

Natural Gas Extraction: Issues and Policy Options

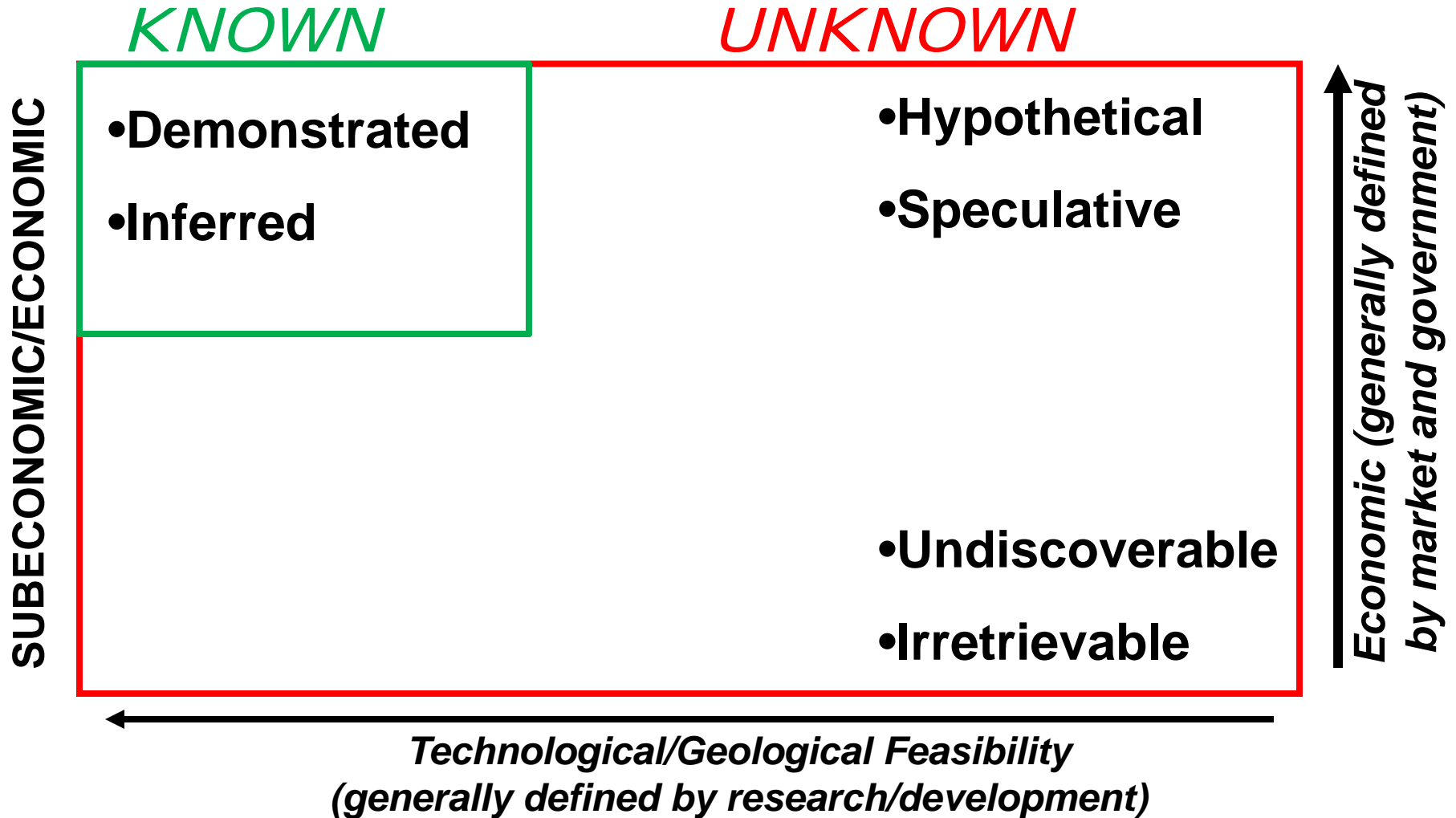
*Farm Foundation Forum
National Press Club
Washington, DC*

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What are the "real" issues?

Harris, J., *Environmental and Natural Resource Economics*, Houghton Mifflin Co., 2002 (adapted from US Bureau of Mines & USGS, 1976).



