IRPA
Glasgow 2012

System of Radiation Protection: EC Perspective

Revision and consolidation of Euratom Basic Safety Standards

Consolidation ("recast")
Better legislation - simplification

Directives:

- **Basic Safety Standards (workers, general public): 1996**
- **Patients/Medical Exposure Directive: 1997**
- **Informing the public on measures in the event of a radiological emergency: 1989**
- **Outside Workers: 1990**
- **High Activity Sealed Sources (HASS): 2003**
- **(Radon Recommendation 90/143/Euratom)**

Revision of EU-BSS

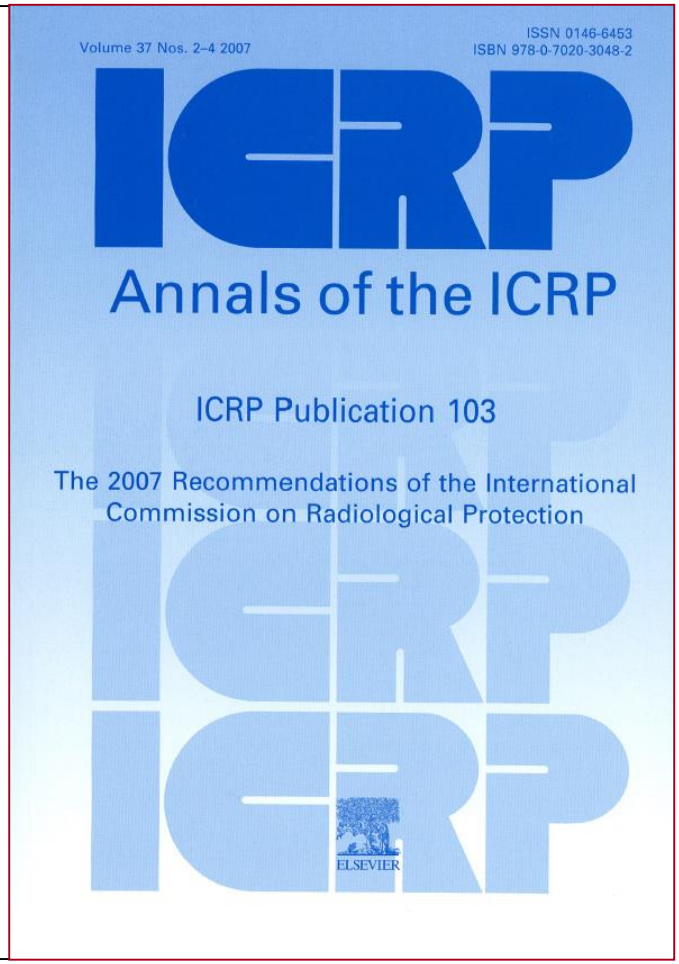
Consolidation of current Directives

Allow for ICRP/IAEA

- **Protection of the environment**
- **Incorporate natural radiation sources**

  strengthen the requirements
- **Exposure situations**

  rather than processes: practices/interventions



Reference levels

Bands of reference levels for public exposure and corresponding societal criteria

RL in the range 20 mSv – 100 mSv for emergency *exposure situations*

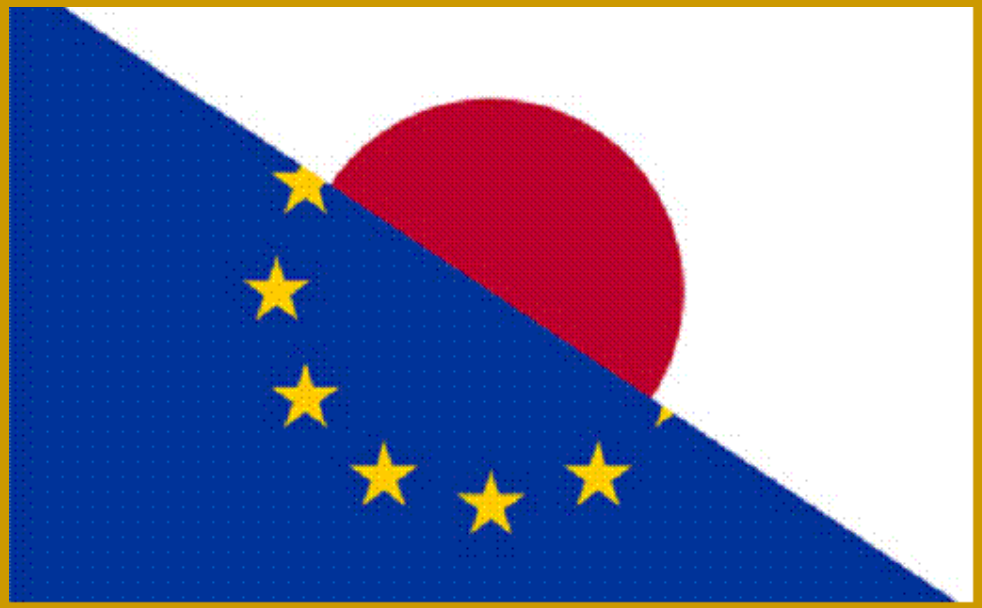
- **below 20 mSv if no disproportionate detriment or excessive cost of countermeasures**

