



Education and Training in Radiation Protection in the Draft Revised Euratom BSS

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Euratom Treaty, 1957

- **Article 2:** ... 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 ...



Euratom Basic Safety Standards

- First Directive established in 1959
 - » Amended in 1962, 1966, 1976, 1980, 1984, and 1996
- Current “Basic Safety Standards”
 - » Council Directive 96/29/Euratom laying down basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation
- Medical Exposures
 - » Council Directive 97/43/Euratom on health protection of individuals against the dangers of ionizing radiation in relation to medical exposure, and repealing Directive

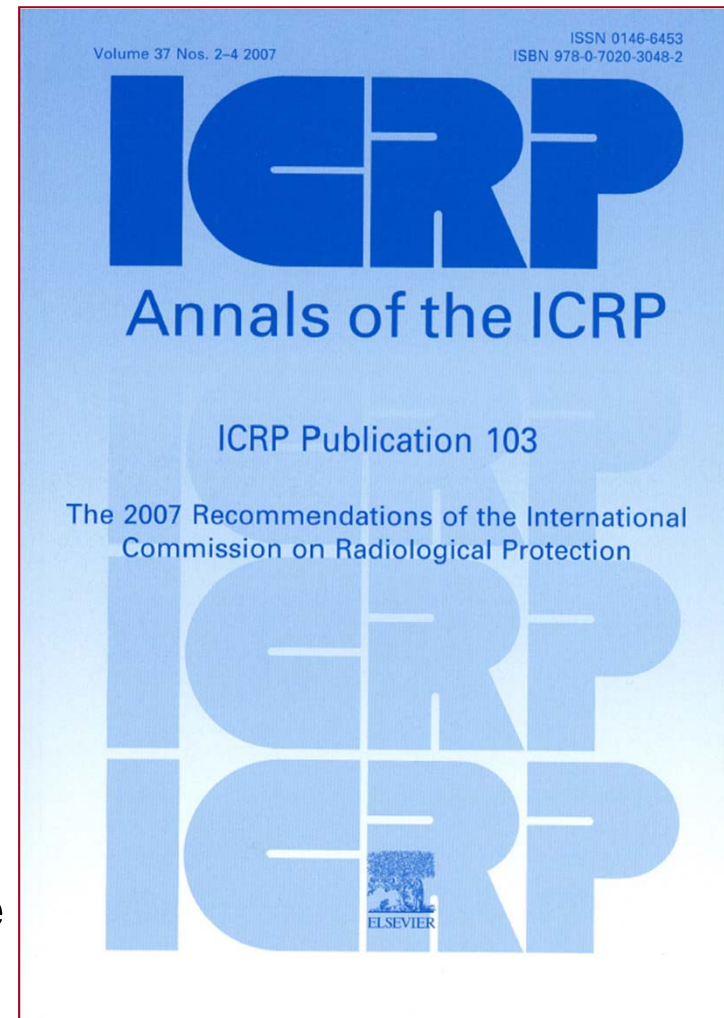
Revision of Euratom BSS

Two objectives

- Revision of the requirements in the Euratom Basic Safety Standards Directive 96/29/Euratom
- Consolidation of existing European radiation protection legislation
 - » 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](#)

Motivation of the Revision

- New scientific findings and recommendations:
 - » ICRP Publication 103, 2007
 - » New scientific data; e.g. on radiation induced cataract, epidemiological findings on radon in dwellings
 - » Cover natural radiation sources
 - » Additional ICRP guidance to come
- Regulatory experience since 1996:
 - » Clarify and strengthen requirements
- Harmonisation with the Revision of the International Basic Safety Standards



Topical issues for BSS revision

- Review of the [regulatory control system](#)
 - » Graded approach to regulatory control
 - » Harmonisation of exemption and clearance
- Introduce more binding requirements on [natural radiation sources](#)
 - » NORM industries, building material, radon in dwellings and work places, cosmic radiation (exposure to air crew and space crew)
- Highlight the importance of [education, training and information](#)
- Strengthen cooperation in [emergency preparedness, planning and response](#)

Structure of revised BSS

- **Preamble**
- **Title I:** Subject matter and Scope
- **Title II:** Definitions
- **Title III:** System of Protection
- **Title IV:** Responsibilities for Regulatory Control
- **Title V:** Requirements for Radiation Protection Education, Training and Information
- **Title VI:** Justification and Regulatory Control of Planned Exposure Situations
- **Title VII:** Protection of *Workers, Apprentices and Students*
- **Title VIII:** Protection of patients and other individuals submitted to *medical exposure*
- **Title IX:** Protection of Members of the Public
- **Title X:** Protection of the Environment
- **Title XI:** Final provisions
- **17 Annexes**

E&T in current Euratom BSS (1)

- E&T requirements scattered in different Directives
- Euratom BSS
 - » Recognition by competent authorities of qualified experts, approved dosimetric services, approved occupational health services and approved medical practitioners
 - » Member States shall ensure that the training of the above experts and services is arranged
 - » “information and training” of occupationally exposed individuals - undertaking’s responsibility
 - » appropriate training of special teams for technical, medical and health intervention (in case of radiological emergency)

