13th International Congress of the
International Radiation Protection Association (IRPA13)
"Living with Radiation - Engaging with Society"
Glasgow/Scotland 14th to 18th May 2012

KIDS Session 6

"Nuclear Fuel Cycle"

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IAEA
International Atomic Energy Agency

Topics

- Mandate IAEA and radiation protection framework
- Regulatory Infrastructure and safety culture
- Itinerant workers
- Dose limits – in particular for the lens of the eyes
- Preparedness for accident follow-up

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Mandate IAEA

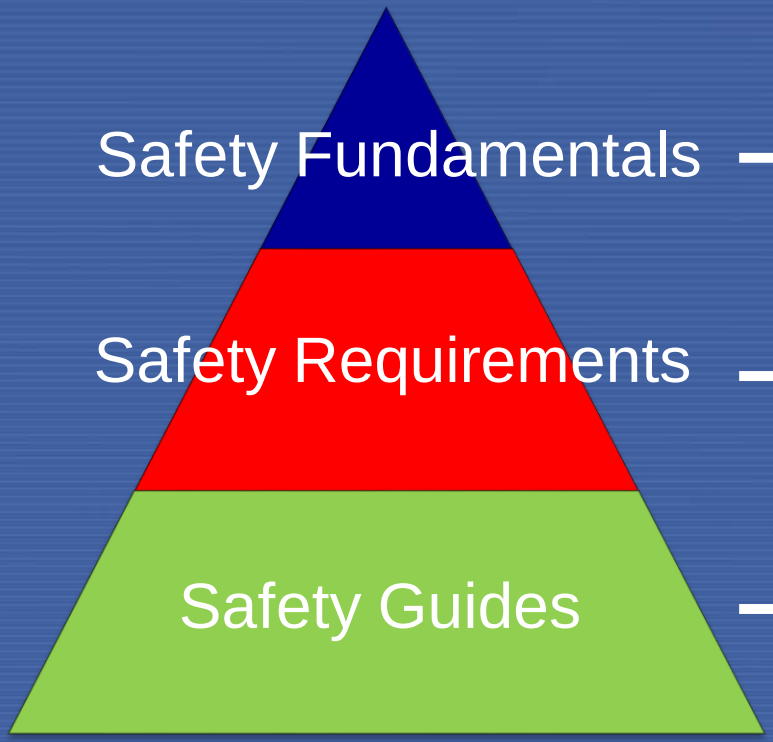
IAEA Safety Functions (Article III.A.6)

Facilitate and service international conventions and other undertakings

"To establish or adopt… [in consultation …] standards of safety for protection of health & minimization of danger to life and property"

"…and to provide for the application of these standards…"

IAEA Safety Standards



high level underlying principles

specify obligations and responsibilities ("shall" statements)

recommendations to support requirements ("should" statements) based on international best practices

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Structure of the Long Term Set of Safety Requirements

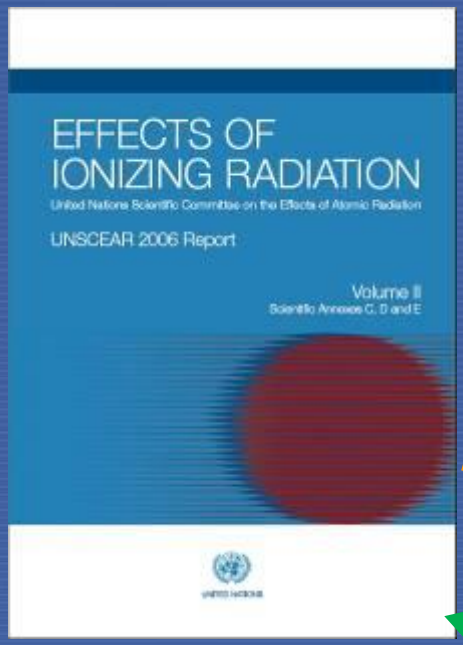
General Safety Requirements

- Part 1 Governmental, Legal and Regulatory Framework
- Part 2 Leadership and Management for Safety
- **Part 3 Radiation Protection and Safety of Radiation Sources**
- Part 4 Safety Assessment for Facilities and Activities
- Part 5 Predisposal Management of Radioactive Waste
- Part 6 Decommissioning and Termination of Activities
- Part 7 Emergency Preparedness and Response

