The new Euratom Basic Safety Standards Directive

Requirements on occupational radiation protection

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European radiation protection legislation

Legal Basis:
The Euratom Treaty (1957)

Article 2: *In order to perform its tasks, the Community shall establish* ***uniform standards*** *to protect the health of workers and of the general public and ensure that they are applied;*
[…]

Article 30: ***Basic standards*** *shall be laid down within the Community for the* ***protection of the health of workers and the general public against dangers arising from ionising radiations.*** *[…]*

Article 31: *The basic standards shall be worked out by the Commission after it has obtained the opinion of a group of persons appointed by the Scientific and Technical Committee from among scientific experts, and in particular public health experts, in the Member States …*

Basic Safety Standards

Ensure the highest possible protection of workers, members of the public and patients against the dangers arising from exposure to ionising radiation

- First Directive adopted already in **1959 - r**egularly amended in 1962, 1966, 1976, 1980, 1984, 1996 and latest **2013**

New Basic Safety Standards:

- Council Directive 2013/59/Euratom laying down basic safety standards for protection against the dangers arising from exposure to ionizing radiation
  (OJ L13, 17.01.2014, p. 1 -73)

Supplementary elements

- Drinking water quality
- Food and feed – maximum permissible contamination levels after a nuclear accident
- Information exchange in case of a nuclear accident or radiological emergency
  - ECURIE *(European Community Urgent Radiological Information Exchange)*
  - EURDEP (*EUropean Radiological Data Exchange Platform*)

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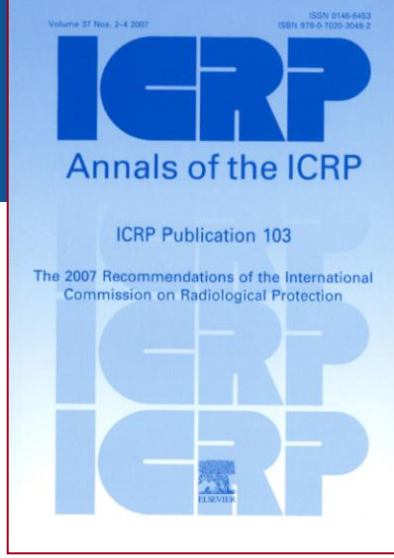
The 2013 Revision



Motivation and Objective of the 2013 Revision

Modernisation of European Radiation Protection Legislation

- Take account of latest scientific findings (e.g. ICRP 2007), technological development as well as operational experience since 1996
- Cover all radiation sources – including natural radiation
- Cover all exposure situations – planned, existing, emergency
- Integrate protection of workers, members of the public, patients and the environment
- Harmonise, to the extent possible, numerical values with international standards

Consolidation and streamlining of existing pieces of legislation

- Combining five existing Euratom Directives and one *Recommendation*
  - *Basic Safety Standards, Directive 96/29/Euratom*
  - *Medical Exposures, Directive 97/43/Euratom*
  - *Public Information, Directive 89/618/Euratom*
  - *Outside Workers, Directive 90/641/Euratom*
  - *Control of high-activity sealed radioactive sources and orphan sources, Directive 2003/122/Euratom*
  - *Radon, Commission Recommendation 90/143/Euratom*

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II *Non-legislative acts*

DIRECTIVES

★ **Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom** 1

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Council Directive 2013/59/Euratom offers

- Better protection of workers, in particular medical staff, emergency workers and workers in workplaces with natural radiation sources (indoor radon; activities processing naturally occurring radioactive material (NORM));
- Better protection of the public, in particular from radon in dwellings, from exposure from NORM activities and building materials and from deliberate exposure for non-medical purposes;
- Better protection of patients, in particular with regard to the avoidance of incidents and accidents in radiodiagnosis and radiotherapy;
- Strengthened requirements on emergency preparedness and response, especially with a view to the lessons learned from the Fukushima accident.

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Protection of workers

Protection of workers in the previous BSS (96/29/Euratom)

- Provisions in the previous BSS (Directive 96/29/Euratom) provide already a very high level of protection for workers through
  - Dose limitation
  - Measures for the restriction of exposure
    - ✓ Classification and delineation of areas
    - ✓ Classification of exposed workers
    - ✓ Assessment of the implementation of arrangements for the radiological protection of exposed workers
  - Assessment of exposure
    - ✓ Monitoring of the workplace
    - ✓ Individual monitoring
    - ✓ Monitoring in case of accidental or emergency exposure
    - ✓ Recording and reporting of results
  - Medical surveillance of exposed workers
  - Information and training

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Improving worker protection

- Dose limit for occupational exposure now 20 mSv in any single year
- Dose limit for the lens of the eye lowered to 20 mSv per year
- Contents of Outside Workers Directive fully integrated
  - ✓ Clear definitions
  - ✓ Clear assignment of responsibilities for undertaking/operator, employer and outside worker
- Occupational radiation protection regime consistently applied also to
  - ✓ Workers in activities involving NORM
  - ✓ Workers in workplaces with Radon
  - ✓ Air crew and space crew
  - ✓ Emergency workers
- Establishment of a data system to register and record occupational exposures