E&T in current Euratom BSS (2)

- Outside workers Directive 90/641/Euratom
 - » information and training of outside workers – shared responsibility between outside undertakings and operators
- HASS Directive 2003/122/Euratom
 - » workers in practices holding HASS – focus on possible loss of control, repeated at regular intervals and documented
 - » workers potentially exposed to orphan sources – encouragement for training of workers and management

E&T in current Euratom BSS (3)

- Medical exposure Directive 97/43/Euratom
 - » Medical practitioner, Medical Physics Expert (MPE) and individuals involved in the practical aspects of the procedures
 - adequate theoretical and practical training for the purpose of radiological practices, as well as relevant competence in RP
 - continuing education and training after qualification, new techniques
 - recognition of corresponding diplomas, certificates or formal qualifications
 - » Member States shall encourage the introduction of a course on radiation protection in the basic curriculum of medical and dental schools

Services and experts in draft BSS (1)

- Changes in definitions of competent services and experts and their roles
 - » Radiation Protection Expert (RPE), replaces “Qualified expert”
 - » Introduction of Radiation Protection Officer (RPO)
 - » New definition of Medical Physics Expert (MPE)
 - » Detailed consideration of functions of RPE, MPE and RPO
 - » Emphasis on (state) recognition and continuity of expertise

Services and experts in draft BSS (2)

- Radiation Protection Expert
 - » an individual having the **knowledge, training and experience** needed to give **radiation protection advice** in order to ensure effective protection of individuals, whose capacity to act is **recognized by the competent authorities**
 - » advice on **occupational and public exposure**, e.g. for plans for new installations, classifications of areas and workers, monitoring, QA, emergency arrangements, waste disposal, training of workers, etc.
 - » **external or internal** advisor, could be carried out by a **group of specialists**

Services and experts in draft BSS (2)

- Radiation Protection Officer
 - » an individual **technically competent** in radiation protection matters relevant for a **given type of practice** who is **designated by the undertaking** to oversee the **implementation** of the radiation protection arrangements of the undertaking
 - » optional, when required by MS
 - » reports directly to management
 - » task of the RPO can be carried out by a radiation protection unit established within an undertaking

Services and experts in draft BSS (3)

- Medical Physics Expert
 - » an individual having the **knowledge, training and experience** to **act or give advice** on matters relating to radiation physics **applied to medical exposure**, whose competence to act is **recognized by the competent authorities**
 - » shall take responsibility for dosimetry, including physical measurements related to the evaluation of the dose delivered to the patient
 - » contributes to optimization (incl. DRLs), QA, equipment and installation design and surveillance, training of medical staff, etc.
 - » can be carried out by a medical physics service

E&T in the draft BSS (1)

- New Title V: Requirements for Radiation Protection Education, Training and Information
 - » Grouping existing requirements on E&T of
 - Exposed workers, apprentices and students
 - Workers potentially exposed to orphan sources
 - Emergency workers
 - » Changes made wherever deemed necessary

E&T in the draft BSS (2)

- MS shall ensure that an **adequate legislative and administrative framework** is established for providing appropriate radiation protection education, training and information to all individuals whose tasks require specific competences in radiation protection
- Appropriate education, training and retraining shall be in place to **allow the recognition** (by the competent authority) of RPE, MPE, occupational health services and dosimetry services
- Training, retraining and information of relevant individuals shall be **repeated at appropriate intervals** and documented

E&T in the draft BSS (3)

- Information and training of exposed workers, apprentices and students and workers potentially exposed to orphan sources
 - » incorporating existing requirements from BSS and HASS Directives
 - » changes related to information on emergency plans and procedures and orphan source detection systems
- Information and training of emergency workers
 - » new vocabulary - "emergency workers", "emergency"
 - » emergency response and radiation protection training requirements

E&T in the draft BSS (4)

- Education, information and training in the field of medical exposure
 - » incorporating existing requirements from the MED
 - » mandatory introduction of a course on radiation protection in the basic curriculum of medical and dental schools
 - » dissemination of appropriate information relevant to radiation protection in medical exposure on lessons learned from significant events
 - » new requirements for informing patients, recording patient doses, and recording, reporting and follow-up of accidental and unintended exposures

BSS adoption procedures

- Opinion of the Group of Experts referred to in Article 31 of the Euratom Treaty – 24 February 2010
- Internal Commission procedures – during 2010 and 1st qtr 2011
 - » Impact assessment
 - » Inter-service consultations
- Adoption of proposal by the Commission – mid 2011
- Opinion of Economic and Social Committee
- Proposal to Council and European Parliament
- Discussion/amendment in Atomic Questions Group of Council
- Adoption by Council
- Transposition into national legislation
 - » Recommendations on drafts submitted by Member States (Article 33 Euratom)

**THANK YOU
FOR
YOUR ATTENTION**

