

The new mandate and work of ICRP Committee 4

Application of the Commission's Recommendations

4th International Symposium on the System of Radiological Protection
12 October 2017

Donald A. Cool
Chairman, C4

Outline

- **Mandate of the New Committee 4**
- **System of Protection**
- **Program of Work**



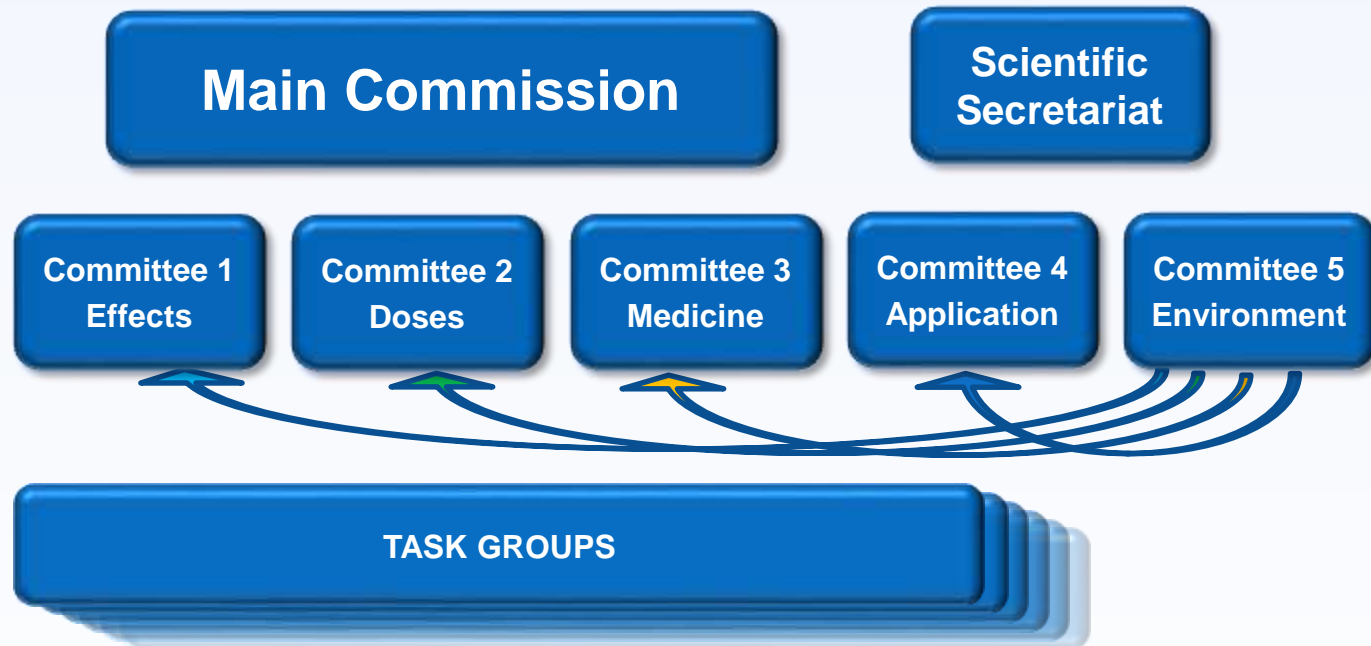
*This presentation has neither been approved nor endorsed by the Main Commission of ICRP
The views and thoughts in this presentation are the Author's personal opinions, representing the ICRP, and are
not intended to represent those of the Electric Power Research Institute*

Enhance Integration and Application

- **ICRP believes that a holistic and integrated view of all the benefits and impacts should include appropriate consideration of protection of both people and the environment.**
- **There remains work to be done to bring to fruition a consistent and coherent approach to the justification and optimisation in any particular exposure situation.**
- **New Committee Structure to include the relevant aspects of protection of humans and the environment into the mandates of each of the Committees**



Integration of Environment in Each Area 2013 – 2017 Term



Structure for 2017 - 2021 Term



**AS OF
JULY 1, 2017**

Committee 4: Development of principles and recommendations on radiological protection of people and the environment in all exposure situations

From the Beginning

The objective of the work of ICRP is to contribute to an appropriate level of protection against the detrimental effects of ionising radiation exposure without unduly limiting the benefits associated with the use of radiation.

