

Plans for Review and Revision of the System of Radiological Protection

ICRP 2021⁺¹

6th International Symposium on the System of Radiological Protection

Vancouver, Canada

7 November 2022



INTERNATIONAL COMMISSION ON RADIOLOGICAL PROTECTION

Registered with the Charity Commission for England and Wales (#1166304)



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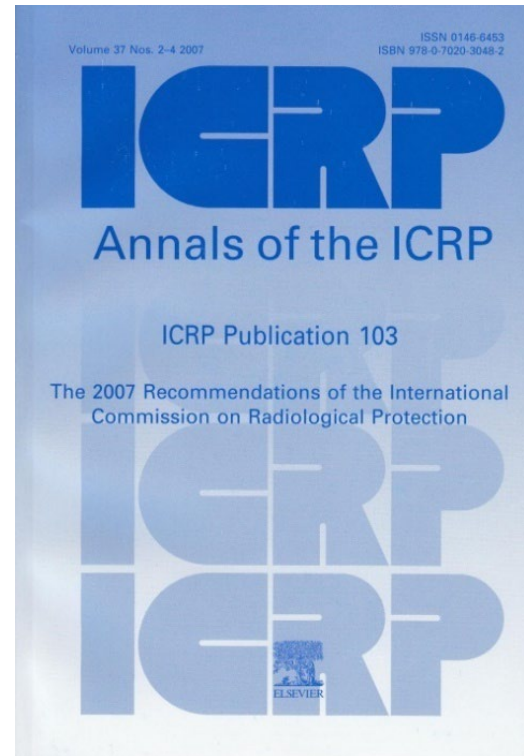
System Review Launched: The Next Decade

Since 2019: The new **BIG joint** project of the ICRP

Review and revision
of the last General
Recommendations –

ICPR Publication 103
from 2007

**Together with all who
are interested in
radiological protection**



Identify **basic open questions (“building blocks”)**: essential work required for the next general recommendations

International Collaboration Important for the Process



Organisations in Formal Relations with ICRP

- Conference of Radiation Control Program Directors (CRCPD)
- European ALARA Network (EAN)
- European Alliance for Medical RP Research (EURAMED)
- European Association of Nuclear Medicine (EANM)
- European Commission (EC)
- European Nuclear Installations Safety Standards Initiative (ENISS)
- Europ. Platform on Preparedness for Nucl. & Radiol. Emergency Response & Recovery (NERIS)
- European Radiation Dosimetry Group (EURADOS)
- European Radioecology Alliance (ALLIANCE)
- European Society of Radiology (ESR)
- European Training and Education in RP Foundation (EUTERP)
- Heads of the European RP Competent Authorities (HERCA)
- Ibero American Forum of Radiological and Nuclear Regulatory Organisations (FORO)
- IEC Electrical Equipment in Medical Practice (IEC/TC62)
- IEC Nuclear Instrumentation (IEC/TC45)
- IndustriAll Global Union's International Network (INWUN)
- Information System on Occupational Exposure (ISOE)
- International Atomic Energy Agency (IAEA)
- International Commission on Radiation Units and Measurements (ICRU)
- International Labour Organisation (ILO)
- International Organization for Medical Physics (IOMP)
- International Radiation Protection Association (IRPA)
- International Society of Radiographers and Radiological Technologists (ISRRT)
- International Society of Radiology (ISR)
- Multidisciplinary European Low Dose Initiative (MELODI)
- National Council on Radiation Protection and Measurements (NCRP)
- OECD Nuclear Energy Agency (NEA)
- United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)
- World Health Organisation (WHO)
- World Nuclear Association (WNA)

Keeping the ICRP Recommendations Fit for Purpose





🔒 iopscience.iop.org/article/10.1088/1361-6498/ac1611

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Journal of Radiological Protection

ACCEPTED MANUSCRIPT • **OPEN ACCESS**


Keeping the ICRP recommendations fit for purpose

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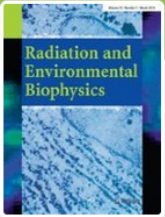
To stimulate discussion

Are there any areas that will require review (views of previous Main Commission)?

