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IUCN Academy of Environmental Law Research Committee, the IUCN Environmental Law Centre, and the IUCN Commission on Environmental Law

Workshop on Ecosystem Services, Economic Valuation, and Environmental Equity: Complementary or Contradictory

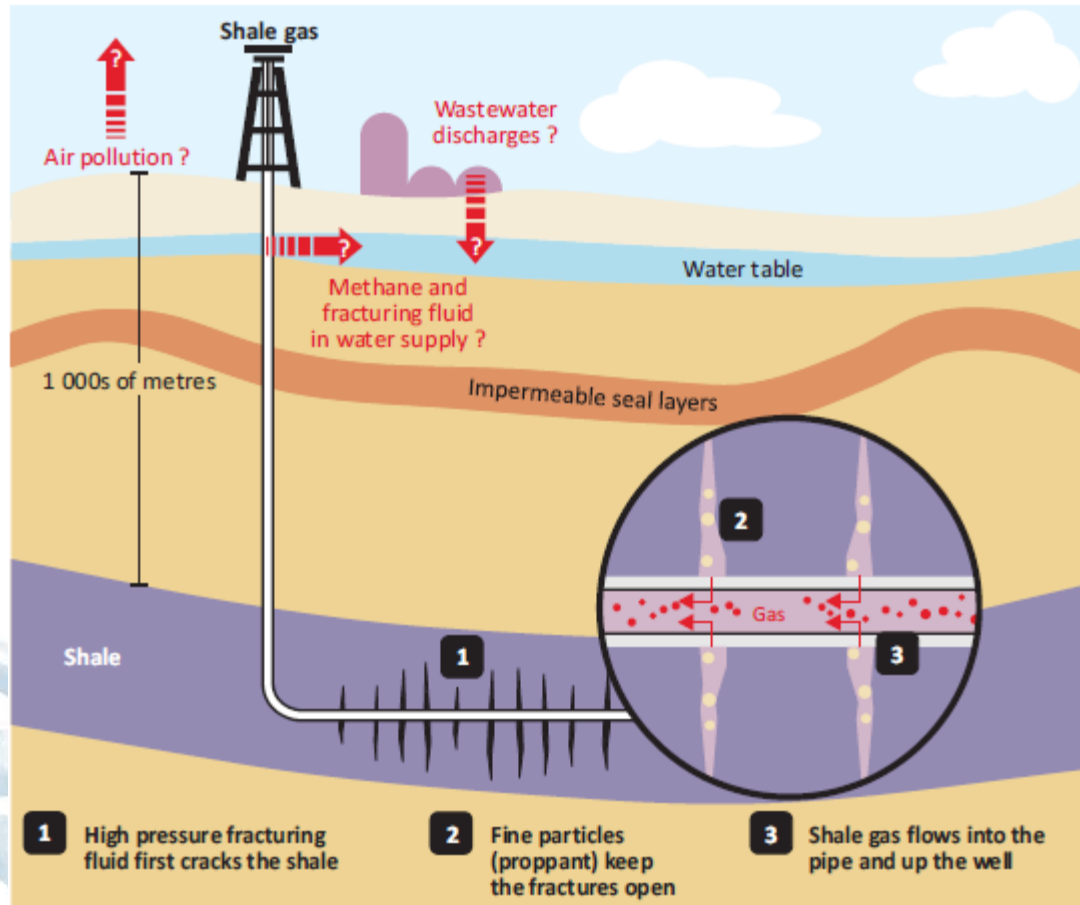
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Environmental Protection versus Energy Supply Security- The Shale Gas Case and Its Impacts on Ecosystem Services

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Shale Gas, hydraulic fracking and impacts on the environment and ecosystem services



Source: EIA, (2012), 25.

Legal framework in the US and EU

- No overall “Shale Gas Regime” or “Act” in both jurisdictions
- Several regulatory levels involved
- Fall under general energy and environmental legislation although specific unconventional gas characteristics ask for more evolved regulation



What should the law look like

- The **benefits and risks** of an ecosystem services approach to environmental protection;
 - **How policy makers can design ecosystem services programs** to achieve the greatest environmental and economic benefits; and
 - The **implications** of ecosystem services on environmental and economic equity.
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- for an ecosystem service approach to Shale Gas regulation...

3 crucial elements

- **The right level of regulation**
- **The institutional setup**
- **The power of the law**



The right level of regulation

local

- Scale of the impacts
- Comparability and equal valorization
- Holistic and coherent regulation
- Enforcement and monitoring

federal/subnational

- Experience and competence
- Transborder harm
- Energy supply security
- Race to the bottom

“adaptive federalism”



The institutional setup

- Implementation, enforcement, administration and monitoring schemes are spread amongst different agencies, (government) institutions and levels
- No clear setup in either ecosystem services field nor the shale gas regulation area.
- River Basin Commissions as solution?



The power of the law

| Possible tools | ... the Shale Gas Case |
|----------------------------|---|
| property rights | commonly determined |
| liability | Including liability for ecosystem service functions into existing regimes |
| environmental planning | EU IEA threshold US State NEPAs |
| (environmental) permitting | EU IPPC regime US NPDES threshold US SDWA exemption |
| taxes | “ecosystem service districts” |

Conclusion

- Ecosystem service approach ensuring economic and environmental equity is well possible
- “Adaptive federalism” regime
- Subnational authority, like the River Basin Commissions/Districts being able to issue binding regulations but focusing on all services of an ecosystem at the same time
- Adaption of Environmental Impact Assessment and Permitting Process
- **Once this has happened in practice, operators will be able to compare investments in pand as a consequence use these services more sustainably physical capital and investments in natural capital**

References

- International Energy Agency, "Golden Rules for a Golden Age of Gas," in *World Energy Outlook Special Report on Unconventional Gas* (2012).

