



The 5th IRPA African Regional Congress

(Eduardo Gallego, IRPA Vice-president)

The 5th IRPA African Regional Congress, AFRIRPA5, was held in Tunis from 6th to 9th September 2018, organized by the Tunisian Association of Radiation Protection against Ionizing and Non-ionizing Radiations (ATPRI&NI). Around 200 delegates from 25 countries attended the Congress, mostly from Africa. More than 200 abstracts were received with 105 oral and 50 poster presentations. Some speakers were able to attend thanks to the financial support of IRPA, the IAEA and the WHO (43 in total). Among them, it should be noted that IRPA financed 6 young professionals.

The program consisted of 10 plenary sessions and 14 breakout sessions, dedicated to the medical area and to "other subjects", which reflects the importance of radiological protection in medicine in the African continent. Six refresher courses were offered on the following topics: Prevention of accidents in radiotherapy; Computational dosimetry; DRLs in relation with image quality; Non-medical human imaging: challenges in justification and application; Radioactivity in food and drinking water; and Characterization of NORM. Their contents will be made soon available through the IRPA website.

The theme of the Congress "*Towards sustainability in Radiological Protection in Africa*" was debated in different sessions. Part of that sustainability is to be able to count on young people motivated to work in the field. During the Congress, the Young Generation Network (YGN) was launched for Africa, with some 40 young professionals willing to join the global IRPA YGN. The prize for the best work of young scientists or professionals was awarded to the only female candidate, Ruth Njantang Nana from Ghana. Congratulations!

The representatives from IAEA (Drs Tony Colgan and Debbie Gillie), WHO (Dr. María Pérez), and IOMP (Prof. John Damilakis) played a leading role and participated in several sessions.

With regard to education and training, the importance of the IAEA's regional training centers and the leadership of countries such as Ghana, South Africa, Algeria, Morocco and Tunisia was noted. The role that IRPA associations could play in providing frameworks for certification of training of radiation protection experts or course accreditation was also discussed. The next IRPA African Regional Congress will take place in Ghana in 2022.



Your IRPA Commission on Publications

Chair Christopher Clement • Vice Chair Bernard LeGuen • Bulletin Editors Chunsheng Li & Ali Shoushtarian • Associate Societies Liaison Adelene Gaw • Website Managers Andy Karam & Chris Malcolmson • Social Media Managers Sven Nagels & Chris Malcolmson • Media Reviewers Sven Nagels, Young-Khi Lim, Hattori Takatoshi • Proceedings Advisor Haruyuki Ogino



President's Blog

(Roger Coates, IRPA President)

As IRPA President I was invited to participate in a panel discussion on 'Future Perspectives on Radiological Protection' at the recent ICRP/ICRU celebratory event. This Colloquium was held in Stockholm, Sweden, 17-18 October 2018, to celebrate '90 Years of Expertise – Radiological Protection in the Next Decade'. It was organized by the Swedish Radiation Safety Authority (SSM). This opportunity made me focus IRPA's thoughts on our key vision for the future of the radiation protection system. I would like to share this with you through this Bulletin.

IRPA is delighted to be invited to contribute to this important discussion. The thoughts are based on the recent IRPA consultation on the system of protection, which has been published in the Journal of Radiological Protection and is available through the IRPA website.

We have a system of protection which essentially hangs together, even if quite complex and relying on a lot of 'fine print'. Whilst we can suggest some detailed changes, we recognise that the system provides a good basis for protection. Our main focus is on how it works at the level of the practitioner - those of us who deal with day to day activities, whether as regulators or front line practitioners in the medical field, industry or research, where we believe that there are some challenges in delivering good outcomes for society.

Firstly we would like more recognition of the context of the normal radiation world, where each and every one of us receives a dose of at least 2mSv/y from natural sources. We do not always recognise that any additional dose we consider in the profession is not an absolute dose. For example, When we discuss a dose of 0.3 mSv/y, the real situation is that it increases a person's overall dose from at least 2mSv/y to 2.3mSv/y. And as well as the large variation in natural background, we should recognise that individual lifestyle decisions by all of us can change this dose significantly, for example through moving house, where we go on holiday (eg to a scenically attractive high natural background area) and whether we choose to fly. This adds an extra 'Delta' to our dose which could easily be a significant fraction of a mSv/y, and these decisions are made without any interest or concern (and usually without knowledge) of radiation by the persons involved.

And quite right – these should not be issues of concern. But within our profession we agonise over much smaller contributions to dose, and sometimes ensure that society has to spend a lot of money to reduce exposures to much lower levels still – often well within the 'Delta' of variable exposure discussed above. The overwhelming majority of our RP decisions involve consideration of doses at a few mSv/y or lower, which in practice do not make a material impact on the overall dose received by an individual – it is still within the 'few mSv/y' range which is inescapable in our normal lives, and well within the variability of natural exposures.