- Background and Purpose
- Objectives and Principles of the System
- Overarching Considerations
- Dose
- Effects and Risk
- Conclusions

Paper 1:
OPEN ACCESS

Areas of Research to Support the System of RP



Radiation and Environmental Biophysics

Review Paper

Areas of Research to Support the System of Radiological Protection

D. Laurier, W. Rühm, F. ... Applegate, D. Cool, C. Clement, on behalf of the International Commission on Radiological Protection (ICRP)

- Introduction
- Research to support radiation risk assessment
- Research to support dosimetry
- Research to support the application/implementation of the System of Radiological Protection
- Conclusions

<http://link.springer.com/article/10.1007/s00411-021-00947-1>

Paper 2:
OPEN
ACCESS

The Future of



14 OCT - 3 NOV 2021

On-Demand Presentations

19 - 20 OCT 2021

Live Presentations

ICRP
Digital
Workshop

UK Registered Charity 1166304

Attractive programme

- 20 Live-Presentations in 4 sessions
 - Session 1: The Big Picture
 - Session 2: Risks and Effects
 - Session 3: RP Concepts
 - Session 4: Applications and Practice
- 50 On-Demand Presentations

International audience from all over the world

- Almost 1,500 registrations from 97 countries
 - Session 1: 826 total viewers
 - Session 2: 643 total viewers
 - Session 3: 608 total viewers
 - Session 4: 521 total viewers
 - On-demand presentations: 7,294 visits

Much opportunity for interaction

- Chat function, possibility for video calls

The 2021 ICRP Digital Workshop



Summary of the 2021 ICRP Workshop on the Future of Radiological Protection

W. Rühm, C. Clemens, J. Laurier, F. Bochud, K. Anderson, S. Bouffler, K. Cho, G. F. Knorr, S. Romanov, A. Wojcik

- Introduction
- Objectives and participation
- Objectives

Scientific basis of the System

- Concepts of the System
- Application of the System
- Role of ICRP
- Live-streamed presentations
- Conclusions

<https://iopscience.iop.org/journal/0952-4746>

Paper 3:
OPEN ACCESS
(support BMUV)

Currently, 30 Active ICRP Task Groups

- TG36 Radiopharmaceutical Doses
- TG91 Low-dose and Low-dose Rate Exposure
- TG95 Internal Dose Coefficients
- TG96 Computational Phantoms and Radiation Transport
- TG97 Surface and Near Surface Disposal
- TG98 Contaminated Sites
- TG99 Reference Animals and Plants Monographs
- TG103 Mesh-type Computational Phantoms
- TG105 The Environment in the System of RP
- TG106 Mobile High Activity Sources
- TG108 Optimisation in Medical Imaging
- TG109 Ethics in RP in Medicine
- TG110 Veterinary Practice
- TG111 Individual Response to Radiation
- TG112 Emergency Dosimetry
- TG113 Dose Coefficients for X-ray Imaging
- TG114 Reasonableness and Tolerability
- TG115 Risk and Dose for Astronauts
- TG116 Imaging for Radiotherapy
- TG117 PET and PET/CT
- TG118 RBE, Q, and w_R
- TG119 Diseases of the Circulatory System
- TG120 Radiation Emergencies and Malicious Events
- TG121 Offspring and Next Generations
- TG122 Detriment Calculation for Cancer
- TG123 Classification Radiation-induced Effects
- TG124 The Principle of Justification
- TG125 Ecosystem Services
- TG126 Human Biomedical Research
- TG127 Exposure Situations and Categories of Exposure

~20 Building Blocks now being addressed

- TG36 Radiopharmaceutical Doses
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- TG95 Internal Dose Coefficients**
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- TG126 Human Biomedical Research**
- TG127 Exposure Situations and Categories of Exposure**

Kick-Off ICRP TG121: June 2022

WORKSHOP

Effects of Ionising Radiation Exposure in Offspring and Next Generations

31st May – 2nd June 2022
Budapest, Hungary



In parallel with the 6th European IRPA Congress

Jointly organized by ICRP Task Group 121 under Committee 1 and European Radiation Protection Research Platforms MELODI and ALLIANCE



ICRP



MELODI



EUROPEAN RADIOECOLOGY ALLIANCE

Organising team on behalf of ICRP TG121, MELODI and ALLIANCE:

Sisko Salomaa Dominique Laurier Christelle Adam-Guillermin Aidana Amrenova
Richard Wakeford Kimberly Applegate Nele Horemans

Four Breakout Sessions

A Hereditary and epigenetic effects due to exposure of germ cell line (pre-conceptual exposure)

B Effects arising from exposure of the embryo and fetus (post-conceptual exposure)

C Transgenerational effects in biota

D Potential impact on the System of Radiological Protection

New Task Groups – Open Calls

Task Group 127 Exposure Situations and Categories of Exposure

A Task Group under Committee 4

Submit
expression of
interest via web
portal by **12/2/22**

Task Group 127 Exposure Situations and Categories of Exposure is seeking 6 to 10 members with a strong knowledge of ICRP Publication 103 and with specific expertise in one or more of the following topics: emergency planning; existing exposure planning; management of RP of different types of planned activities; environmental protection and management; communication and dialogue with stakeholders; and development of radiological protection regulations and guidance.

- To review ICRP Publication 103 and subsequent Publications in terms of exposure situations and category of exposures
- To organise open workshops together with international organisations
- With special attention paid on existing exposure situations

ICRP

THANK YOU!

www.icrp.org