

Programme

9 September 2025

ICRP-World Nuclear Association Workshop

**ENABLING SUSTAINABLE DEVELOPMENT
THROUGH THE SYSTEM OF PROTECTION:
PRACTICALITY AND ALIGNMENT**

11 - 12 September 2025
Hamilton, Ontario, Canada

In Collaboration With

Session 1: Alignment of the RP System with the UN Sustainable Development Goals

All Times Local (EST)

8:00 - 9:00

Breakfast Buffet

9:00 - 10:30

Part 1: Introductory Session

Chair: **Christopher Clement (ICRP)**

Welcome and Opening Remarks

Christopher Clement (ICRP)

Josip Zic (World Nuclear Association)

Overview of the ICRP Vision of the UN Sustainable Development Goals and the System of Radiological Protection

Nicole Martinez (ICRP & Clemson University, USA)

IAEA Initiatives for Supporting the UN Sustainable Development Goals

Miroslav Pinak (IAEA)

Academic Initiatives for Alignment of the RP System with the UN Sustainable Development Goals

Josip Zic (McMaster University, Canada)

The Role of RP System in Enabling Sustainable Development of Nuclear Energy: Industry Perspective

Sameh Mehem (World Nuclear Association)

Discussion and Q&A

10:30 - 11:00

Coffee Break

11:00 - 12:30

Part 2: Practical Examples of Sustainable Development Goals & Areas of Interest Related to the Radiological Protection System

Chair: **John Takala (Cameco, Canada)**

Sustainable Development, SDGs, and Radiation Protection

Kari Toews (Cameco, Canada)

Optimizing Low-Level Waste Management: Clearance as a Practical Tool for Sustainable Development

Ryan Cooke (Laurentis Energy Partners, Canada)

Environmental Radiological Protection BUZZwords in Practice:

An Ecosystem Services Case Study with Clade Anthophila (Bees)

Sarah Donaher (University of Tennessee, USA)

Creating a Sustainable Talent Pipeline

Julie Burt (Canadian Nuclear Safety Commission, Canada)

Development of Low Dose Biomarkers for Environmental Radiobiology:

A NTE Perspective

Rhea Desai (McMaster University, Canada)

Discussion and Q&A

Session 2: Strengthening Talent Pipelines

All Times Local (EST)

12:30 - 13:30 **Lunch Break**

13:30 - 15:00 **Part 1: Introductory Session**

Chair: **Nicole Martinez (ICRP & Clemson University, USA)**

**Addressing the Decline of Academic Health Physics Programs:
Challenges, Solutions, and Opportunities for the Future**
Jeff Caudill (University of Alabama, USA)

**Securing the Future of the RP Profession Through Collaboration of Academic
Institutions on Health Physics Training and Development**
Chris Malcolmson (McMaster University, Canada)

ICRP Vancouver Call for Action to Strengthen Expertise in RP Worldwide
Christopher Clement (ICRP, Canada)

IAEA Initiatives for Supporting the Growth of the Radiological Protection Workforce
Miroslav Pinak (IAEA)

Energizing the Future: Building a Lasting Workforce for Nuclear
Emily Hill and Sam Taylor-Woods (PA Consulting, UK)

Discussion and Q&A

15:00 - 15:30 **Coffee Break**

15:30 - 17:00 **Part 2: Practical Solutions, Best Practices, Policies and Strategies to Address the
Radiological Protection Skills Gaps**

Chair: **Ephraim Schwartz (Ontario Power Generation, Canada)**

**Building Sustainable Talent Pipeline: RSIC Case Study:
Lessons Learned in Delivering Lasting RP Competence**
Natalia Mozayani (Radiation Safety Institute of Canada, Canada)

Addressing Radiation Protection Skills Shortage in Canada
Marc Jones (Canadian Nuclear Laboratories, Canada)

Combining Training in Radiation Biology with Teaching Programming Languages
Tatjana Paunesku (Northwestern University, USA)

Workforce Projection and Strategy
Megan Janecka (Canadian Nuclear Association, Canada)

Discussion and Q&A

Session 3: The Promotion of Practical, Proportional and Effective RP Regulations and Transitioning ICRP Recommendations into Practice

All Times Local (EST)

8:00 - 9:00 **Breakfast Buffet**

9:00 - 10:30 **Part 1: Introductory Session**

Chair: **Sameh Melhem (World Nuclear Association)**

Practical, Proportional and Effective Radiological Protection

Christopher Clement (ICRP, Canada)

Promotion of the Global Acceptance and Use of IAEA Safety Standards in Radiation Protection and Safety

Miroslav Pinak (IAEA)

Low Dose Decision Making

Kari Toews (Cameco, Canada)

Operational Quantities for External Radiation from ICRU Report 95 in the Nuclear Industry

Thomas Otto (ICRU, Switzerland)

Discussion and Q&A

10:30 - 11:00 **Coffee Break**

11:00 - 12:30 **Part 2: Practical Session - Regulators**

Chair: **Sasha Albisharat (Bruce Power, Canada)**

A Regulatory Perspective: Ensuring Protection of the Environment for New Nuclear Projects

Verena Sesin (Canadian Nuclear Safety Commission, Canada)

Potential Reform of the US Radiation Protection Framework

Michael Smith (Nuclear Energy Institute, USA)

Guidelines for Canadian Drinking Water Quality – Radiological Parameters

Debora Quayle (Health Canada, Canada)

Advancing Radiation Protection: IAEA Approach Towards Stakeholder Engagement in the Decision on Adoption of ICRU/ICRP Report 95

Edward Waller (Ontario Tech University, Canada)

Discussion and Q&A

12:30 - 13:30 **Lunch Break**

**Session 3: The Promotion of Practical, Proportional and Effective
RP Regulations and Transitioning ICRP Recommendations into Practice**

All Times Local (EST)

13:30 - 15:00

Part 3: Practical Session - Industry

Chair: **Michael Smith (Nuclear Energy Institute, USA)**

Individual Sensitivity to Ionizing Radiation Under Low-Dose-Rate Exposure

Masanori Tomita (Central Research Institute of Electric Power Industry, Japan)

Implementation of Changes to ICRU Dose Quantities at a Large Nuclear Facility

Ephraim Schwartz (Ontario Power Generation, Canada)

The Need for a Holistic Approach to Worker Risk

Sasha Albisharat (Bruce Power, Canada)

Application of ALARA in Uranium Mine Design and Operation

John Takala (Cameco, Canada)

Estimating Radiation Doses from Airborne Radionuclide Emissions to

Residents Living Near Nuclear Power Plants in Ontario, Canada

Matthew McKittrick (Dalhousie University, Canada)

Discussion and Q&A

15:00 - 15:30

Coffee Break

15:30 - 16:00

Closing

Closing Remarks

Christopher Clement (ICRP)

Josip Zic (World Nuclear Association)