



Radon, arsenic and land contamination in the South West

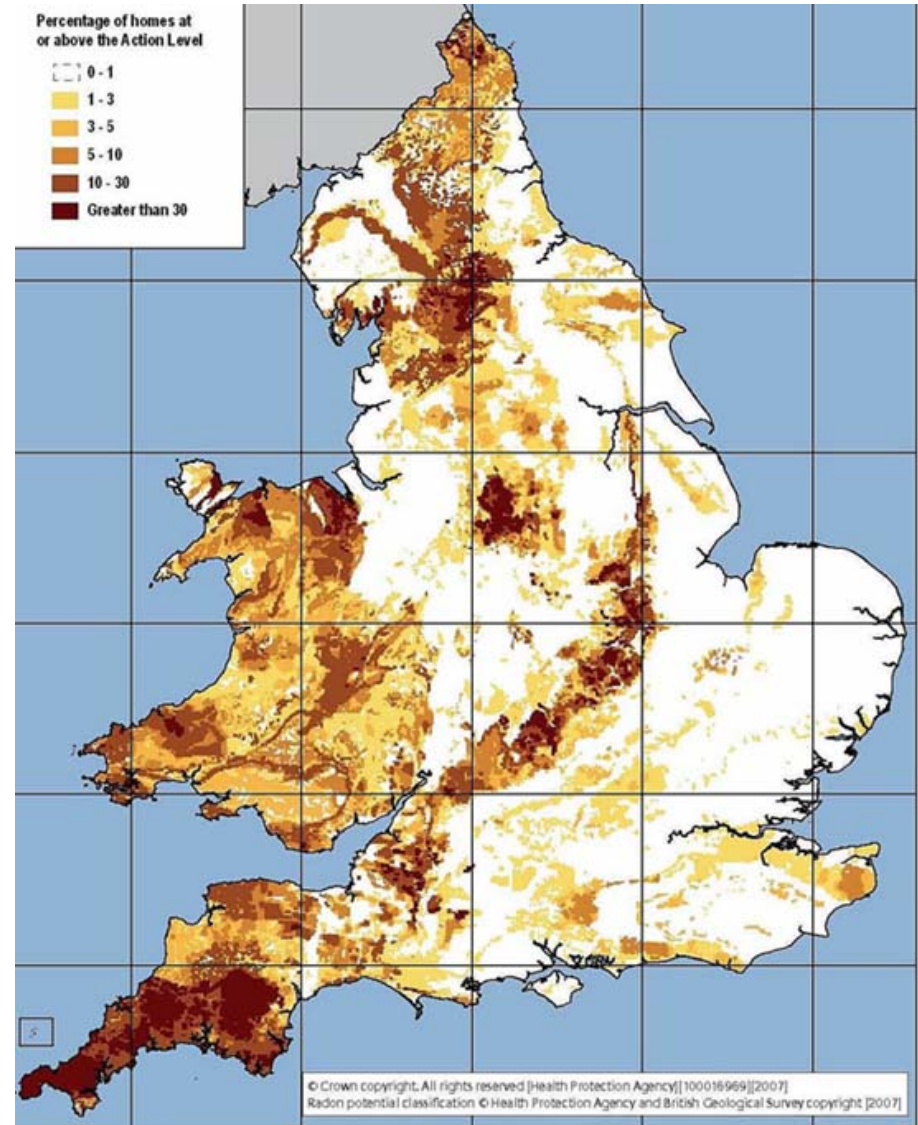
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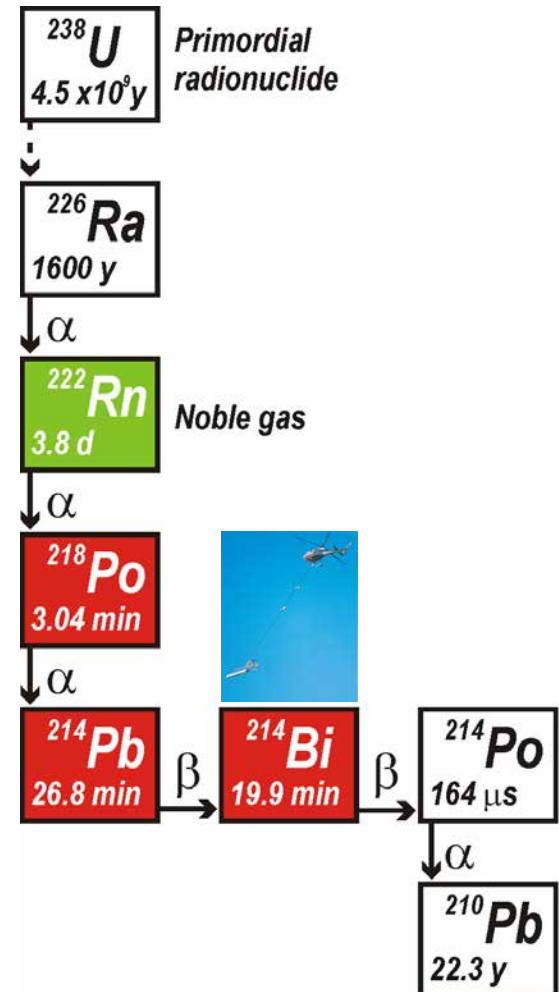
Radon

