

JUNE 2025

ISSUE #46



THE CROATIAN RADIATION PROTECTION ASSOCIATION (CRPA) PARTICIPATING IN THE 2ND MEDICAL PHYSICS AND RADIATION PROTECTION PICNIC

In this issue:

EC MESSAGE: CAMERON JEFFRIES - 2

ILLUMINATING THE FUTURE: A LOOK AT IRPA YGN'S DYNAMIC RECENT YEARS - 3

ASSOCIATE SOCIETY UPDATE: CROATIAN RADIATION PROTECTION ASSOCIATION - 7

REPORT FROM THE NORM TASK GROUP - 9

IN MEMORIUM: MARIE-CLAIRE CANTONE - 12

UPCOMING EVENTS - 14

EXECUTIVE COUNCIL MESSAGE

CAMERON JEFFRIES

Welcome to the latest IRPA Bulletin. I was pleased to be able to accept the opportunity to share an Executive Council message with you in this issue. Claire-Louise provided an excellent outline of the plan to improve communication based on feedback from members including a focus on the progress of IRPA Task Groups (TGs). We can share the achievement of the Tissue Reactions TG who have recently had their Report on awareness about tissue reactions in the eye lens, cardiovascular system and skin published in the Journal of Radiological Protection as an accepted manuscript. The full article is available here.



The achievement of the Tissue Reactions TG is also tinged with sadness due to the recent passing of Professor Marie-Claire Cantone, the Chair of the TG. I had the pleasure to work with Marie-Claire as a member of an earlier TG on the Lens of the Eye and also as a member of the Executive Council. There have been many fitting tributes to Marie-Claire from the Associazione Italiana di Radioprotezione, the International Commission for Radiological Protection and IRPA. I will surely miss her warm, friendly smile, sense of humour, and dedication to our profession.

The ability to meet, connect, and collaborate with international colleagues in our professional areas of interest and expertise often leads to long lasting relationships and friendships. Shared expertise and knowledge across international boundaries are important for improving radiation protection. This is as equally true for members of executive council as it is for young generation and early career professionals; all of us, in fact. The TG on Naturally Occurring Radioactive Material (NORM) provides an excellent case for developing long lasting professional connections.

The NORM TG have been working to develop a practical handbook on NORM. While developing the handbook, they have also built an assistance network that has reached out to share their expertise. This has resulted in a number of publications related to NORM. The members plan to transition the TG to an IRPA support network for NORM once the handbook is completed.

As well as supporting collaboration between radiation protection practitioners, IPRA has an important role as the voice of the radiation protection profession. IRPA has developed formal relationships with a number of international organisations, such as IAEA, WHO, ICRP, to be able to represent members. Such representation is dependent on IRPA hearing the views of members about changes and issues, which is primarily achieved via the IRPA Trask Groups.

The route to share outcomes with members is less clear. I represented IRPA during the IAEA radiation safety standards meeting in 2023. At that meeting, there was ample opportunity to provide a view from IRPA during the meeting. There is an opportunity for executive council to develop a formal position on issues and to develop a process to share outcomes with members.

I will end by encouraging you all to get in touch, to reach out to executive members and share your experience, ask a question or provide a comment – we are always glad to hear from you.



Dr. V. P. Singh The Leadership Committee of the IRPA Young Generation Network

The International Radiation Protection Association Young Generation Network (IRPA YGN) continues to be a vibrant force in shaping the future of radiation protection through the young generation. Dedicated to fostering communication, collaboration, and professional development among students and young professionals worldwide, the IRPA YGN has had a particularly active few years, driving impactful initiatives and strengthening its global presence. IRPA YGN has been the driving force for initiating young generation networks in different countries across the globe, boosting the engagement of new generation in protection professional. Since mid-2021, IRPA YGN has continued to expand its activities, and for the period before that, the paper "The IRPA Young Generation Network: Activity Report from the Middle of 2018 to the Beginning of 2021" by Sylvain Andresz et al. provides a comprehensive overview. At present the IRPA YGN has 20 committee members including seven who recently joined from Australia, China, India, Japan, Kenya and Myanmar. These are balanced out by some retiring members who no longer meet the YGN criteria, and efforts are being made to identify and involve new representatives from their respective countries (e.g. Ghana).

