Radon Action Plan of Finland

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Regulation background of Radon Actin Plan (RAP)

- Radiation Act (859/2018, 159 §)
  - Ministry of Social Affairs and Health will prepare
- Governmental Decree on ionizing radiation (1034/2018 54 §, Annex 6)
  - RAP includes radon exposure in dwellings, public buildings and workplaces due to ground and bedrock, building materials and household water
  - Updated every 5 year
1. Long-term goals for radon exposure associated lung cancer reduction
2. Reference levels
3. Measuring
4. Mapping of indoor radon concentrations
5. Identification of buildings and areas with high radon concentrations
6. Remediation and prevention of high indoor radon concentrations
7. Risk communication
Process

- 2017: Stakeholder involvement and hearing
- 2018: **Steering group** of national authorities involved in radon regulation established
- 2019: Radon Action Plan will be published
Steering group of national authorities involved in radon regulation

Representatives

• Ministry of Social Affairs and Health (chair and the responsible body)
  – Health Protection, Environmental Health (governmental & regional)
  – Occupational Safety and Health (governmental & regional)
  – STUK (secretary)
  – National Supervisory Authority for Welfare and Health (Valvira)

• Ministry of Environment

• Association of Finnish Local and Regional Authorities
Organization of the regulation control of radon exposure

**New buildings**
- Local building control /Ministry of Environment

**Homes and buildings with public access**
- Local health protection authority /Ministry of Social Affairs and Health

**Workplaces**
- STUK (+Occupational safety and health authority)

**Household water**
- < quality requirement
  - Local health protection authority
- > quality requirement
  - STUK

**Radioactivity in building material, underground mines and quarries, waste containing radioactive materials**
- STUK
<table>
<thead>
<tr>
<th><strong>GOALS BY 2040</strong></th>
<th><strong>HOW?</strong></th>
<th><strong>SOURCE OF INDICATORS</strong></th>
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| Lung cancer cases due to radon decreased | Radon exposure and smoking will decrease | Radon exposure: the national radon database and surveys  
Smoking habits: nationwide surveys  
Lung cancer cases: the Cancer Registry |
| Radon exposure will decrease in dwellings, places with public access, and workplaces | Radon mitigation in new buildings  
Remediation of existing buildings with high radon concentrations  
Regular radon measurements | Results from radon surveys in dwellings  
Results from targeted regulation control of radon in work places and buildings with public access |
| Indoor radon concentrations will be better known | Radon concentrations in dwellings in ground floor will be measured more often.  
Radon concentrations in work places and places with public access will be measured as stated in the Radiation Act.  
National radon database will be developed to be more comprehensive and accessible. | Indicators from the regulation control of radon in workplaces and places with public access  
Number of entries in the national radon database |
| Radon risk awareness increased | Effective and active communication to/with all target groups | Radon risk awareness from surveys |
1. Long-term goals for radon exposure associated lung cancer reduction
2. Reference levels: 200 & 300 Bq/m³, 500 000 Bq h/m³/yr
3. Measuring: >2 months during September-May, alpha track detectors, continuous monitors

4. Mapping of indoor radon concentrations
5. Identification of buildings and areas with high radon concentrations
6. Remediation and prevention of high indoor radon concentrations

7. Risk communication

![Diagram showing radon mitigation strategies]