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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

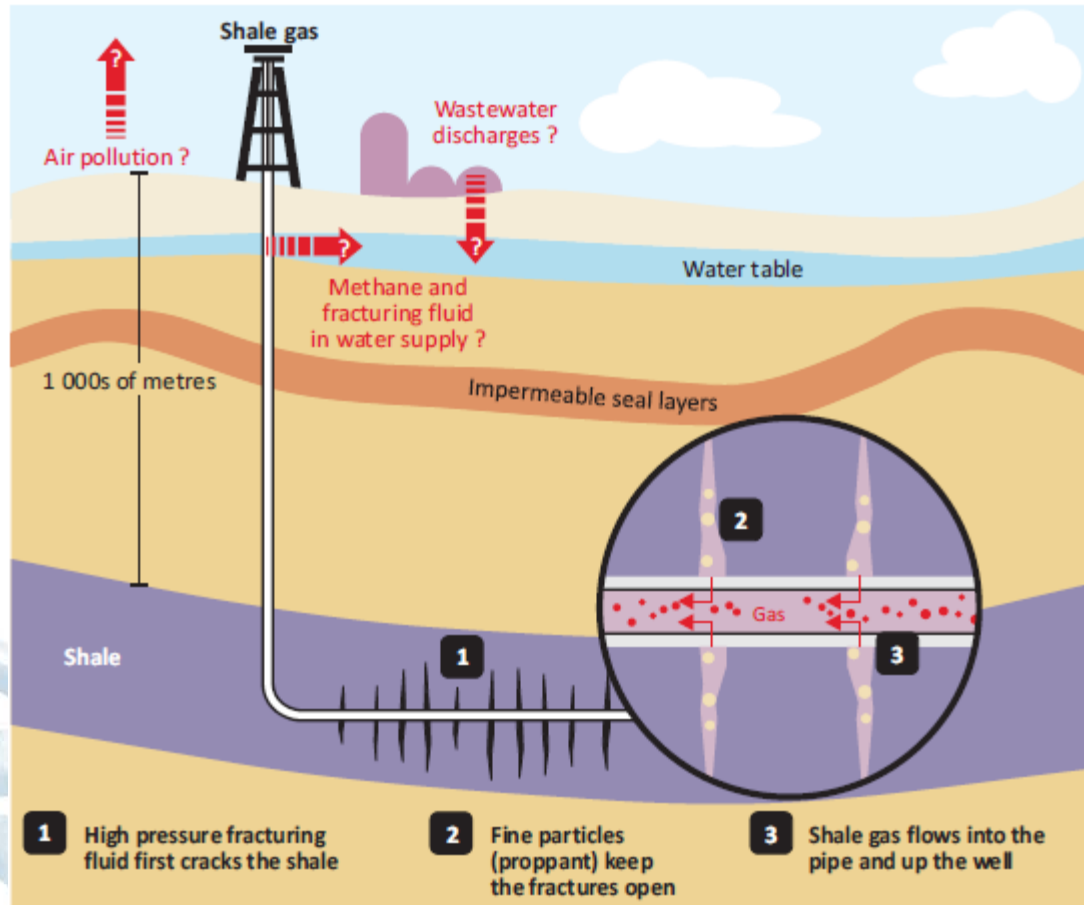
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Environmental Protection versus Energy Supply Security- The Shale Gas Case and Its Impacts on Ecosystem Services

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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).

