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Potential of Extraction of Shale Gas in Germany in the Context of Mining Law

Scientific support to energy security in the Baltic Sea Region

4 July, 2013, Lithuanian Academy of Sciences
Vilnius, Lithuania

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Golden age of gas **or environmental hazard?**

Shale gas: providing domestic energy at affordable costs, more climate-friendly than other fossil fuels?



Strong environmental concerns against the development of gas from unconventional deposits:

- **Risk of drinking water contaminated using fracking technology?**
 - **Safe dispose of flowback water?**
 - **Earthquakes?**
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Global resources and impacts

• **Shale gas potential: some 157 trillion cubic metres recoverable using technology available today** (current estimate for conventional natural gas resources stands at 307 trillion cubic metres) [DERA Rohstoffinformationen 2012]

Unconventional sources in the U.S. might have a strong impact on

- global energy framework, i.e. is affecting prices
 - energy mix
 - supply situation
 - geostrategic situation
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German Federal Government`s priorities

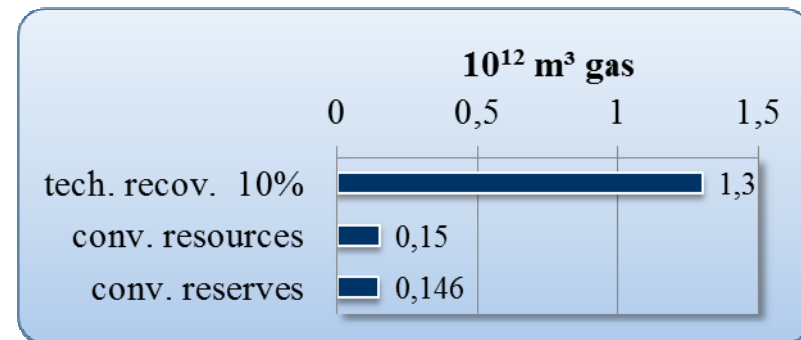
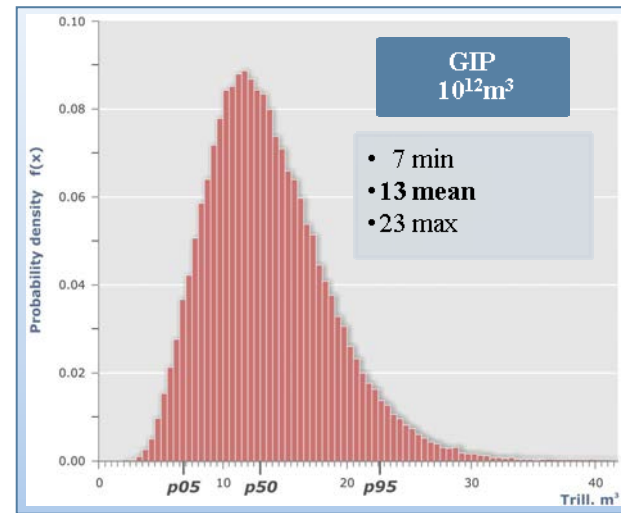
- **First priority is the protection of our environment and our drinking water in particular.**
 - **We want to be in a position to harness the potential of shale gas in a sustainable manner.**
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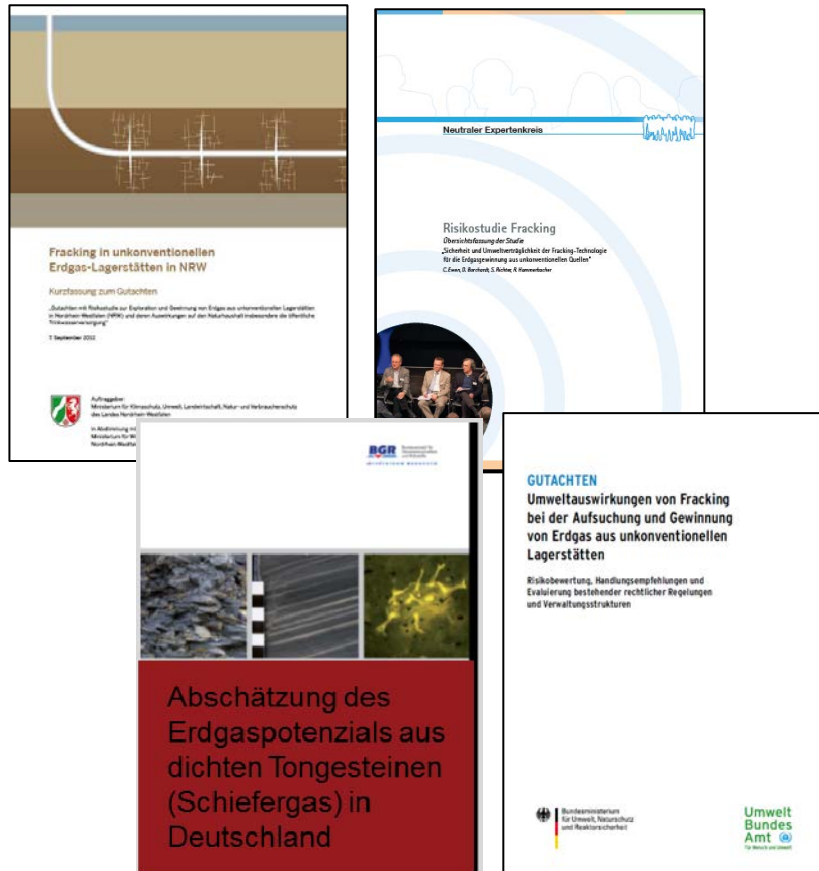
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Shale gas potential in Germany (BGR study)





Published studies in 2012/13



- Risk- Study „Fracking“ – „ExxonDialogProcess“
- Risk Study North Rhein Westphalia
- Risk Study UBA Fracking and its environmental impacts, in particular to groundwater
- BGR Study Shale Gas Assessment & Environmental Aspects
- The German Advisory Council on the Environment (SRU)



Legal framework - Federal Mining Act (BBergG)

- License or approval is required for any exploration or development of oil, natural gas, or geothermal energy
 - This provision applies irrespective of the exploration and extraction technologies that are deployed

 - Approval that plan complies with mining legislation and does not conflict with the overriding public interest
 - Environmental Impact Assessment for Mining Projects: Additional EIA is required where daily production exceeds 500 tons of crude oil or 500,000 cubic metres of natural gas (“EIA Mining Regulation”)
 - Carrying out these procedures falls within the sphere of exclusive competence of the respective Land
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Federal Water Act

- **Federal Water Act**, use of fracking technology for deep drilling requires a water permit, issued by the competent mining authority and subject to the water authority's approval.

 - Within designated water protection areas and mineral spring protection areas, the use of fracking technology for deep-drilling may be banned altogether, if necessary to ensure that the water is protected.
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Current status:

- **In view of the on-going public debate on fracking, the government coalition has agreed not to adopt new legislation until after the general elections in September 2013.**
 - **Desire to reach a consensus as broad as possible among the population and industry.**
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