- **Protection Objectives**
 - Prevent Deterministic
 - Stochastic ALARA
 - Genetic
 - Cancer
 - Non-cancer



Foundations

- **Social and Ethical Principles/Values**

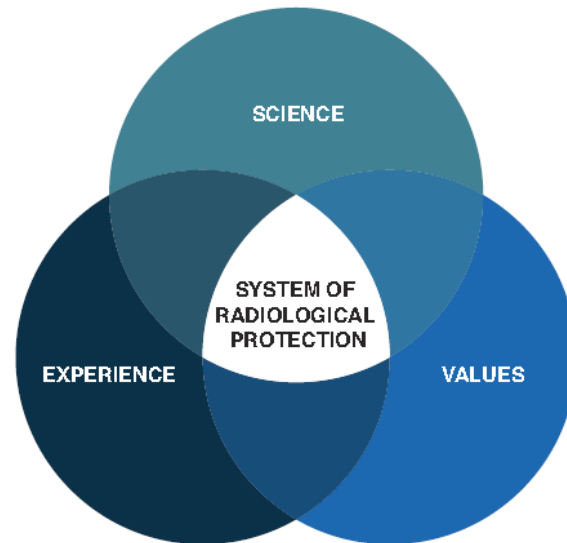
- Beneficence
- Non-maleficence
- Autonomy/Dignity
- Justice
- Prudence
 - Reasonableness
 - Tolerability
 - Peaceful
 - Vigilant
 - Reaction
 - Accountability
 - Inclusiveness
 - Conservation/biodiversity/sustainability

- **Science**

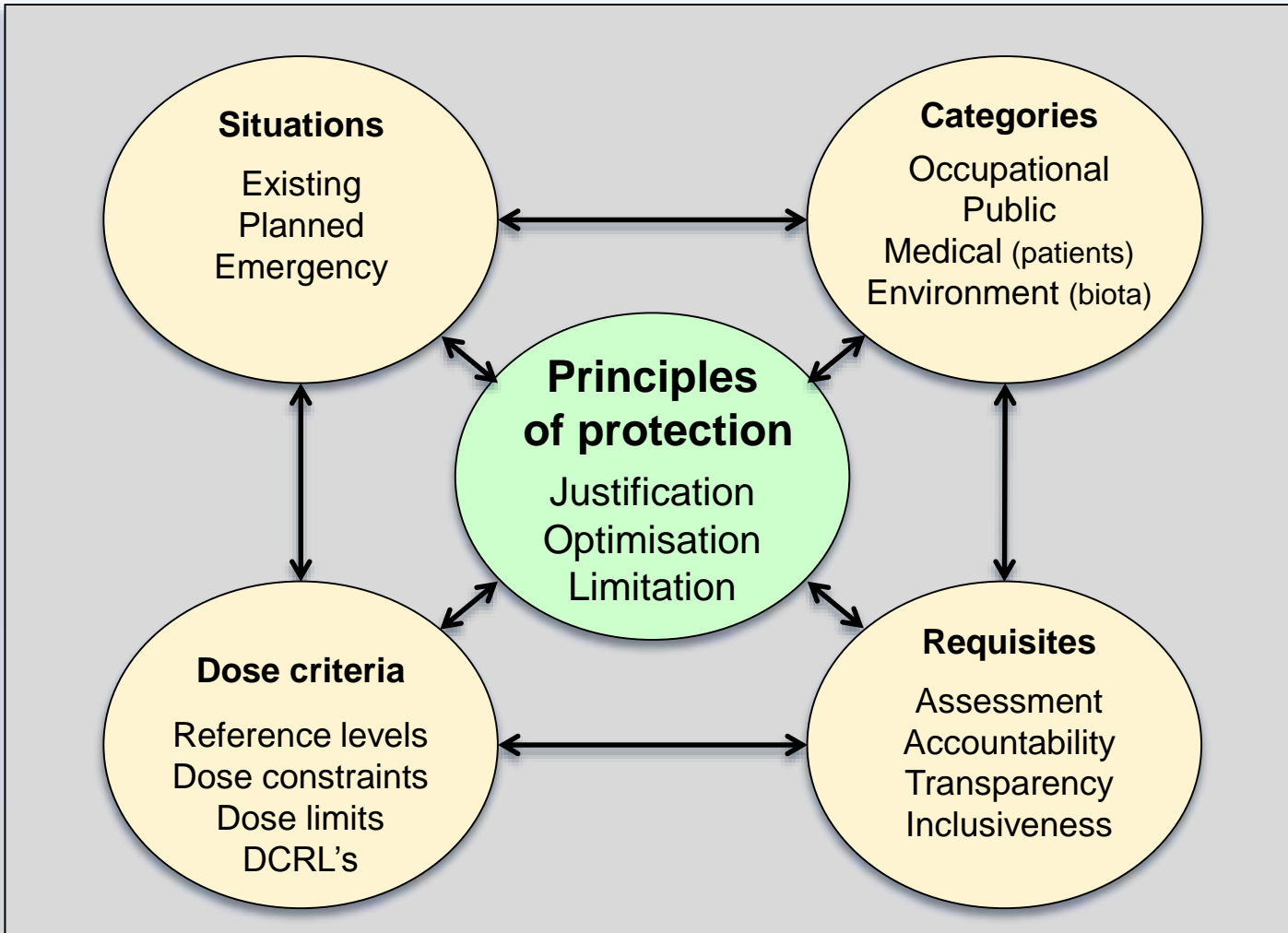
- Epidemiology
- Radiobiology
- Anatomy
- Physiology
- Metrology
-