Perhaps we have to reset the way in which we make decisions around the 'few mSv/y' range, where all that we really know about radiation risk is that 'if there is a risk, it is quite small'.



President's Blog (Continue..)

Having set this scene I would like to come on to what our profession can do to help us be more realistic and relevant, and avoid the drive towards unnecessary ever lower doses. The first thing is to be more conscious of how we address prudence and conservatism. We need to recognise that what may be reasonable prudence at high doses may be over-conservative at much lower doses. The degree of precaution should be proportionate to the risk. Conservatism usually multiply together in our assessment studies and regimes. As an example, the basis for the clearance process was set at $10\mu\text{Sv}/\text{y}$, but because of multiple conservatisms in the assessment processes the impact of material being released is around one hundred times lower – at most a small fraction of a $\mu\text{Sv}/\text{y}$. And this comes at a very significant expense to society – many hundreds of millions of dollars if all aspects are added up. Is this good value for society? For me it is not something I can be proud of as an outcome from my profession. No one has set out to deliberately achieve this outcome, we have just sleepwalked into it. But we must wake up!

Secondly, we must give more attention to what 'Reasonable' means in ALARA. Of course, optimisation has been a great success story – just look at the downward trend in nuclear industry occupational exposures. But there are now hints of an expectation of 'ever lower doses', with more attention on 'As Low As' rather than 'Reasonable' and a trend towards minimisation rather than optimisation. We therefore need to give more conscious thought to 'how low is low enough' in the various situations we address.

Thirdly, we must move towards a more effective application of the Graded Approach, especially in regulation. This would ensure a more proportionate use of society's resources, focussing greatest attention onto the higher dose activities.

So what does my future world of radiation protection look like? When additional doses are around the 'few mSv/y range and lower, where the total dose to an individual remains within the common range of natural background, then we should address protection issues within the framework of a radiation protection culture which is integrated within the wider safety culture of an organisation. This would ensure the leadership, engagement with affected parties, learning from experience and integration within effective procedures and QA which are equally important to all aspects of safety. For such exposures which impact on members of the public then of course there needs to be careful stakeholder engagement, such is the sensitivity of radiation, but we should not always presume that this would lead to ever lower doses.

For exposures above this dose range, this is where we should really focus our positive attention. This would include the upper ranges of occupational exposure, the higher natural background exposures (especially radon) and in particular the increasingly important medical exposures - e.g. in CT scans, radiotherapy and related areas.

In summary, the future challenge is to make the system of protection work in practice and ensure full benefits and value for society. We should focus our attention on the higher exposures, where there are so many clever and important developments taking place of which we can indeed be very proud. We should not ignore the lower doses, but integrate these into 'normal life', be proportionate, and don't seek to chase out every last microsievert at great expense to society.



(Roger at the Arc do Triomphe with delegates to the European Presidents Meeting in Paris, October 2018)



IRPA's Horizon Scan

(Christopher Clement, IRPA Publications Director)

The IRPA Executive Council is monitoring a relatively short list of topics of broad interest to IRPA members because of their potential impact on the practice of radiation protection. See <http://irpa.net/page.asp?id=54778>, or select "TOPICS" then "HORIZON SCAN" from the www.irpa.net menu. Major developments will be shared through the IRPA news and other channels. Current topics include: Assessment of Dose to the Lens of the Eye - Developments in Tissue Reactions and Related Science; LNT for Radiation Protection; Low-Dose and Low-Dose-Rate Risk; Optimisation of Radiation Protection for (Paediatric) Patients; Practical Aspects of the Proposed Revision to ICRU Operational Quantities; Practical Radiation Protection: Reasonableness, Conservatism and the Graded Approach; and, Revision of Radon Dose Coefficients. These topics will be introduced in depth in the future issues of the Bulletin. Stay tuned!



The 15th IRPA International Congress

(Carol Lee, IRPA15 Secretariat)

The International Radiation Protection Association (IRPA) and the Korean Association for Radiation Protection (KARP) will jointly host the 15th International Congress of the International Radiation Protection Association (IRPA15), which will take place in COEX, Seoul, Korea from 11st to 15th May 2020.

The theme of the IRPA15 congress is "Bridging Radiation Protection Culture and Science – Widening Public Empathy", which will be elaborated through various plenary sessions, oral sessions, poster sessions, special sessions, joint workshops, satellite meetings, exhibitions and social programs.

