops and Meetings organized by ICNIRP or with ICNIRP participation

As a widely recognized international organization in non-ionizing radiation protection, ICNIRP is invited to participate in, or co-sponsor, many international scientific events. In the period covered by this report, ICNIRP has organized and/or contributed to the following meetings:

ICNIRP Main Commission, PG and Board meetings

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|---------------------------|-------------------------|----------------|
| • Executive Board meeting | Munich, Germany | 22 May |
| • PG „Data Gaps“ meeting | Geneva, Switzerland | 26 June |
| • PG „Philosophy“ meeting | Ferney-Voltaire, France | 28 June |
| • Annual General Meeting | Wollongong, Australia | 12-14 November |
| • PG „Data Gaps“ meeting | Wollongong, Australia | 12 November |
| • PG „RF“ meeting | Wollongong, Australia | 12-13 November |
| • PG „Diagnostic“meeting | Wollongong, Australia | 13 November |

ICNIRP Workshops and Joint Workshops

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| • Joint Workshop „Radiation Protection Principles“ | Geneva, Switzerland | 27 June |
| • Joint Workshop „RF health effects & standards“ | Wollongong, Australia | 11 November |

Planned Workshops

- Workshop on Thermophysiology, 26-28 May 2015, Turkey (tbc)
- International NIR Workshop, 9-10 May 2016, Cape Town, South Africa (in conjunction with IRPA Congress)

Participation of ICNIRP Representatives in Workshops, Scientific Meetings and Courses

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|---|---------------------|----------------|
| • WHO Meeting | Geneva, Switzerland | 20 March |
| • WHO consultancy NIR standards | Geneva, Switzerland | 2-3 June |
| • WHO IAC Meeting | Geneva, Switzerland | 4-5 June |
| • 4 th European Regional IRPA Congress | Geneva, Switzerland | 23-27 June |
| • ITU Meeting | Beijing, China | 26 September |
| • Asian European GLORE Meeting | Luxemburg | 19-20 November |

Collaboration with International Organizations

World Health Organization (WHO)

ICNIRP is officially recognized by the World Health Organization as a collaborative NGO for all aspects of non-ionizing radiation protection. ICNIRP's co-operation is mainly related to WHO's International EMF project, and INTERSUN Program.

Reflections about the general concepts around protection issues were at the focus of the 2014 cooperation efforts. WHO and ICNIRP joined with ICRP, IRPA and ILO to organize a workshop on "Radiation Protection Principles" in order to discuss the similarities and differences in ionizing and non-ionizing radiation protection principles.

The workshop was useful in particular for the update of the ICNIRP statement "General approach to protection against non-ionizing radiation" and was also of major interest to initiate a common understanding of a radiation protection culture worldwide.

In relation to radiofrequency fields, cooperation was ongoing in 2014. In particular, WHO gave a presentation at the Workshop on Radiofrequency Field Health Effects & Standards, jointly organized by ICNIRP, ACEBR (Australian Centre for Electromagnetic Bioeffects Research) and ARPANSA (Australian Radiation Protection and Nuclear Safety Agency) and hosted by the University of Wollongong on 11 November 2014 in Wollongong, Australia. The WHO delegate in charge of radioprotection participated in the International Session held at the Annual General Meeting of ICNIRP on 12 November 2014, Wollongong, Australia. ICNIRP was represented by its Chair at the meeting related to NIR standard setting on 20 March 2014 and at the WHO IAC meeting on 4-5 June, Geneva, Switzerland. The ICNIRP Chair attended, as an observer, also the WHO meeting on NIR standards held on 3-4 June in Geneva, Switzerland.

European Commission (EC)

ICNIRP provides scientific advice for the evaluation and interpretation of scientific data, and for their dissemination, especially to Directorate General "Health and Consumer Protection", Directorate General "Enterprise and Industry", and Directorate General "Employment, Social Affairs and Equal Opportunities".

International Labour Organization (ILO)

The partnership between ICNIRP and ILO dates back to 1994 when ICNIRP was admitted on the ILO's Special List of Non-Governmental Organizations. Since then several publications have been jointly issued in particular related to EMF and Ultraviolet radiation. In 2014 collaboration took place with ILO Safety at Work within the framework of the activities of the Project Group on Radiation Protection Principles (see Workshop), the WHO Environmental Health Criteria and the Basic Safety Standards.

International Radiation Protection Association (IRPA)

ICNIRP and IRPA are linked per Charter and the cooperation is within this framework. IRPA provides information on ICNIRP activities regarding its publications, current online consultation, the organization of conferences, and the elections on its website. Collaboration took place through the activities of the Project Group on Radiation Protection Principles and

in particular the organization of the joint workshop on “Radiation Protection Principles”, Geneva, 27 June 2014 with regard to the approaches within the ionizing and non-ionizing radiation protection systems. ICNIRP also collaborated with IRPA by contributing to the preparation of the NIR session and with lectures presented by ICNIRP members and ICNIRP SEG members at the 4th European Regional IRPA Congress, 23-27 June, Geneva, Switzerland.

Other collaboration

As part of its mission, ICNIRP provides scientific advice on NIR protection to public agencies with an interest in radiation protection in many countries worldwide (see above). These activities are performed mostly through participation in seminar or round tables and the provision of lectures in training courses and scientific conferences, as well as meetings with protection agencies. This year the collaboration efforts were intensified with the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) through the organization of a Joint Workshop and the participation of a NIR delegation from ARPANSA in the International Session of the Annual General Meeting, 12 November 2014, at which Cancer Victoria (in relation to UV) and IEC were also represented through their delegates.

Budget

In 2014 the ICNIRP activities were supported by the German Federal Ministry for the Environment (BMUB), the European Union Directorate General Employment, Social Affairs and Inclusion (Safety at Work), the International Radiation Protection Association (IRPA), the New Zealand Ministry of Health, the Israel Ministry of Health, the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), the Australian Communications & Media Authority (ACMA). ICNIRP’s annual financial reports are subject to the audit by the German Tax Authorities every three years. The tables for 2013 and 2014 are indicative.

Financial Report 2013*		
Income		
Subsidies		60.724,78
Workshops and Books		890,28
Total Income		61.615,06
Expenses		
Staff	-68.199,31	
Meetings & Workshops	-16.364,03	
Publications & Communication	-22.825,64	
Insurance & Administrative Expense	-4.427,07	
Total Expense	-111.816,05	
Finance Income		0,00
Finance Costs	-106,35	
Financial results	-106,35	
Result of the Year	-50.307,34	

Financial Report 2014*		
Income		
Subsidies		118.090,00
Workshops and Books		11.970,00
Total Income		130.060,00
Expense		
Staff	- 68.349,00	
Meetings & Workshops	- 43.172,00	
Publications & Communication	- 19.568,00	
Insurance & Administrative Expense	- 4.150,00	
Total Expense	- 135.239,00	
Finance Income		0,00
Finance Costs	- 106,00	
Financial results	- 106,00	
Result of the Year	- 5.085,19	-

* The above tables are indicative. 2014 table updated in March 2016.