**Shale gas: what are the effects on people and the environment?**

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**On 1 June 2015, within the framework of the Horizon 2020 research programme, the European Commission has sanctioned the start of one of the first major European studies into the effects of shale gas production on people and the environment. TNO is coordinating the work of a consortium of eighteen research institutes from ten European countries in the project M4ShaleGas (‘Measuring, monitoring, mitigating, managing the environmental impact of shale gas’).**

The research questions include:

* What impact does shale gas extraction have on the subsurface?
* What effects do above-ground activities and installations have on the landscape and groundwater?
* Which consequences do greenhouse gas emissions have on the quality of air?
* How does knowledge on shale gas extraction contribute to the public debate?

**Research shale gas extraction process**

All components of the shale gas extraction process are subject to risks analysis and risk reduction. In the M4ShaleGas project all research institutes collaborate, collect the best practices from the United States, and run experiments to detect the behaviour of the European shale sedimentary rocks. In addition, models are developed to predict the impact of fracking methods and measurements are designed to reduce the risk of environmental damage.

**Consortium partners**

The consortium partners are independent research institutes that provide the necessary scientific knowledge which will help the European Commission in drawing up policy on shale gas production in Europe. For data of existing shale gas activities abroad input is requested from current operators. An industry panel ensures that experiences of companies are shared with the consortium. The consortium does not interfere in the political and social discussion on utility and necessity of shale gas extraction, but can provide factual information.

Best practices from the Netherlands are also collected in the project and experiments conducted to find out the behaviour of European shale sedimentary rock.