The 2nd meeting of the International Congress Program Committee (ICPC) Core Group and the International Congress Support Committee (ICSC) was held from 30th November to 1st December 2018 in Seoul, Korea. During this meeting, the ICPC Core Group finalized the topic areas and scientific matrix for the scientific program and scheduled a web meeting in February 2019 to discuss the topics for the plenary sessions and special sessions. The ICSC discussed bursary supports for young professionals to participate in this congress.

Your IRPA15 organizing committee members are working hard to make this congress a success. Stay tuned on the updates. For more information on the congress, please visit the website at www.irpa2020.org.



Update from Japan Health Physics Society (JHPS)

(Michiaki Kai, JHPS President)

The Japan Health Physics Society (JHPS) has taken the initiatives to tackle specific issues on radiological protection after the Fukushima accident. To strengthen scientific issues, internal doses from the accident were reviewed by a working group (Ishikawa et al., J Radiol Prot, 2018) and also the dosimetric method for insoluble cesium was proposed (Manabe et al., J Nucl Sci Technol, 2018). Natural background doses in Japan are being investigated to clarify regional variation before the accident. To introduce a new dose limit to eye lens, the dosimetric methods and current dose distribution in nuclear and medical sectors have been investigated under the contract to the Nuclear Regulation Authority. To promote young generation activities, JHPS has facilitated young generation collaboration with the Korean Association for Radiation Protection (KARP) and the Society for Radiological Protection (SRP). In AOCRP5 in Melbourne, the first workshop was held on young generation network (YGN) of IRPA to go forward regional cooperation. In Sapporo, June 2018, the JHPS annual meeting welcomed President-Elect Peter Bryant of SRP to launch collaboration between SRP and JHPS. As part of the initiatives, a joint workshop on YGN with KARP and SRP will be held in Sendai, December 2019, in conjunction with the JHPS annual meeting.

KARP-JHPS Joint Workshop of Young Generation Network

(Akihiro Sakoda, JHPS)

The joint workshop of YGN between KARP (Korean Association for Radiation Protection) and JHPS (Japan Health Physics Society) was proposed and discussed by the representatives from two societies at the last IRPA YGN session of the AOCRP-5 in May 2018. The presidents of the two societies agreed to organize this joint workshop to promote communication and collaboration of young professionals between KARP and JHPS. As a result of the agreement, two young researchers (Tatsuhiko Suzuki and Tohru Okazaki) from JHPS attended the joint workshop taken during the KARP annual meeting held in Jeju, Korea in November 2018. At this joint workshop, main activities and plans of each society's YGN as well as their roles and responsibilities were shared with all participants in the first session. And in the second session, some research projects and their findings were presented by the representatives from the two societies. In addition, they discussed future plans between the two societies, especially for collaboration of young professionals. Lastly, they agreed to have the next joint workshop in Sendai, Japan in December 2019. For further information about this event, please contact Wi-Ho Ha (lovin@kirams.re.kr).





The German-Swiss Association for Radiation Protection (FS)

(Klaus Henrichs, FS Secretary)

The FS (Fachverband für Strahlenschutz) represents radiation protection professionals in Germany and Switzerland. The association was founded as a non-profit organization in 1966 and it has been a member of IRPA.

Our Mission: Based on sound expertise we strive to protect humans and the environment from detrimental effects of radiation exposure from applications in medicine, research and industry and from natural sources. We also support the management of accidental and emergency cases - independently and with competence.

Currently, FS has 1320 members who work in research centres, universities, industry, government authorities, and medical institutions. FS is independent from any financial, economic or political interests. FS members work exclusively on scientific, technical and practical issues in radiation protection.

Our Organization: Operationally, FS is managed by the Board (president, secretary, treasurer, publication officer), who are supported by 4 members in the Directorates and two task groups, one in charge of cooperation with the French speaking Swiss and the other in charge of public relations. The most important instruments are the 14 Expert Groups, who are responsible for public statements and position papers, generally coordinated by the Expert Group on Legal Affairs.

We offer: (1) Networking, exchange of knowledge and experience in the expert groups; (2) Annual congresses and symposia; (3) Support for young scientists and professionals; (4) Contacts to national and international associations and authorities; (5) Experts' positions and external communication. In addition, our quarterly Periodical Strahlenschutz, PRAXIS, discusses a topic of special relevance in details. In the internet (www.fs-ev.org) all actual information about the association, its activities, and coming events can be found.

