

The IAEA programme for public exposure to radon

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IAEA

International Atomic Energy Agency

Mandate of IAEA

IAEA Statute (Article III.A.6)

6. To establish or adopt, in consultation and, where appropriate, in collaboration with the competent organs of the United Nations and with the specialized agencies concerned, standards of safety for protection of health and minimization of danger to life and property (including such standards for labour conditions), and to provide for the application of these standards to its own operation as well as to the operations making use of materials, services, equipment, facilities, and information made available by the Agency or at its request or under its control or supervision; and to provide for the application of these standards, at the request of the parties, to operations under any bilateral or multilateral arrangements, or, at the request of a State, to any of that State's activities in the field of atomic energy

IAEA Safety Standards

THE IAEA SAFETY STANDARDS: A GLOBAL REFERENCE FOR PROTECTING PEOPLE AND THE ENVIRONMENT

- Used by Member States to deliver consistent levels of safety for the protection of workers, the public and the environment
- Binding for IAEA's own activities
- Binding on Member States in relation to operations and project agreements assisted by the IAEA
- Many safety standards are jointly sponsored by other international organizations e.g. WHO for radon-related documents

International Basic Safety Standards 2011



IAEA Board of Governors September 2011

During the Board's consideration of measures to strengthen nuclear safety and security, **the body approved** the revised IAEA Safety Standards on the Safety of Nuclear Power Plants: Design (Safety Standards Series No. NS-R-1), as well as **a revision of IAEA Safety Series No. 115, or Draft Safety Requirements: Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards.**

http://www-pub.iaea.org/MTCD/Publications/PDF/p1531interim_web.pdf



BSS Requirements on Radon

Requirement 50: Public exposure due to radon indoors

The government shall **provide information** on radon indoors and **the associated health risks** and, if appropriate, shall **establish and implement an action plan** for controlling public exposure due to radon indoors.

National Radon Strategy

Government assign responsibilities

Radon Measurements

- National radon survey to evaluate the existing exposure situation and to decide if there is a need of radon action plan

Information

- To stakeholders and public

Radon Action Plan

- Establishment
 - A national reference level not exceeding 300 Bq/m³
 - Develop legal framework
 - Identify effective preventive measures and corrective actions
 - Develop communication strategy and educational system for public and professionals
- Implementation
 - Identify radon-prone areas and develop radon maps
 - Include appropriate preventive measures and corrective actions in building codes for new and existing buildings and educate building professionals
 - Reduce activity concentration of radon and consequent exposures to a level at which protection is optimized;
- Review
 - Monitoring of effectiveness of all actions and improve them accordingly.

Medium-term work plan on radon at the IAEA

- Development of training material (in cooperation with WHO) for
 - Establishing a national radon action plan
 - Communication strategy
 - Preventive measures and corrective actions
- Development of technical guidance on
 - Communication strategy
 - Preventive measures and corrective actions
- Provision of technical assistance through Technical Cooperation

Technical guidance

- SSG-32 (DS421): Protection of the Public against Exposure Indoors due to Radon and Other Natural Sources of Radiation (WHO as a co-sponsor)
 - Guidance for regulatory body
 - Radon and building materials are included
 - To be published in 2nd half of 2014
- IAEA/AQ/33: National and Regional Surveys of Radon Concentration in Dwellings: Review of Methodology and Measurement Techniques

IAEA Technical Cooperation Programme

Participants: 123 Member States

2014-2015 programme (radon)

National Projects – Albania and Montenegro

Regional project – Europe

Regional workshops – Latin America & Asia Pacific

Regional project RER/9/127

- Project title: Establishing Enhanced Approaches to the Control of Public Exposure to Radon
- Project Management Officer: Katherina Deufrains
- Technical Officer: Trevor Boal
- Project duration: 2 years (2014-2015)

Participating Member States

- Albania
 - Armenia
 - Bosnia and Herzegovina
 - Bulgaria
 - Croatia
 - Estonia
 - Georgia
 - Greece
 - Hungary
 - Latvia
 - Lithuania
 - Moldova
 - Montenegro
 - Romania
 - Russian Federation
 - Serbia
 - Slovakia
 - Slovenia
 - Tajikistan
 - TFYR of Macedonia
 - Turkey
 - Ukraine
- PLUS
- Azerbaijan
 - Belarus
 - Cyprus
 - Kazakhstan
 - Kyrgyzstan
 - Malta
 - Poland
 - Uzbekistan

Objective

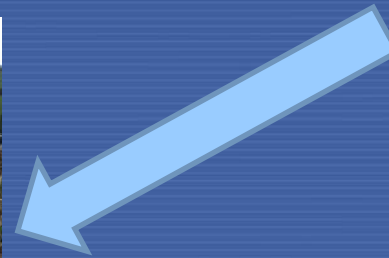
- To assist the Member States in establishing and further developing approaches to the control of public exposure to radon in Europe.
- The project focuses on the development of policies and strategies in order to implement new requirements of "Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards (GSR Part 3)" as they apply to exposure due to radon in dwellings.

Key milestones and expected outputs

- Report summarising existing data on radon levels and radon policies and strategies in the Member States participating in the project.
- Guidance for communication strategy
- Reports on the progress in the development of radon action plans in States.
- Communication strategy in place
- Developed and/or improved national programmes (action plans) for controlling public exposure to radon.

IAEA Terminology

- radon strategy = information + action plan
- **corrective actions** for existing homes
remediation **mitigation**
- **preventive measures** for new/future homes



Summary

- There is large variability in exposure due to natural sources of radiation
- Exposure due to radon is the most variable, but also the most controllable
- The IAEA is working closely with the World Health Organization to raise awareness of radon as a public health and radiation protection issue
- In general, the system of radiological protection needs to deal more effectively with exposure due to natural sources
- We need to extend our programmes to other parts of the world

Thank you for your attention



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