


Does onshore oil and gas exploration and exploitation pose health risks?



The European Commission recently asked the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) to assess public health risks resulting from onshore oil and gas exploration and extraction activities on a commercial

scale in the EU, and to identify knowledge gaps. The SCHEER has provided their response in their Final Opinion on public health impacts and risks resulting from onshore oil and gas exploration and exploitation in the EU. This factsheet provides a quick look at the issue.

→ A LITTLE HISTORY OF HYDROCARBONS AND POTENTIAL HEALTH RISKS

Hydrocarbons have been explored for more than 150 years, including in the EU, where crude oil and natural gas are produced. This results in planned and unplanned releases of crude oil and gas components as well as other substances to air, groundwater, surface water and soil.

For people living near the activity sites, onshore oil and gas exploration and exploitation can increase their exposure to biocides, scale and corrosion inhibitors, oxygen scavengers, surfactants, and various hydrocarbons such as Volatile Organic Compounds, polycyclic aromatic hydrocarbons, as well as particulate matter and noise.

→ WHY WAS THIS NEW OPINION REQUESTED?

Despite the fact that hydrocarbon exploration and production have been going on for a long time, there is limited information available on the possibly resulting environmental and public health impacts. The SCHEER

was surprised at the very limited scientific assessment and monitoring of both the environment and people's health near long-established onshore oil and gas exploration and exploitation sites in the EU. This was even more surprising given the numerous studies conducted on similar American oil and gas exploration and exploitation activities and the amount of scientific evidence pointing towards possible adverse effects of these activities.

→ IS THERE ANY EVIDENCE THAT ONSHORE OIL AND GAS ACTIVITIES NEGATIVELY IMPACTS HEALTH?

The existing epidemiological studies provide weak to moderate evidence that onshore oil and gas exploration and exploitation entails health risks for the general population and point to specific endpoints, such as adverse birth outcomes, asthma exacerbation and possibly increased occurrence of haematological cancers in the vicinity of oil and gas exploration and exploitation sites.

The inferred relationship between natural gas exploration and exploitation and earthquakes has been investigated and is also a public health concern.

→ WHAT MEASURES HAVE BEEN TAKEN TO PROTECT PEOPLE'S HEALTH?

There is some EU legislation already in place: general legislation on environmental protection and workers' health is applicable here, and the non-binding Commission Recommendation 2014/70/EU on minimum principles for the exploration and production of hydrocarbons using high-volume hydraulic fracturing aims inter alia at ensuring that public health is safeguarded. In addition, requests have been made for greater transparency by companies operating at the sites regarding the chemicals released and exposure levels.

→ WHAT DOES THE SCHEER CONCLUDE AND RECOMMEND?

The SCHEER concludes that there is weak to moderate evidence that onshore oil and gas exploration and exploitation entails health risks for the general population. However, in order to make definite and more robust conclusions about the health risks, more information is needed. The SCHEER would like to see these knowledge gaps bridged and recommends:

1. Setting up and developing a centralised and harmonised inventory of all oil and gas exploration and exploitation sites in the EU
2. Conducting analytical and modelling studies to identify, quantify and characterise exposure mixtures and their levels in the vicinity of these sites
3. Initiating targeted biomonitoring and exposure assessment studies of populations potentially at risk
4. Conducting large-scale epidemiological studies with accurate exposure assessment
5. Carrying out quantitative risk assessment studies.

This factsheet is based on the Opinion of the independent Scientific Committee on Health, Environmental and Emerging Risks (SCHEER): 'The public health impacts and risks resulting from onshore oil and gas exploration and exploitation in the EU'.

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This opinion is available at:
https://ec.europa.eu/health/scientific_committees/scheer/opinions_en