- Lung cancer
- SW strongly affected
- Current mapping explains 10% or so of the variation in Rn in dwellings
- Evidence for dramatic local variations in Rn and possible extreme exposure sites



Radon

- TellusSW AGRS – almost direct measurement of radon in the ground
- Complete coverage of near surface radon

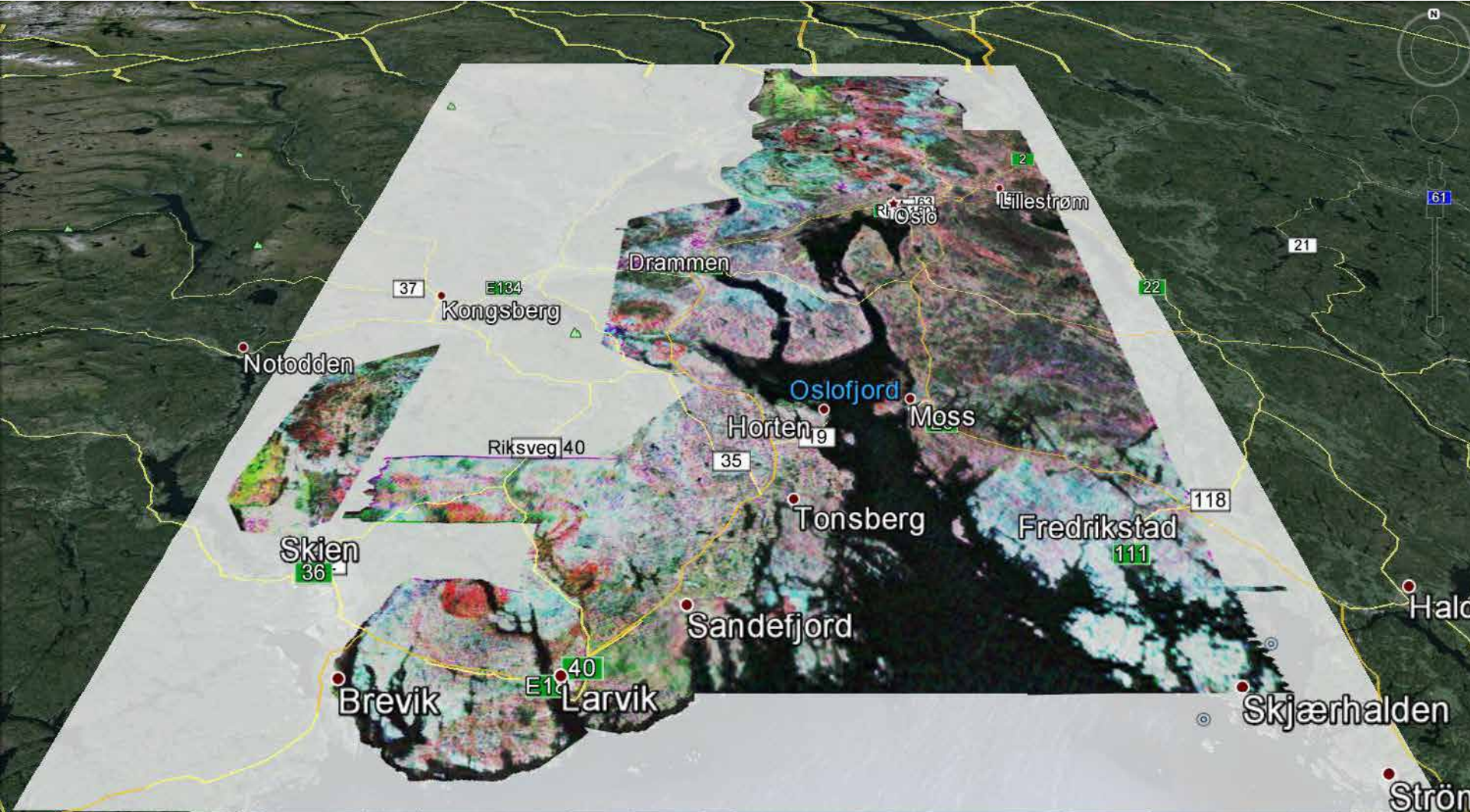




Radon in Norway

- AGRS explains more of the observed variation in Rn in homes than any other data set
 1. AGRS
 2. Bedrock geology
 3. Drift geology
 4. other

