



Strål  
säkerhets  
myndigheten

Swedish Radiation Safety Authority

# Existing strategy and challenges for a national action plan for radon in Sweden

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## Background

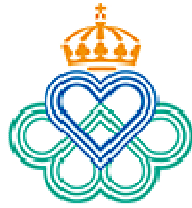
- Sweden – More than 30 years of experience!
  - All three sources of radon (soil/rocks, construction materials and groundwater) are of importance.
- Many of the guidelines listed in the national action plan are already in place.
- Successful radon programme but some aspects need to be reviewed.



## Assignment of responsibilities

- Several authorities share the responsibility to work with radon issues at the **central, regional** and **local** level in Sweden.
- Not unique!

# Responsible authorities



Public Health  
Agency of  
Sweden



Strål  
säkerhets  
myndigheten  
Swedish Radiation Safety Authority



National Board of  
housing, building and  
planning



Swedish Work Environment Authority



National Food Administration

SGU

Geological Survey of Sweden



Municipalities and  
county councils

SWEDAC 

Swedish Board of  
accreditation and  
conformity assessment



National Institute of Public Health



Ale Alingsås Alvesta Aneby Arboga Arjeplog Arvidsjaur Arvika Askersund Avesta Bengtsfors Berg  
 Bjurholm Bjuv Boden Bollebygd Bollnäs Borgholm Borlänge Borås Botkyrka Boxholm Bromölla Bräcke  
 Burlöv Båstad Dals-Ed Danderyd Degerfors Dorotea Eda Ekerö Eksjö Emmaboda Enköping Eskilstuna  
 Eslöv Essunga Fagersta Falkenberg Falköping Falun Filipstad Finspång Flen Forshaga Färgelanda  
 Gagnef Gislaved Gnesta Gnosjö Gotland Grums Gullspång Gällivare Gävle Göteborg Götene  
 Habo Hagfors Hallsberg Hallstahammar Haparanda Heby Hedemora  
 Helsingborg Herrljunga Hjo Höfn Hällefors Härjedalen  
 Härnösand Hällefors Härjedalen  
 Karlsborg Karlshamn Karlskrona Kalmar  
 Kramfors Kristianstad Klippan Knivsta  
 Laholm Landskrona Kävlinge Köping  
 Linköping Ljungby Ljusdal Lindsberg  
 Sälen Malå Mariestad Edet Lindesberg  
 Mönsterås Mörbylånga Malmö Malmö Malung-  
 Nykvarn Nyköping Nynäshamn Munkfors Mölndal  
 Oxelösund Pajala Partille Partille Norrtälje Norsjö Nybro  
 Sigtuna Simrishamn Sjöbo Skövde Skövde Skövde  
 Sollentuna Solna Sorsele Sotenäs Sotenäs  
 Strömstad Strömsund Sundbyberg Sundsvall Svalöv Svedala Svenljunga Säffle Säter  
 Sävsjö Söderhamn Söderköping Södertälje Sölvesborg Tanum Tibro Tidaholm Tierp Timrå Tingsryd Tjörn  
 Tomelilla Torsby Torsås Tranemo Tranås Trelleborg Trollhättan Trosa Tyresö Täby Töreboda Uddevalla  
 Ulricehamn Umeå Upplands Väsby Upplands-Bro Uppsala Uppvidinge Vadstena Vaggeryd Valdemarsvik  
 Vallentuna Vansbro Vara Varberg Vaxholm Vellinge Vetlanda Vilhelmina Vimmerby Vindeln Vingåker  
 Vångårda Vänersborg Vännäs Värmdö Värnamo Västervik Västerås Växjö Ydre Ystad Åmål Ånge Åre  
 Årjäng Åsele Åstorp Åtvidaberg Älmhult Älvdalen Älvkarleby Älvsbyn Ängelholm Öckerö Ödeshög Örebro  
 Örkelljunga Örnsköldsvik Östersund Österåker Östhammar Östra Göinge Överkalix Övertorneå

**290**  
**municipalities**  
**having the most**  
**important role**



## **Advantages of the present system**

- Optimisation of knowledge and resources
- Radon is a multidisciplinary problem, there is a need for different expertise.



## **Disadvantages of the present system**

- No authority has the principal responsibility to coordinate radon work at the national level
- Issues that are not defined as the responsibility of a specific authority are not followed up.
- Problem arises when radon is not a prioritized issue at certain authorities.
- Public is often confused about this division of responsibility



## **Disadvantages (continued)**

- No governmental body works with remediation measures or follows development of remediation technique in Sweden.
  - We have a recently established Swedish Radon Association for Consultants.





## **Incentives in place to control radon exposure**

- Financial support is provided to remediate high radon concentration.
- National goals have also been set up to reduce the number of persons exposed to high radon concentrations.

# Environmental goals

**A radon concentration below 200 Bq/m<sup>3</sup> in all dwellings by the year 2020**

**All schools and kindergartens should have a radon concentration below 200 Bq/m<sup>3</sup> by the year 2010.**





## **Present strategy- what can be improved?**

- Proactive measures to prevent radon ingress in buildings are hardly in place in Sweden.
- There is a need for innovative thinking regarding preventive measures.
  - Financial support for proactive measures?



## **Present strategy- what can be improved?**

- ➔ Radon measurement data is not managed in a systematic way at the national level.



## Classification of risk areas

- Sweden (the whole country!) is a radon-prone area.
- Emphasis is not on delineating risk areas (high, medium and low risk)
- The strategy is to build radon proof.



## Challenges

- Collaboration among all responsible authorities!
- Need for collaboration with academia.
- Risk communication – how to keep the subject alive?
- Radon at workplaces.