Specific Safety Requirements

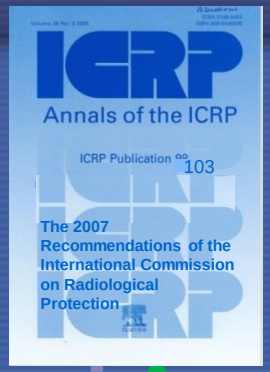
- 1. Site Evaluation for Nuclear Installations
- 2. Safety of Nuclear Power Plants
  - 2.1 Design and Construction
  - 2.2 Commissioning and Operation
- 3. Safety of Research Reactors
- 4. Safety of Nuclear Fuel Cycle Facilities
- 5. Safety of Radioactive Waste Disposal Facilities
- 6. Safe Transport of Radioactive Material

Radiation Protection Framework



UNSCEAR
Scientific basis

effects
risks



ICRP
Protection philosophy, principles and units

recommendations

levels
trends

ILO convention 115: occupational radiation protection

FAO/WHO
Codex Alimentarius Commission
(food contamination guides)

UN transport regulations for radioactive material

IAEA, WHO, ILO, FAO etc.
-Safety standards
-Protection programmes

implemented by Member States

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Protection of Workers

Specialized maintenance activities are likely to become a competitive and global business!

- **highly skilled workforce will become increasingly mobile**
- **less trained and qualified workers are employed**

Dosimetric consequences considering that this control will be more and more complex

Optimization has an increasing importance

Ensuring radiation protection culture *(language, different regulations,….)*

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Protection of workers

Optimization

- Optimization is to achieve a balance
- Current situation: most weight is given to
  - *reduction of exposure, even if these are well below limits/reference levels*

➡ How to prevent/mitigate resulting misallocation of resources?

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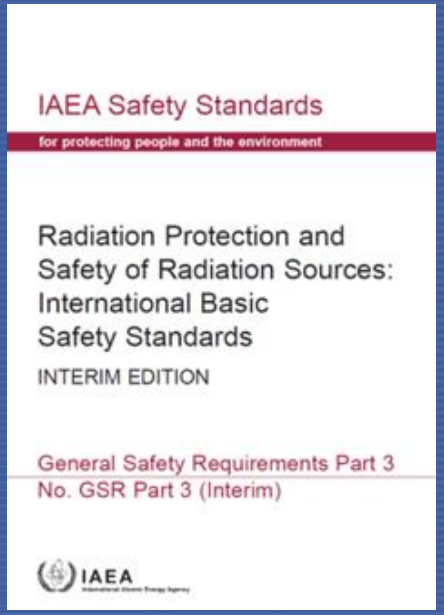
Protection of workers

Equivalent dose limits for the lens of the eyes

Crosscutting between planned and public exposure situations

- Ensuring an appropriate implementation into regulatory control
- Identifying proper dosimetric approaches to control the exposure of the lens of the eyes



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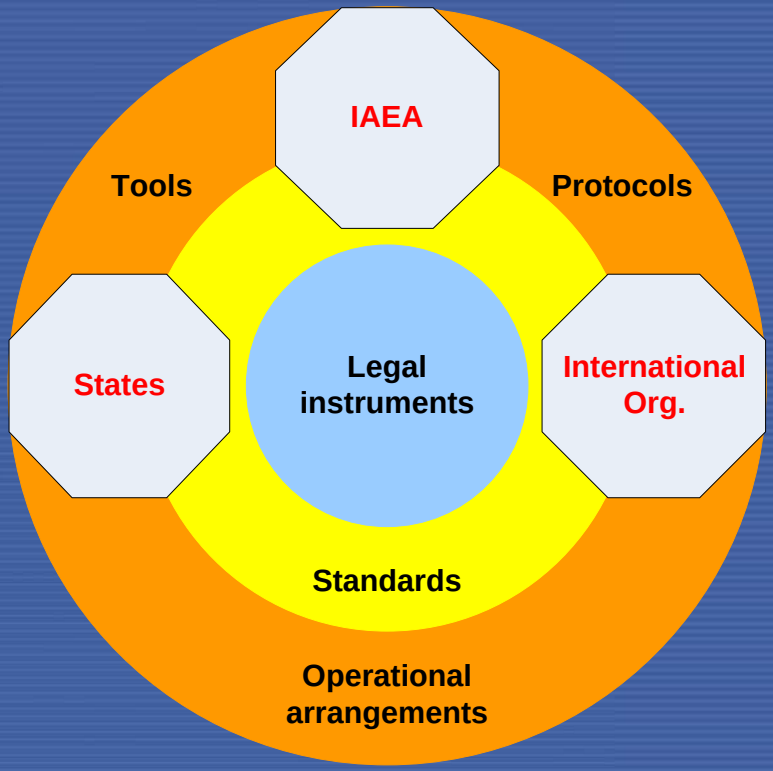
Preparedness for accident follow-up

International Framework

- Legal instruments
- Safety Standards
- Tools, protocols and operational arrangements



Slide IAEA/IEC

Thank you for your attention

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