Radon Program of the Czech Republic
- Information Strategy

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Present situation in the Czech Republic

Average radon concentration in flats - approx. 120 Bq/m³

Regulation based on legislation (Atomic Act, Building Code)
Radon Program of the Czech Republic – Action plan
Technical standards:
  ČSN 73 0601 Protection of buildings against radon from the soil
  ČSN 73 0602 Protection of buildings against radon from building materials

Methods of measurement and remediation
More than 20 years of experience, experienced staff, results of measurements

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Low radon risk perception – both the public and building professionals
Strong energy saving trend that decreases ventilation and increases indoor radon concentration
Communication strategy

• **General information**
  Goal – to create common knowledge about radon, motivate the owners for measurement

  **Important messages:**
  “Radon is one of the existing risks in everyday life, known and manageable.”
  “Prevention (including radon) is the part of the current style of life.”

• **Special information for particular groups**
  **Professional public** – “Radon shall be the standard part of everyday work of the designers and civil engineers.”
  **Construction officers** – “There is accessible information about radon risk and you should hand it on.”
  **Public** - “Be interested in radon risk, in particular in some important situations – e.g. new house construction, old house rebuilding, house purchase.”
General information

External independent sociological examinations

1. Faculty of Arts, Charles University in Prague
   Department of Sociology

2. Marketing Agency Soukup

More than 1 000 respondents, the group was selected according to the demographic indicators of the Czech population
Results of the sociological examinations - Public knowledge

Approximately
80 % of respondents have some information about radon, among respondents building or purchasing house in past 3 years 93 %

Among the respondents who had some information about radon
90 % of them regard it as danger
94 % of them know that it increases risk of cancer generally
88 % of them know that it is the lung cancer
90 % of respondents know that antiradon insulation is needed
60% of respondents know that ventilation is important

50 % of respondents think that they are poorly informed
only 12 % of respondents have some information about the Radon Program
Results of the sociological examinations - Attitude to the radon concentration measurement
Results of the sociological examinations - Probability of individual reaction to high radon concentration
Conclusions of the sociological examinations

- General knowledge is high but it does not itself motivate to an action.
- Every knowledge affects behaviour, every information in media for a short time increases the interest in measurement, knowledge of radon risk in the residential area motivates the residents to take care of radon.
- There is a space for motivation of public, only approximately 20% of respondents are decided not to be interested in radon at all.
- Public is interested in practical and local information.
- Personal contacts and printed information are still very effective.
- People are not ready to spend money for protection against radon, they prefer free measurement and self-help measures.
- Neither the public nor professional public are much active in information search.
Most issues have been included in the Action plan before the examination:

Accessible information for the public as well as target groups
Website, personal and printed information
Risk visualization – radon maps
Free long-term measurement of indoor radon concentration
State financial support for remedial measures
Cooperation with regional and local authorities

New item – preference of self-help measures
Handbook for self-help measures is under preparation
www.radonovyprogram.cz
Information about recommended behaviour in some situations

- Radon measurements
- Antiradon prevention at new house construction
- Antiradon prevention in case of rebuilding
- State financial support for antiradon measures
- Radon at house purchase
- Houses from material with high radionuclide content

On–line advisory center
Radon maps
Handbooks
Results of measurements
Personal contacts
Geological maps of radon risk in the scale of 1: 50 000
Screen list of Complex Radon Information for Selected Cadastre
Indoor radon concentration measurements in nursery schools

- 2011/2012: 697 buildings
- 2012/2013: 540 buildings
- 2013/2014: 311 buildings
Indoor radon concentration measurement in nursery schools

The longterm average indoor radon concentration is in nearly 20% of nursery schools higher than 400 Bq/m$^3$. In the half of them even in the school hours.

In comparison with the search in the period of 1990 – 1991

- original buildings - the average indoor radon concentration increased by 9%
- rebuilt buildings (insulated, new tight windows) - by 60%.

Remediation of schools is completely paid by the government.

Information for parents, staff, municipalities, local authorities etc.
Radon trail in Jáchymov (Joachim)
Radon trail in Jáchymov (Joachim)
Information posters for local authorities

Radon risk in geological substratum
for municipalities with increased possibility
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The SÚJB (State Authority for Nuclear Safety) provides information posters for local authorities. These posters are designed to inform residents about the radon risk in their area. Radon is a radioactive gas that can accumulate in homes, especially in areas with a high natural radon content. Pictograms and color codes are used to indicate the level of radon risk, ranging from low to high. The posters are available in multiple languages and are distributed by the SÚJB.
Handbook for building professionals

RADON – Construction context
Manual for antiradon measure designers and implementers

Topics:

- Anti-radon measure selection
- Anti-radon insulations
- Simple ventilaton systems
- Background ventilation
- Ventilation layers
- Measure calculations according to the Czech Technical Standard ČSN 73 0601
- Radon diffusion coefficients
- Building materials as radon and gama radiation sources
Education of building professionals

Courses:

**Protection against radon in context with requirements on energy saving buildings**

Part of the lifelong training
Through an agency specialized in the construction branch
Together with the professional chamber
Conclusions

Important task – to bring information to the public as close as possible

• in those situations when the public needs the information – new house construction, old house reconstruction, house purchase

• on the places where the public expects to get the information – construction offices, designers, estate agencies

• in the effective form - personal, printed, web sites; practical and local information; risk visualization (e.g. with radon maps)

• in the positive way to avoid stress

• in their standard ways (building professionals)
Thank you for your attention