Norway

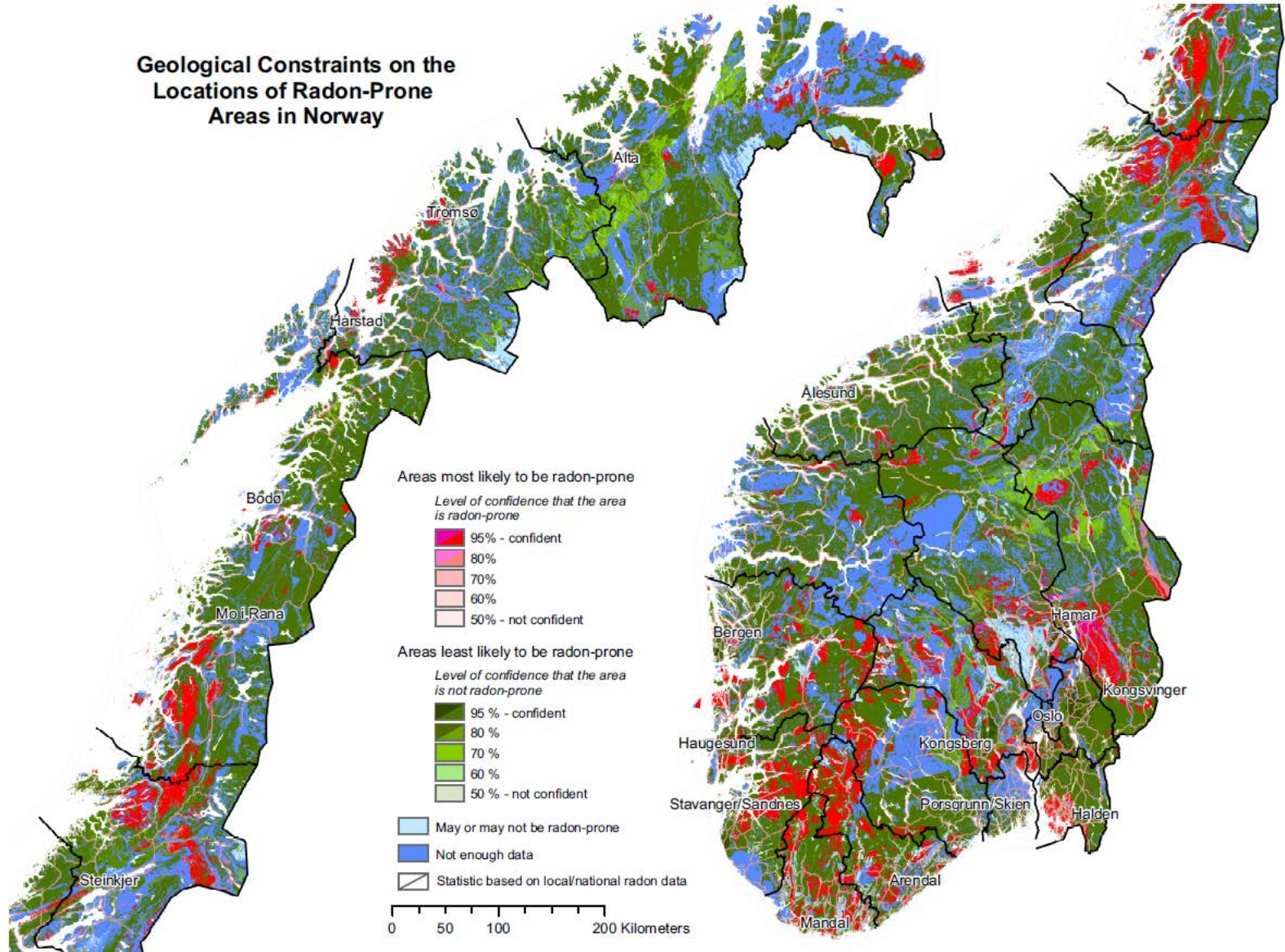


Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat
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Google earth

Kragero

Geological Constraints on the Locations of Radon-Prone Areas in Norway





Outcome Radon

- Stronger model for the distribution of radon in homes
- Discovery of extreme exposure sites
- The effect of mining on radon
- Impact on human health



Arsenic and other toxic metals

Arsenic, cadmium, lead, tin, copper, manganese, zinc, thorium, uranium and radium

- Mining sites, drainage systems and estuaries
- TellusSW AGRS - Thorium, uranium and radium
- TellusSW geochemical data
- Better constraints on location and character of contamination
- Behaviour over time, impact on livestock, crops and human health



What is required to achieve this?

- Data
 - TellusSW data
 - Digital Geology (BGS)
 - Indoor radon measurements (Public Health England)
 - CSM/University of Exeter data sets
 - Other
- Expertise
 - BGS, CSM, PHE, European Centre for Environment and Human Health, Local authorities