RL in the range 1 to 20 mSv per year for existing *exposure situations*

- **indoor radon exposure**
- **long-term post-accidental management**

RL below 1 mSv for specific pathways of exposure

Great East Japan Earthquake Impact on Europe and EC Actions:
Import controls



Great East Japan Earthquake : **Import controls**

Concerns of EU citizens had an adverse effect on the market.

Hence there was an urgent need to ensure harmonised criteria for:

- **food and feed,**
- **ships and containers,**
- **and other goods.**

For this purpose the Commission has issued:

- **binding requirements on import checks on food and feed and**
- **non-binding guidelines for the contamination checks on ships and containers.**

*The Commission will pursue **international standards** on permissible levels of contamination of goods, applicable in international trade.*

Great East Japan Earthquake: **Food and Feed**

Regulation 3954/87 Euratom *disproportionate for the import of food from a distant country*

On 15 March 2011: recommendation to control food imported from Japan

On 25 March the European Commission adopted an implementing regulation, under general food safety legislation

- **with reference to the pre-established maximum permitted levels of radioactivity for different categories of radionuclides laid down in Regulation 3954/87 Euratom,**

Action levels in Japan for food and drinking water

- **for Cs-137+134: 500 Bq/kg (EU value 1250 Bq/kg)**
- **commitment from Japan to control export of food on the same basis**
- **on 11 April (corrigendum on 13.4) amended implementing regulation incorporating the action levels introduced in Japan for iodine and caesium isotopes (as well as plutonium) after the accident**
- **starting 1 April 2012: even lower levels: 100 Bq/kg!**

Lessons

Need for thorough reflection on food restrictions

- **Nearby and distant events**

Need for emergency response plans for circulation of goods

- **At local level and in international trade**

  Revise international transport regulations (surface activities)
  Acceptance criteria for commodities (e.g. code of conduct for metal scrap)

Improve risk communication!

(Waste management in emergency situations)

Harmonisation of emergency response

"Stress test"

European Commission

15 March 2011: Commissioner Oettinger announces stress tests of nuclear facilities in the EU

21 March: Energy Council (energy ministers from MS) endorses the Commission proposal to carry out comprehensive safety and risk assessments

24-25 March: European Council (Heads of State and Government) calls on the Commission and the European Nuclear Safety Regulators' Group (ENSREG) to develop the scope and modalities of the assessments

24 May: the Commission and ENSREG reach agreement on the methodology and the timetable

26 April 2012: the Commission and ENSREG endorse the report of the peer review Board

Strengthening the EU nuclear safety regulatory framework

Improving the legal framework at EU and national level in the following areas:

*1) improving **technical measures** for safety, and improving the necessary oversight to ensure full implementation,*

*2) improving the **governance** as well as the legal framework of nuclear safety,*

*3) improving **emergency preparedness and response**,*

*4) reinforcing the EU **nuclear liability** regime and*

*5) enhancing **scientific and technological competence**.*

System of Radiation Protection Conclusions

Principles of Radiation Protection

Justification

- **Planned introduction of new sources or activities**
- **In emergency and existing exposure situations, societal reasons prevail**

Optimisation

- **Role of constraints for regulatory purpose**
- **Reference levels (e.g. for trade in building materials)**

Dose limitation

- **Link with the principle of justification**
- **NORM industries, air- and spacecraft**
- **Legal responsibility of the employer (e.g. for radon at work)**

Challenges

Develop further the situation-based approach

- **Meaning of dose limits and constraints**
- **Existing sources / exposure situations**
- **Legal responsibilities**

Keep radiation protection simple

- **Pragmatic regulatory judgement**
- **Conservatism in regulation of normal operation**

  Keep in mind application in emergency exposure situation

Revisit (ICRP) Recommendations?

- **No need to change the system of protection**
- **Easily understood language**

  Acceptance of health risks
- **Theory and (regulatory) common sense**
- **Conventional standards in international trade**