- **Experience**

- Hiroshima/Nagasaki
- Nuclear Installations
- Industrial/Medical
- Chernobyl
- Fukushima
-

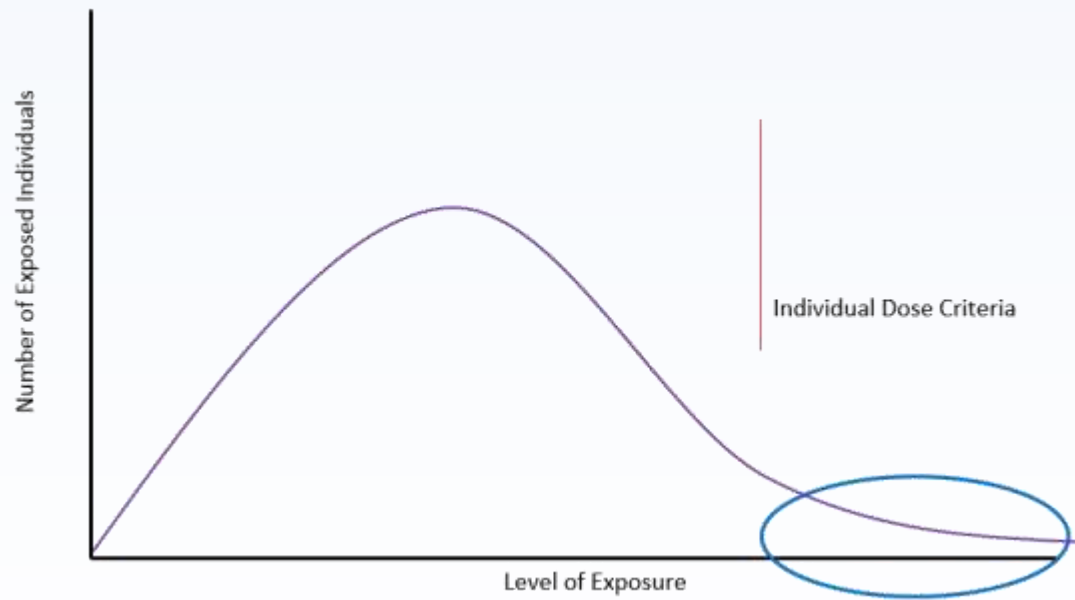


System of Protection



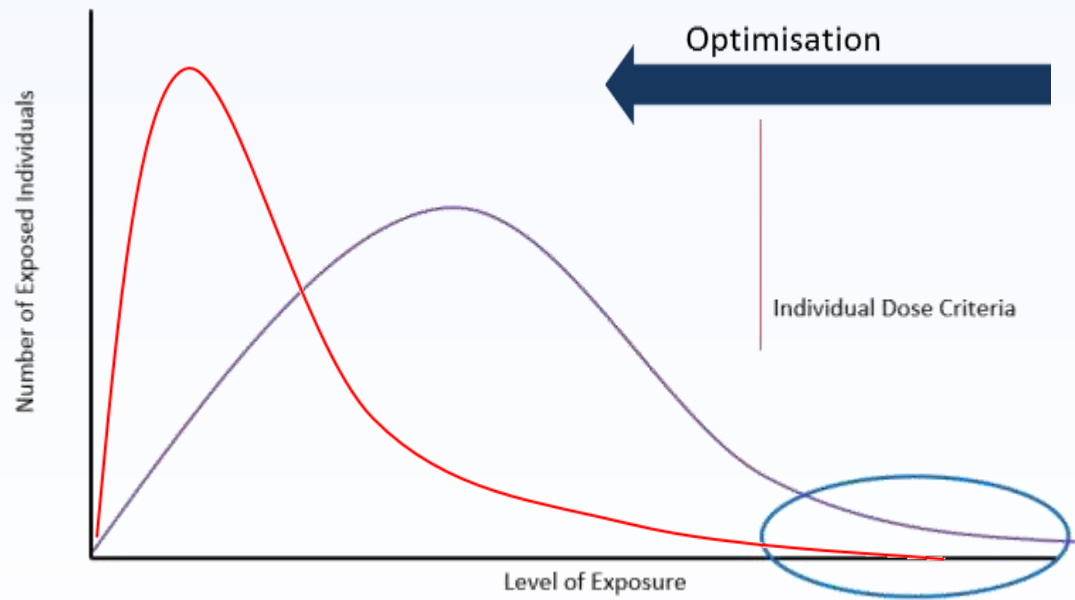
Unified Protection Approach

- Characterize exposures
- Justify taking actions