Strategic Vision for a Connected Future

A cornerstone of IRPA YGN's recent activities has been the implementation of its comprehensive Strategic Agenda for 2022-2024. This agenda has guided the network's efforts to align with IRPA's broader strategic program, emphasizing key areas such as:



Figure 1: First episode of the Holistic Radiation Protection Perspectives Webinar Series organized by Radiation Protection and Nuclear Safety Youth Network (RPNS-YN) of Kenya

Enhanced Digital Engagement: Recognizing the evolving landscape of communication, the IRPA YGN has championed the use of webinars and social media to disseminate knowledge, facilitate discussions, and reach a wider audience, including students and professionals in developing countries. This includes exploring how these tools can best interface with IRPA's organizational structure. A recent example is the collaboration initiated in 2024 with the Radiation Protection and Nuclear Safety Youth Network (RPNS-YN) in Kenya (Figure 1). IRPA YGN members have been invited as speakers in their recurring webinars, contributing to international exchange and mutual learning. The content is also shared within national YGNs to maximize its reach and impact. In addition, IRPA YGN participated in international events in the hybrid YGN sessions in AOCRP6 (Asian and Oceanic Congress for Radiation Protection) during Feb 07-11, 2023 at Nehru Centre, Worli, Mumbai (Figure 2) and 35th IARP National Conference in Mangaluru, India, further strengthening regional and global dialogue (Figure 3). Exchanges such as this, as well as active participation in Task Groups, are part of IRPA YGN's broader global engagement. This engagement also includes active participation in international events such as the 35th IARP National Conference, and "Shaping the Future of RP: Engaging the Next Generation" presented by Cameco and Radiation Safety Institute of Canada and hosted by ICRP (Figure 4). These platforms not only support knowledge transfer but also foster new connections and future collaborations.



Figure 2: Asian and Oceanic Congress for Radiation Protection during Feb 07-11, 2023 at Nehru Centre, Worli, Mumbai, India

Strengthening National YGNs: A core objective remains the active support and encouragement of national Young Generation Networks. The IRPA YGN works to foster collaboration between these national groups, sharing best practices and assisting in the establishment of new networks where opportunities arise. For example, a Young Generation Network has recently been established in Australia, reflecting the growing global momentum and interest in connecting and empowering the next generation of radiation protection professionals. This experience and others are summarized in "The IRPA Young Generation Network: Activity Report from the Middle of 2018 to the Beginning of 2021" by Sylvain Andresz et al.



- Fostering Participation in IRPA Congresses: The network is committed to ensuring strong representation and active involvement of young professionals in major IRPA events and technical working groups, providing a fresh perspective on critical radiation protection topics. In particular, inperson meetings at such events as the IRPA-16 Congress in Orlando, USA (2024) offer ideal opportunities to get to know each other, collaboratively develop ideas, and lay the foundation for continued online networking and cooperation.
- **Participation in IRPA Task Groups:** The leadership committee members are participating in various Task Groups of IRPA such as Source Security, Mentoring, Radiation Protection Training & Education, NORM, and more to develop high quality documents and information for future generations using previous experiences and present scenarios.



Figure 3: Hybrid YGN Session at the 35th IARP National Conference in Mangaluru, India

Key Initiatives and Collaborations:

In line with its strategic goals, the IRPA YGN has spearheaded several notable initiatives in recent years:

- International Internship and Scholarship Mini-Survey: Responding to a direct need from national societies, the IRPA YGN conducted a valuable mini-survey in March 2023 to gather information on available international internship and scholarship programs in radiation protection. This initiative aims to better equip young professionals with opportunities for growth and experience.
- Invitation in EUTERP: The IRPA YGN has been invited by the EUTERP Foundation to make a presentation to the ETRAP2021 conference on the topic of the "Young Generation and Social Media". The IRPA YGN ran a survey on this topic and the results were published on the IRPA YGN webpage as well as in the Journal of Radiological Protection as an article: <u>The young generation in radiation protection (IRPA YGN) in social media and online learning: 'Brave New World' or 'Online Nightmare'?</u>





Figure 4: Shaping the Future of RP: Engaging the Next Generation during 1 -2 April, 2025 in ICRP

