

# Overview of ICRP Committee 4

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## Application of the Commission's Recommendations

3<sup>rd</sup> International Symposium on the System of Radiological Protection  
20 October 2015

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Chairman, C4

# Outline

- **System of Protection**
- **Program of Work**



*This presentation has neither been approved nor endorsed by the Main Commission of ICRP  
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# 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**

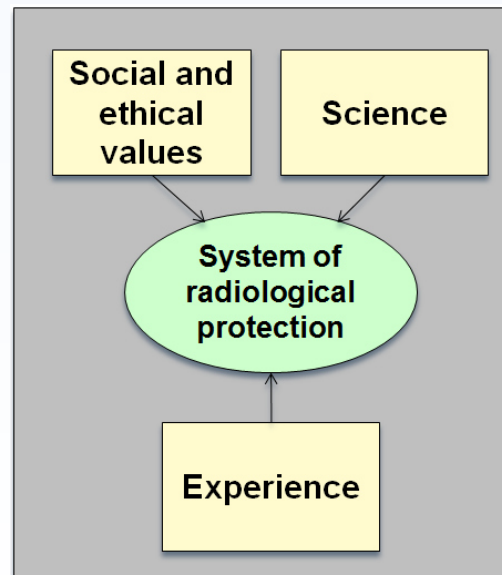
- Beneficence
- Non-maleficence
- Autonomy/Dignity
- Justice
- Prudence
  - Reasonableness
  - Tolerability
    - Peaceful
    - Vigilant
    - Reaction
  - Accountability
  - Inclusiveness
  - Conservation/biodiversity/sustainability

- **Science**

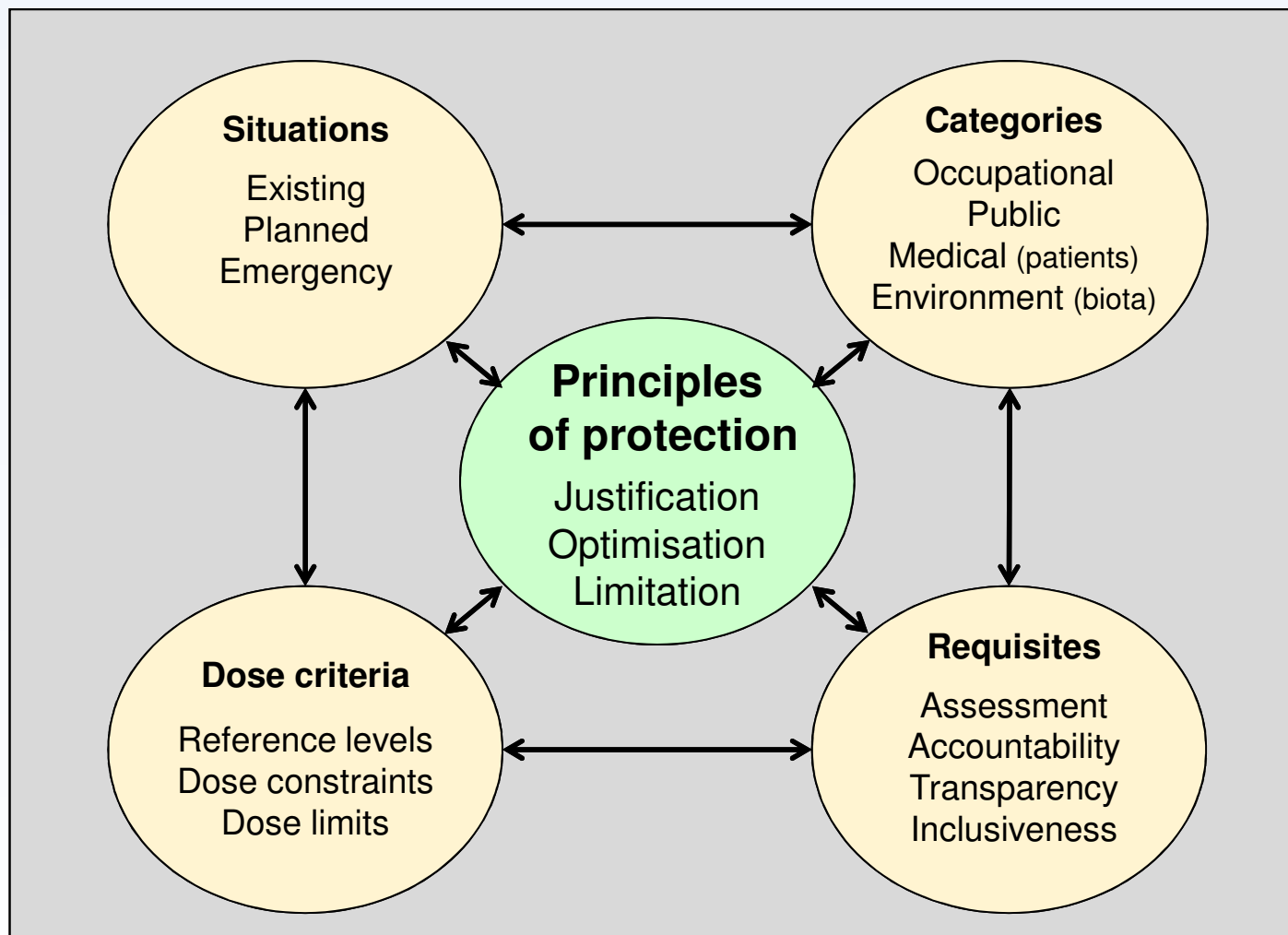
- Epidemiology
- Radiobiology
- Anatomy
- Physiology
- Metrology
- .....