- Identify exposures of individuals or populations in the environment which warrant specific attention



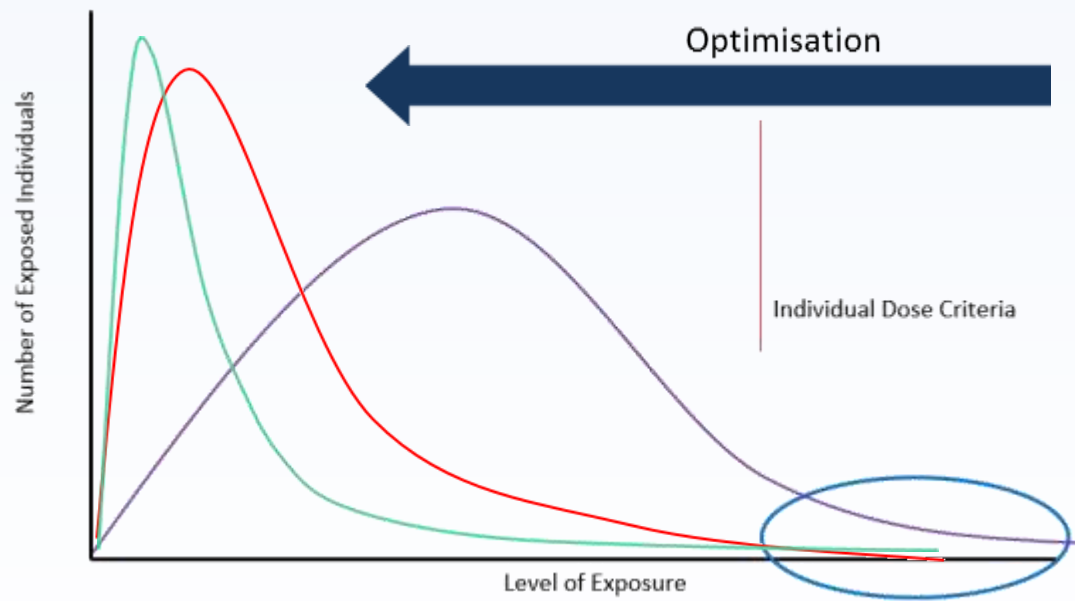
Apply Optimization

- Characterize exposures
- Justify taking actions
- Identify exposures of individuals or populations in the environment which warrant specific attention
- Enable stakeholder engagement and action