Emergency workers

- Information and training
  - ✓ Prior to an emergency
  - ✓ When the emergency occurs

> *"emergency worker" means any person having a defined role in an emergency and who might be exposed to radiation while taking action in response to the emergency;*

- Protection of emergency workers
  - ✓ Provide for appropriate radiological monitoring and protective equipment
  - ✓ Emergency occupational exposures shall remain below dose limits
  - ✓ Provide for special medical surveillance
  - ✓ If dose limits cannot respected
    - ✓ Establish specific reference levels ≤ 100 mSv
    - ✓ Inform workers about associated health risks and available protection measures
    - ✓ Ensure that workers undertake these actions voluntarily

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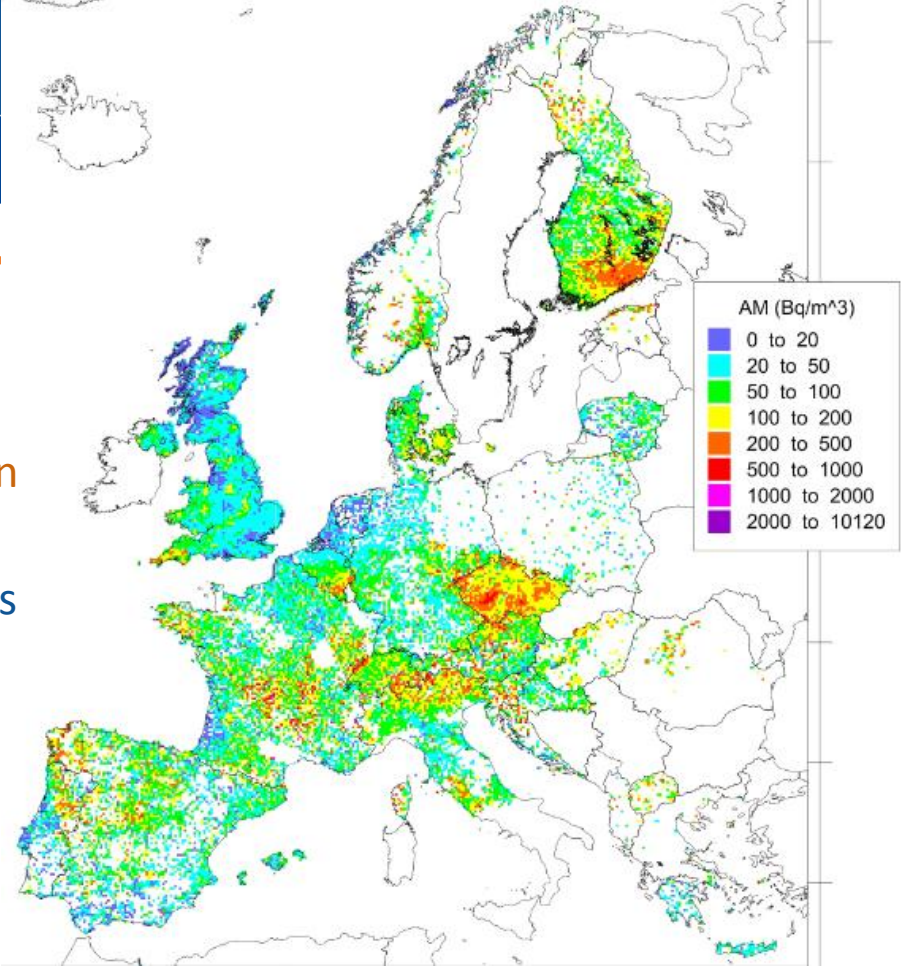
Radon in workplaces



- Establishment of a national radon action plan
- Establishment of a national reference level for indoor radon concentration in workplaces ≤ 300 Bq/m^3
- Identification of radon prone areas

- Radon measurements in workplaces
  - ✓ Radon prone areas
  - ✓ Specific types of workplaces identified in the national action plan

- If radon concentrations remain > national reference level (despite optimisation)
  - ✓ Notify the competent authority
  - ✓ Introduce occupational exposure arrangements
    - ✓ > 6mSv/a Situation to be managed as a planned exposure situation
    - ✓ ≤ 6mSv/a Exposures need to be kept under review

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Adoption, transposition and implementation

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Adoption and beyond

- Article 31 Group of Experts Opinion – ***24 February 2010***
- *Commissio*
- *European E* ***…ruary 2012***
- *Commissio*
- Legislative
- *European C*
- Publication in the *Official Journal of the European Union* – **17 January 2014**

28 Member States of the European Union will have four years to transpose this comprehensive Directive into national legislation

✓ 99 definitions, 109 articles and 19 annexes

Article 106

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 6 February 2018.

Résumé

- Previous BSSs provided already for a very high level of protection for workers in Europe

- European radiation protection legislation consolidated and modernised
  - ✓ New Basic Safety Standards Directive (2013/59/Euratom) adopted in December 2013
  - ✓ Further improvement of the protection of workers, in particular of medical staff, outside workers, emergency workers and workers in workplaces with natural radiation sources (indoor radon; naturally occurring radioactive material (NORM))
  - ✓ European Union Member States have until February 2018 to transpose the Directive into national legislations


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Thank you for your attention
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