- <u>Cross-Sectional Cooperation with Nuclear and Radiation Organizations</u>: The IRPA YGN has actively engaged in collaborative efforts with other young sections from prominent nuclear and radiation-related organizations, such as the European Federation of Organisations for Medical Physics (EFOMP), The European Fusion Education Network (FuseNet), and the European Nuclear Society (ENS). These collaborations aim to demystify nuclear and radiation terms, encourage interdisciplinary exchange, and highlight diverse career paths within the sector. A notable outcome of this cooperation was the "Nuclear Around Us" social media competition, inviting young people to create engaging content.
- <u>Portraits Initiative</u>: This ongoing initiative continues to highlight inspiring young professionals working in radiation protection, sharing their stories and career journeys to attract and motivate the next generation.
- Insights into Social Media and Online Learning: The IRPA YGN has continued to analyze the use of social media and online learning by young professionals in radiation protection (<u>The young</u> <u>generation in radiation protection (IRPA YGN) in social media and online learning: 'Brave New</u> <u>World' or 'Online Nightmare'?</u>). This research provides valuable insights into effective communication and education strategies for the field.

The IRPA YGN remains dedicated to its mission of encouraging, engaging, inspiring, and developing the next generation of radiation protection professionals. Through its strategic initiatives, collaborative spirit, and commitment to leveraging modern communication tools, the network is playing a crucial role in ensuring a robust and innovative future for radiation protection worldwide. Ideally, each country should be represented by at least one member in the IRPA YGN leadership committee. The current list of members can be found on the <u>IRPA YGN website</u>. We continuously encourage all national societies and networks to identify and propose promising young professionals for participation in the IRPA YGN, helping to ensure broad international representation and sustainable leadership development.



ASSOCIATE SOCIETY UPDATE: CROATIAN RADIATION PROTECTION ASSOCIATION

Activities of the Croatian Radiation Protection Association (CRPA) in 2025: Strengthening Education, Scientific Collaboration, and Professional Outrea



In 2025, the Croatian Radiation Protection Association (HDZZ) continued to promote the field of radiation protection through education, international cooperation, and public engagement.

One of the year's highlights was the 2nd Medical Physics and Radiation Protection Picnic, held on March 15th at Dubrava Clinical Hospital in Zagreb. Jointly organized by CRPA, the Croatian Medical Physics Association (CROMPA), and the hospital KB Dubrava, the event aimed to raise awareness about medical physics and radiation protection among young people. Around 150 participants, including students and the general public, attended lectures and interactive workshops covering topics such as radon detection, radiological imaging, patient protection, dosimetry in radiotherapy, and environmental radioactivity monitoring. The event successfully fostered direct interaction between experts, students, and the public, encouraging interest in the profession.

From April 1–4, CRPA organized the 14th Symposium with International Participation in Vodice, under the patronage of the Ministry of Science, Education, and Youth. The symposium was co-organized with the Ruđer Bošković Institute (RBI), the Institute for Medical Research and Occupational Health (IMI), and CROMPA. It brought together over 70 participants from Croatia and abroad and featured 28 oral and 29 poster presentations. For the first time, all presentations were prepared in English to facilitate international exchange and participation. The central theme of the symposium was "Challenges in Radioactive Waste Management", addressed through invited lectures by leading experts. Dr. Russell Alexander presented on "Natural analogues of the engineered barrier system (EBS)", and Dr. Želimir Veinović discussed "Knowledge, information, and education in radioactive waste and spent fuel management." In the Radiation Dosimetry section, Dr. Luana de Freitas Nascimento from the Belgian Nuclear Research Centre delivered a keynote titled "Scintillators for in vivo real-time dosimetry: conventional, flash and particle therapy." On the final day, within the Radiation Protection in Medicine section, Prof. Dr. Boris Brkljačić gave a plenary lecture on "Justification of radiological examinations: results of the EU-JUST-CT project."

ASSOCIATE SOCIETY UPDATE: CROATIAN RADIATION PROTECTION ASSOCIATION

The scientific program was both comprehensive and diverse, covering a wide range of topics such as general issues in radiation science, biological effects of radiation, public exposure, radioecology, radon, instrumentation, and measurement techniques.