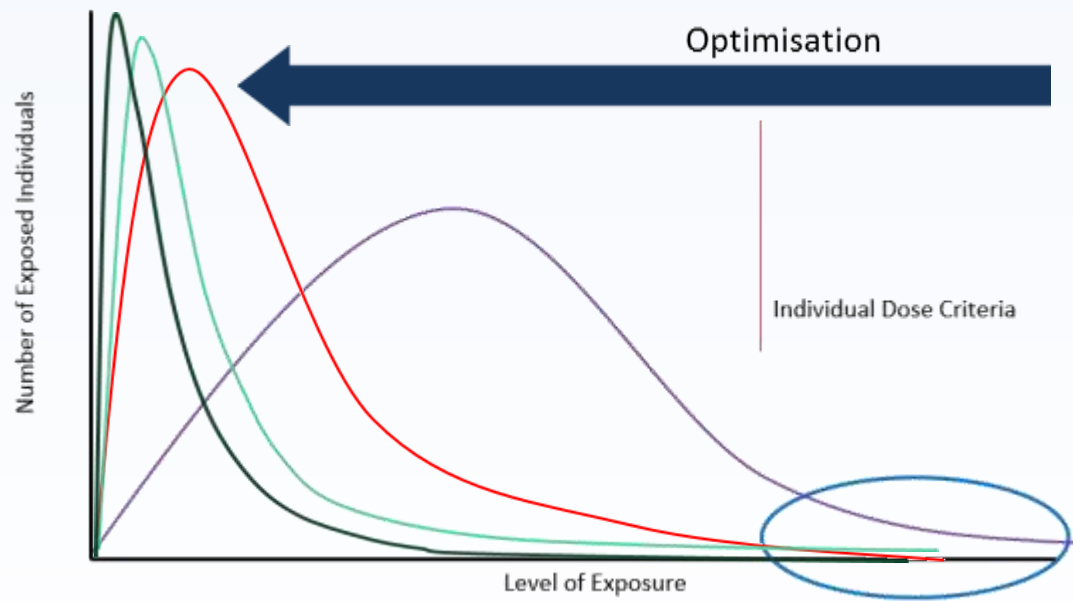
Iterative Process

- Characterize exposures
- Justify taking actions
- Identify exposures of individuals or populations in the environment which warrant specific attention
- Enable stakeholder engagement and action
- Influence the entire dose distribution and shift exposures towards lower values



Build Culture of Protection

- Characterize exposures
- Justify taking actions
- Identify exposures of individuals or populations in the environment which warrant specific attention
- Enable stakeholder engagement and action
- Influence the entire dose distribution and shift exposures towards lower values
- Reduce inequity



C4 Program of Work

- **Five Major Areas of Work**
 - Existing Exposure Situations
 - Emergency Exposure Situations and Lessons from Fukushima
 - Foundations and Fundamentals of Radiation Protection
 - Integration of protection of the environment
 - Topical Reports
- **Support to other Committees**



Existing Exposure Situations

- **Publication 126: Radiological Protection against Radon Exposure, December 2014**
- **Publication 132: Radiological Protection from Cosmic Radiation in Aviation, 2016**
- **TG 76: NORM**
- **TG 98: Contaminated Sites**



Emergency Exposure Situations

- **TG 93: Update to Publications 109 & 111**
 - Update to *Publication 109*, Protection of People in Emergency Exposure Situations
 - Update to *Publication 111*, Protection of People Living in Long-term Contaminated Areas
 - ICRP Dialogue series
 - Draft to be discussed by C4 in Paris meeting
- **Future Work**
 - Possible Task Group to revise *Publication 96* to look at emergencies other than large reactors
 - Consideration of the handling of pets and livestock, and information for businesses impacted by a radiological event



Foundations of Radiation Protection

- **TG94: Ethical Foundations of the System of Radiological Protection**
 - IRPA workshops
 - Public Consultation late Spring 2017
 - Final draft discussed by Main Commission in Paris
- **Future Work**
 - Medical Ethics with Committee 3
 - Reasonableness and Tolerability



Protection of the Environment

- **TG 72: RBE and Reference Animals and Plants – discussed by Main Commission in Paris**
- **TG 74: Dosimetry for Non-Human Species – In Publication**
- **TG 99: with Committee 1, Reference Animals and Plants (RAPS) Monographs**
- **TG 104: Main Commission TG, Integration of Protection of People and the Environment in the System of Radiological Protection**
- **TG 105: Considering the Environment when Applying the System of Radiological Protection**



Topical Reports

- ***Publication 125: Radiological Protection in Security Screening, August 2014***
- **TG 97: Surface and Near Surface Disposal of Solid Radioactive Waste**
- **TG 106: Application of the Commission's Recommendations to activities involving mobile high activity sources**



Summary

- **Committee 4**
 - 18 Members from 12 countries
 - 5 Major Areas of Work
 - 8 Active Task Groups, Additional TG's to be discussed in Paris
 - Participation in TG's of other Committees
 - Looking ahead to issues to be clarified and elaborated for the system of protection



ICRP



www.ICRP.org