Current focus points: Besides supporting the young professionals (e.g. Rupprecht Maushart Award) and transforming recent European legislation into national law, FS concentrates on engaging the public regarding the use of radiation in the medical field. Two recently developed media help us bring expert views to the general public: (1) "Radiation Safety Fact Sheets" summarize a complex issue on two pages in a language understandable also by non-professionals; (2) An "ask-the-expert" channel in our web-site offers the possibility to direct questions to a preselected group of specialists. Recently, FS founded a new task group, Medical Radiation Safety, which has a group of medical experts, mainly physicians. This task group enables FS to increase activities in the field of medical issues of radiation safety.



The 12th Egyptian Radiation Physics and Protection Conference

(Mohamed Gomaa, IRPA Egypt)

The 12th Egyptian Radiation Physics and Protection Conference was held from 27 to 29 October 2018 at the Egyptian Atomic Energy Authority, Nasr City, Cairo. Participants came from universities, and nuclear and atomic authorities, as well as several ministries. The conference activities include 15 scientific sessions, two invited talks sessions and one round table. The topics include: (1) Operational radiation protection; (2) Safety of research and power reactors; (3) Decontamination after accidents; (4) Regulations; (5) Radiation sources and detectors; (6) Theoretical physics; (7) Environmental Physics; and (8) Medical Physics. Invited talks covered topics in medical physics (Mr. Ibrahim Dihini) and research reactor safety (Dr Amgad Shokr). The youth award was presented to Mr. Mohamed Helmy (environmental physics).



WHO Activities in the Field of Non-ionizing Radiation

(Emilie van Deventer, WHO)

As the United Nations agency responsible for international health, the World Health Organization (WHO) has been performing health risk assessments relating to non-ionizing radiation (including electromagnetic radiations and fields from static field to optical radiation and acoustic fields (ultrasound and infrasound) for several decades. Since the 1990s, increased exposure to these fields and concern over their safety for human health have prompted WHO to establish projects specific to electromagnetic fields and ultraviolet radiation. WHO promotes and evaluates research on the health effects of non-ionizing radiation, and develops public health recommendations through guidelines, policies and information dissemination.

The International EMF Project - There is increasing EMF exposure to people due to the generation, distribution and use of electricity, and applications in medical technologies and wireless devices. Fifth generation (5G) wireless technologies, where many more base stations are required, are seen as the next major issue of public concern.

In response to governments concerns, WHO's International EMF Project was established in 1996 to review the scientific literature on health effects of EMF exposure and formally assess health risks. Since then, it promotes a focused agenda of EMF research, encourages internationally acceptable standards, and provides information on risk communication and risk management. The EMF Project is open to any WHO Member State government department or representatives of national institutions concerned with EMF protection.

The INTERSUN Project - Following on the 1992 Rio Conference, where the need for activities on the health effects of UV radiation was highlighted, the World Health Organization (WHO) established the INTERSUN Project in 1995, as a collaboration with the United Nations Environment Programme (UNEP), the World Meteorological Organization (WMO), the International Agency on Cancer Research (IARC - a specialized agency of WHO), and the International Commission on Non-Ionizing Radiation Protection (ICNIRP - an NGO in official relations with WHO).

Working closely with its collaborating centres and national authorities around the world, WHO encourages simple and affordable interventions to reduce environmental and occupational health risks from UV radiation. Over the past few years, WHO has developed and promoted the UV index, a tool to raise public awareness of the health risks associated with UV exposure and the necessity of protective measures. It has also developed policy guidance on artificial sunbeds and published global burden of disease associated with UV exposure. The impact of UV radiation as a hazard in the workplace is also of concern.

Currently, an overarching regulatory framework for non-ionizing radiation protection is being developed to reflect an international consensus on the protection of people from harmful effects of non-ionizing radiation. The target audience includes policy makers, radiation regulators, employers and other relevant stakeholders.



Canadian Radiation Protection Association 2019 Conference



May 27 - 30, 2019
Ottawa Canada
<http://crpa-acrp.com/home/>

The Canadian Radiation Protection Association (CRPA) invites you to the 2019 Conference in Canada's capital, Ottawa, Ontario. The theme of the conference is *Connecting with Communities*.

The CRPA is welcoming presentations and posters on the topics of radon, radiation protection, dosimetry, emergency preparedness and response, non-ionizing radiation, risk communication, and more!

Check out the website for more information including the training sessions and technical tours that will be offered.

The venue for our conference is the [Delta Hotel](#), located in the heart of downtown Ottawa. With its central location, you can discover the many features that Ottawa has to offer – the Byward Market, Rideau Canal, parliament buildings, National Art Gallery, Museum of Nature, Aviation Museum, National War Museum, Canadian History Museum, Gatineau Park, a world of ethnic restaurants and much, much more. Over one million colourful tulips will also be in full bloom! We invite to come and experience spring in our nation's capital.

WE HOPE TO SEE YOU IN OTTAWA!