Nikola Šegedini & Ivana T

Anita Crnov

The event also hosted the HDZZ General Assembly, where members reviewed reports from the past term and elected new leadership. Dr. Ivana Coha was re-elected as President, with Dr. Tomislav Bituh (Vice President), Dr. Andreja Sironić (Secretary), Iva Franulović (Treasurer), and Dr. Ivana Tucaković (Assembly Chair) taking key roles. The new Executive and Supervisory Boards were also appointed.

The symposium concluded with awards for the best young researchers. Dr. Nikola Šegedin received the prize for best oral presentation, and Anita Crnov won the award for best poster.

Through these events, CRPA reaffirmed its mission to support knowledge exchange, promote best practices in radiation protection, and inspire new generations of professionals in the field.



IRPA TASK GROUP ON RADIATION PROTECTION IN INDUSTRIES IMPACTED BY NORM JIM HONDROS AND RAINER GELLERMANN



Members of the NORM Task Group during the IRPA Congress in Orlando 2024 (from left: Rainer Gellermann, Rosabianca Trevisi, Philip Egidi, Drew Watson; Jim Hondros)

Background

Naturally occurring radioactive materials (NORM) are present in many mining and industrial processes not normally associated with radioactivity. During the last few decades there has been a growing understanding on the need to apply the principles of radiation protection to these areas. In addition, there are also concerns related to legacy sites from previous industrial activities.

Radiation protection related to NORM is unlike that in the nuclear industry or medical uses of radiation. In general, the broader community, including workers in the "non-radioactive" industries and members of the public, are unaware of the relatively low hazards, but upon hearing the word "radioactive", tend to think the worst. Accordingly, in 2019 IRPA implemented a Task Group (TG) of practitioners from around the world to consider the issues with NORM, with the aims of:

- Summarising experience and developing of a library of good practice documents for radiation protection in NORM affected industries.
- Increasing awareness about NORM around the world and developing a common understanding of requirements for the safe and appropriate management of NORM,
- Supporting countries which are new to NORM,
- Networking between practitioners and sharing existing and good practices.

The TG started in 2020 with members from counties spanning all continents. The co-chairs are Rainer Gellermann (Germany) and Jim Hondros (Australia). The TG IRPA Executive Committee mentor is Cameron Jeffries. The group has continued to grow since it's inception, with many new networks and friendships formed.



IRPA TASK GROUP ON RADIATION PROTECTION IN INDUSTRIES IMPACTED BY NORM

JIM HONDROS AND RAINER GELLERMANN

The Handbook Project

The development of a handbook for practitioners is a key objective of the TG. This handbook aims to summarise the basics of the radiation protection as applied to NORM from a practitioner's perspective. It will also contain a collection of practical experiences and assessments.

The key areas that the handbook will cover include the following:

- A description of radiation and radiation protections basics and overview on NORM in industry (and mining) will be given.
- The graded approach (GA) is a key element in radiation protection philosophy and in operational radiation protection. Therefore, a special chapter deals with this important method.
- Nearly all NORM consists of a mixture of radionuclides; with only a few of them being easily measurable, the characterisation of NORM is a challenge. The handbook will make some proposals how the challenge can be solved in practice.
- Based on a sound characterisation of NORM the operational radiation protection can be planned and carried out. In this regard the question, "How to manage NORM?" will be discussed.
- Another item of high practical relevance is the treatment and disposal of NORM-bearing waste. A specific task is the transport of NORM under the requirements of the hazardous goods regulations. The handbook will give an overview of the field specifically for NORM.
- Furthermore, NORM requires communication not only to the public but much more important to the workers and to consumers who professionally utilize products with NORM. Trading of goods containing NORM is therefore a special chapter.
- The final chapter will give an overview of the radiation protection status of different worldwide regions.





Francis Ottoo (left) and Analia Canoba (right) during their presentation at the IRPA Conference in Orlando 2024

IRPA TASK GROUP ON RADIATION PROTECTION IN INDUSTRIES IMPACTED BY NORM

JIM HONDROS AND RAINER GELLERMANN

It is the aim of the TG to have a draft for comment available at the IAEA Accra NORM conference in October 2025 and a final release at the IRPA European Regional Congress in 2026.

