



Ref. Ares (2020)2496502



Meritxell Martell¹, Tanja Perko^{2*}, Kateřina Rovenská³, Ivana Fojtíková³, Robbe Geysmans², Johan Paridaens²

1: Merience SCP, Barcelona, Spain
2: Belgian Nuclear Research Centre, SCK CEN, Mol, Belgium
3: SURO, Prague, Czech Republic

Introduction

The Basic Safety Standards (BSS) Directive does not explicitly mention Education and Training (E&T) in Annex XVIII- elements to be considered in national Radon Action Plans (RAPs). However, HERCA and EUTERP recognise the need of E&T in the RAPs.



Educated and trained stakeholders are essential for the implementation of Radon Action Plans (RAPs)

Objectives of the EU-RAP project

- 1) To collect, review and assess national radon action plans in all EU MS and the UK according to the requirements laid down in the BSS Directive with a particular focus on the practical implementation of the actions defined in these action plans.
- 2) To identify good practices to address radon related issues together with experts, regulators, local authorities and other stakeholders from EU MS and the UK.

How do EU MS and the UK address education and training in their RAPs?

Assessment of E&T in RAPs

Strategy

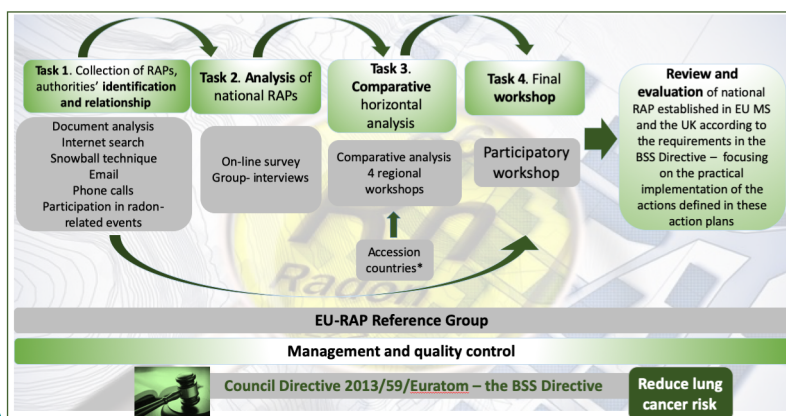
Does the RAP include E&T activities/work/approaches for:

- professionals and workers in the construction industry (e.g. engineers, architects, those workers executing the work, etc.)?
- professionals who carry out radon measurements or mitigation work?
- employers and employees in potentially affected workplaces?
- those with responsibility for radon (e.g. different authorities including local authorities)?
- schools?
- relevant degree programmes at higher education institutions?
- Are E&T courses accredited?
- Are training materials or training tools developed, collected and made available?

Implementation

How do EU MS and the UK implement the above in practice?

Methodology: Finding out how E&T is addressed



Good practices of E&T for:



Primary and secondary schools: Flyer on radon distributed to all schools in Slovenia.



Building industry: Greek Atomic Energy Commission in cooperation with Technical Chamber of Greece offers continuing E&T for engineers.

A dedicated course to architects with emphasis on prevention during construction in Luxembourg.



Universities: Radon Renovation course based on Danish Building Research Institute instructions at

AALBORG UNIVERSITET



Health professionals: training for Cancer Screening Programme personnel for better cancer prevention in Spain.



Employers and employees: Training personnel at workplaces with radon exposure and staff of the Chief Sanitary Inspectorate in Poland by



Measurement and remediation professionals: accredited training professionals in the Czech Republic.



Citizens: Emerging citizen science initiatives on radon testing and/or remediation in Ireland and Italy.



Local authorities: On-line training for mayors in Romania
Training of local government administrations and invitation to workshops on radon in Finland.

Findings

- ❖ Lack of a systematic overview of E&T in most countries.
- ❖ IAEA significantly contributes to E&T in the field of radon in EU MS.
- ❖ Lack of motivation of remediation industry to attend E&T programmes
- ❖ Insufficient attention to E&T for employers and employees and local authorities
- ❖ On-going collaboration of owners of RAP and associations of builders and/or universities to develop and offer E&T programmes for professionals

Recommendations

- ❖ Systematically collect existing E&T activities (E&T inventory)
- ❖ Promote international collaboration on harmonised E&T programmes in EU MS
- ❖ Offer E&T accredited courses for remediators
- ❖ Collect and make available online training materials on radon
- ❖ Support citizen science projects on radon



The EU-RAP study: "Review and evaluation of national radon action plans established in EU Member States according to the requirements in Council Directive 2013/59/Euratom –the BSS Directive –focusing on the practical implementation of the actions defined in these action plans" receives support by EC, DG Energy. Ref. Ares (2020)2496502.

NORM X symposium & RICOMET conference, Utrecht, the Netherlands on May 9 – 13, 2022