- **Experience**

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

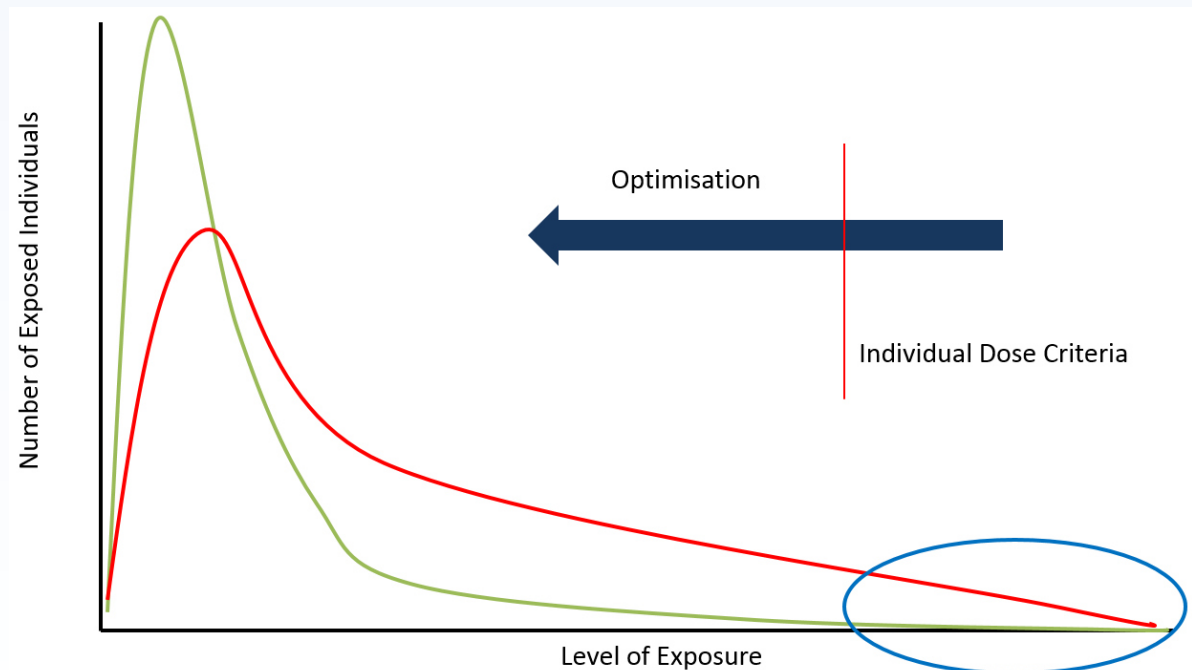


# System of Protection



# Optimisation and Dose Criteria

- Shift exposures towards lower values
- Influence the entire dose distribution
- Reduce inequity
- Identify exposures which warrant specific attention to reduce their magnitude



# C4 Program of Work

- **Four Major Areas of Work**
  - Existing Exposure Situations
  - Response to Fukushima
  - Foundations of Radiation Protection
  - Topical Reports
- **Support to Work of other Committees**
  - TG79 Effective Dose
  - TG89 Occupational Radiological Protection in Brachytherapy
  - TG91 Radiation Risk Inference at Low Dose and Low Dose Rate
  - TG92 Definitions
  - Collaborative work proposal with C5 under consideration

# Existing Exposure Situations

- ***Publication 126*, Radiological Protection against Radon Exposure, December 2014**
- **TG83, Radiological Protection from Cosmic Radiation in Aviation, in public consultation**
- **TG 76 on NORM ongoing**
- **TG 98 on Contaminated Sites started end of 2014**



# Unified Approach

- **Occupational Exposure can occur in any exposure situation**
- **Characterisation of the situation is a prerequisite for action**
- **Justification of establishing control is necessary**
- **If actions justified, exposures are managed by optimisation of protection using restriction on individual doses to reduce inequity, identify exposures which warrant specific attention to reduce their magnitude, and to guide reduction in the entire dose distribution ALARA**

# Unified Approach

- **Individual Criteria selected in, **or below**, bands recommended in Publication 103:**
  - 1-20 mSv/y band for existing and planned, as appropriate
  - 20-100 for emergencies, if necessary
- **The basic requisites of assessment, accountability, transparency and inclusiveness (stakeholder involvement) applied commensurate with risks**
- **For **regulatory convenience**, the authority may manage well characterized and controlled existing exposure situations with tools normally associated with planned exposure situation, using a graded approach**

# Response to Fukushima

- **TG 93 in process**
  - 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 Seoul meeting

# Foundations of Radiation Protection

- **TG94 in process**
  - IRPA workshops
  - Session in this Symposium
  - Draft to be discussed by C4 in Seoul meeting
  - Intention for preliminary consultation at time of IRPA Congress in May, 2016
- **WP on Tolerability of Risk**
  - White Paper for discussion
  - What is tolerable depends on prevailing circumstances, and the time duration

# Topical Reports

- ***Publication 125*, Radiological Protection in Security Screening, August 2014**
- **TG 97, Surface and Near Surface Disposal of Solid Radioactive Waste, started end of 2014**
- **Topics invited from organisations in formal relations with ICRP**
  - High Activity Sources

# Summary

- **Committee 4**
  - 17 Members from 14 countries
  - 4 Major Areas of Work
  - 6 Active Task Groups
  - Participation in TG's of other Committees
  - Looking ahead to issues to be clarified and elaborated for the system of protection



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