It is expected that the once handbook is complete, the TG will have completed its primary task. However, the TG members have discussed a number of possibilities and are proposing to continue their work as an IRPA "Network Group". This way, members can continue to interact and communicate and further develop the handbook project. Furthermore, they can work on important tasks under the auspices of IRPA. Such tasks may include:

- Continuing to be a practitioner's voice for NORM in review of the ICRP System of Protection and NORM
- Continuing to be a voice for practitioners in the area of NORM
- Providing clarity and practical advice on the graded approaches to NORM
- Delving into NORM and ESD (circular economy)

Conclusion

All members of the TG would like to graciously thank IRPA Executive for their continued support. The leadership and freedom to operate provided by the current and previous IRPA Executive members, in particular from Roger Coates and Bernard Le Guen, is acknowledged and provides the foundation of the TG. The TG members also greatly appreciate the support and encouragement of Cameron Jeffries.



Rainer Gellermann during his presentation at the IRPA Conference in Orlando 2024



IN MEMORIUM: MARIE-CLAIRE CANTONE

It is with deep sorrow that the International Radiation Protection Association (IRPA) marks the passing of Professor Marie-Claire Cantone, a longstanding and highly respected member of the global radiation protection community, who died on 12 May 2025 at her home near Milan, Italy.



Professor Cantone served with distinction on the IRPA Executive Council from 2016 to 2024, contributing significantly to the Association's mission to advance radiation protection worldwide. Her leadership and dedication were central to strengthening ties between national societies and the international community, particularly through her efforts to promote education, communication, and professional development across borders. She also served as Co-Chair of the IRPA Task Group on the Lens of the Eye, reflecting her commitment to advancing protection standards in critical areas of radiological health.

Marie-Claire was widely known for her tireless energy, deep expertise, and warmth of spirit. She brought these qualities to all her professional endeavours, including her extensive

work with the International Commission on Radiological Protection (ICRP), where she served on Committee 3 from 2017, and co-chaired Task Group 109 while also contributing to Task Group 114. Her organizational talents were evident in her coordination of major ICRP events, including the Main Commission meeting in 2022 and the Committee 3 meeting in 2024, both of which included workshops designed to foster local engagement and global collaboration.

In her home country, Professor Cantone was a pillar of the Italian Radiation Protection Society (AIRP), where she served as President from 2013 to 2015, following prior roles as Vice President and Board Member. Her work in AIRP reflected a lifelong commitment to building a strong, inclusive professional community—values that she brought to her involvement with IRPA as well.

In academia, she held long-standing positions at the University of Milan, where she educated and mentored generations of medical physicists. From 2006 to 2013, she led the School of Specialization in Medical Physics, guiding its growth with generosity and a strong vision for interdisciplinary excellence.

Marie-Claire was a passionate advocate for radiation protection in all its dimensions—scientific, ethical, and societal. She championed efforts to protect not only patients and workers, but also the public and the environment. Through her numerous international roles, she elevated the importance of thoughtful, inclusive, and evidence-based approaches to radiation safety.



IN MEMORIUM: MARIE-CLAIRE CANTONE

The IRPA community will remember Professor Cantone with great respect and affection—for her intellect, integrity, and lasting impact on our field. Her legacy will live on in the many Page 1 of 2 International Radiation Protection Association (IRPA) 15 May 2025 professionals she mentored, the policies she helped shape, and the global community she so deeply enriched.

We extend our heartfelt condolences to her family, colleagues, and all who had the privilege to know and work with her.



Photo collage of Professor MarieClaire Cantone at various IRPA events over the years, most recently the IRPA16/69th HPS Annual Meeting in Orlando, Florida, USA, in July 2024 Credit: Bernard Le Guen



UPCOMING EVENTS



IUPESM 2025

World Congress on Medical Physics and Biomedical Engineering

29 September – 4 October 2025 Adelaide Convention Centre, Australia



ACPSEM Australasian College of Physical Scientists & Engineers in Medicine

www.wc2025.org #IUPESM2025





Host Organisations











SOUTH



UPCOMING EVENTS

FANR C

15

Hosted By:



7 – 9 OCTOBER 2025 Abu Dhabi, UAE – The Ritz-Carlton, Grand Canal



PRELIMINARY Programme

65T 8:30	Tuesday 7 October	Wednesday 8 October			Thursday 9 October		
9:00							
	Welcome	Effects I	Environment	Dosimetry I	RP Concepts III	Highlight I	Applications I
9:30	Bo Lindell Lecture	Bill Morgan Memorial Lecture •	Evolution of RAPs & DCRLs • Ecosystem	Occupational &	Individualisation &	Inside ICRP & the Framework	Armed Conflict • Malicious Events •
10:00		Effects Overview • Radiation Detriment	Services • Practical Application	Public • Medical • Emergency	Stratification: Science & Implications	of International Organisations	Preparedness, Response & Recovery
10:30	Coffee Break 10:30 - 11:00	Coffee Break 10:30 - 11:00	Coffee Break 10:30 - 11:00	Coffee Break 10:30 - 11:00	Coffee Break 10:30 - 11:00	Coffee Break 10:30 - 11:00	Coffee Break 10:30 - 11:00
11:00		Effects II	Medical I	Dosimetry II	RP Concepts IV	Highlight II	Applications II
11:30	Review & Revision of the System of	Low Dose &	Optimisation in	Environmental		RP Culture •	Space
12:00	Radiological Protection	Dose Rate • High Background Areas	Imaging • Imaging in Radiotherapy • Recurrent Imaging	Protection • Operational Quantities	Exposure Categories & Situations	Education • Training • Communications	Exploration • NORM
12:30							
13:00	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
13:30	Lunch 12:30 - 14:00	Lunch 12:30 - 14:00	Lunch 12:30 - 14:00	Lunch 12:30 - 14:00	Lunch 12:30 - 14:00	Lunch 12:30 - 14:00	Lunch 12:30 - 14:00
14:00							
14:30	Finalists for the	Effects III	Medical II	RP Concepts I	RP Ethics I	Highlight III	Applications III
15:00	Cousins Award for Young Scientists and Professionals	ICRP/UNSCEAR Collaboration	Proton and Heavy Ion Therapy • Emerging Therapies • Second Primary Cancer	Justification & Optimisation of Protection	Reasonableness & Tolerability	RP Challenges & Opportunities in the UAE & GCC	Remediation of Legacy Sites • Waste Management
15:30							
16:00	Coffee Break 15:30 - 16:00	Coffee Break 15:30 - 16:00	Coffee Break 15:30 - 16:00	Coffee Break 15:30 - 16:00	Coffee Break 15:30 - 16:00	Coffee Break 15:30 - 16:00	Coffee Break 15:30 - 16:00
10:00		Emerging Experts	Medical III	RP Concepts II	RP Ethics II	Highlight IV	Applications IV
16:30	Sustainability & Vancouver Call	The Next Generation	Occupational RP •		Ethics in RP in	A	Implementing RP
17:00	for Action	of Scientists & Professionals	Health Surveillance of Exposed Workers	Sources and Impacts of Uncertainty	Medicine and the Practice of RP	Artificial Intelligence in RP	Recommendations in Regulation
17:30							
18:00							



Do you have news to share? Send it to: cop@irpa.net

We'll share it via the IRPA News and the IRPA Bulletin. Stories for the Bulletin are normally 200-300 words plus images.

We're always looking for updates from our Associate Societies for our Society Spotlight. Let us know what your society has been up to. Meetings, conferences, general events or any good news is always welcome!

Your IRPA Commission on Publications:

IRPA Communications Officer: Dave Niven Bulletin Editors: Andy Karam, Dave Niven Associate Societies Liaison: Michèle Légaré Website Manager: Dave Niven Social Media Managers: Sara Dumit & Dave Niven

Great news! You can now donate directly to the IRPA Montreal Fund through PayPal! Starting last year, we've made it even easier to donate to the Montreal Fund as an individual. Simply click on the donate button below to make a donation via PayPal.

All donations will help increase participation at future IRPA Congresses, such as the IRPA Regional Congresses in 2026 and the IRPA 17 International Congress in 2028, by those who may not otherwise be able to attend. The need for support is increasing and your contributions are urgently needed.