*Key question:
“Do benefits of fracking outweigh
the costs?”*

- **Likely benefits**
 - Cheap energy
 - Economic development/jobs
 - Energy independence
 - Export energy
 - Environmental benefits
- **Likely costs**
 - Damage to environment
 - High infrastructure costs
 - Opportunity costs
 - Alternative water use
 - Energy/environment for future generations
 - Alternative land use

Answer: “It depends, and we may not know yet.”

Regulatory Philosophy

Innocent until proven guilty

- **Allow activity to proceed until objective proof of harm is found**
- **Presumes benign nature of activity**
- **Assumes markets can quickly find equilibrium**
- **Who pays?**
- **Standard of proof?**

Guilty until proven innocent

- **Regulate activity until objectively proven benign or of acceptable impact**
- **Presumes harmful nature of activity**
- **Who pays?**
- **Standard of proof?**

Locus of Control

Local Level

State Level

Federal Level

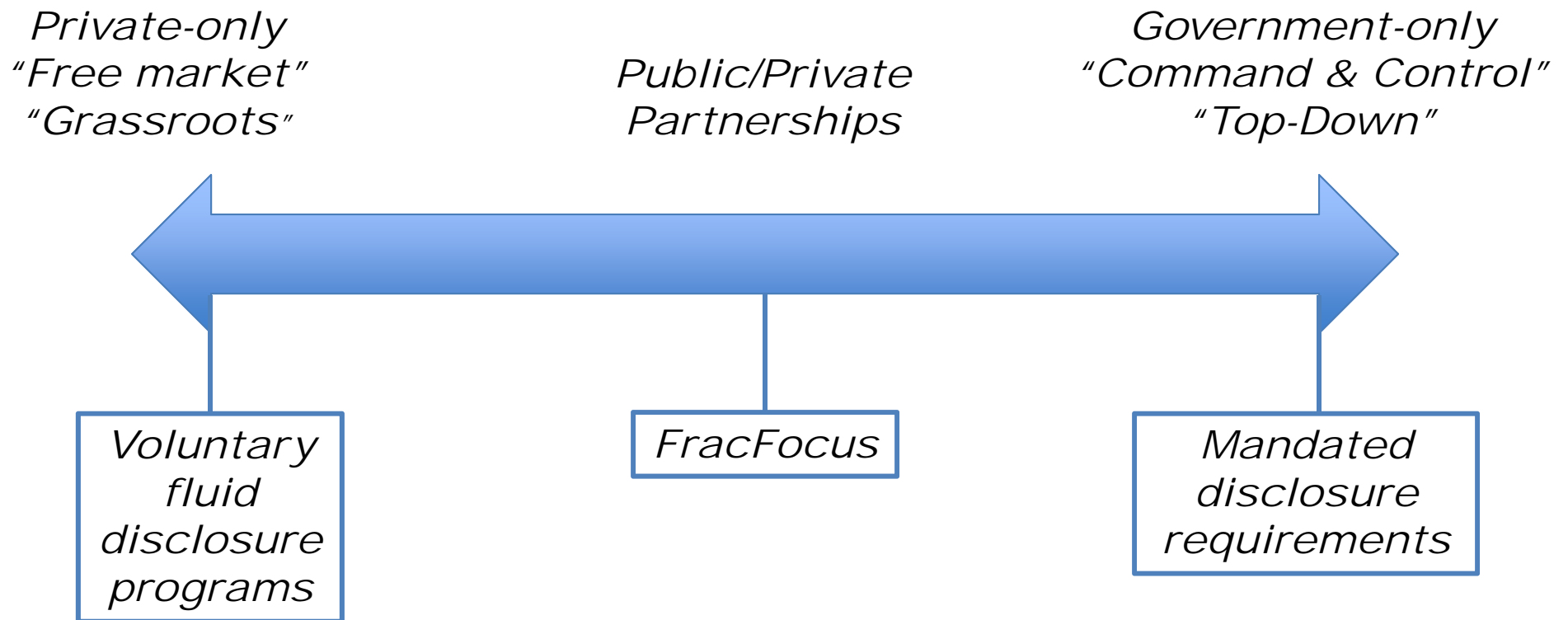


Local knowledge
Locus of impact
Available resources?
Authorization?
Uniformity?

Regional knowledge
Plenary statutory authority*
Delegation of programs
Removed from impacts?

Access to expertise
Uniformity
Most removed
Uniformity desired?

Alternatives to resolve concerns Environmental & Community

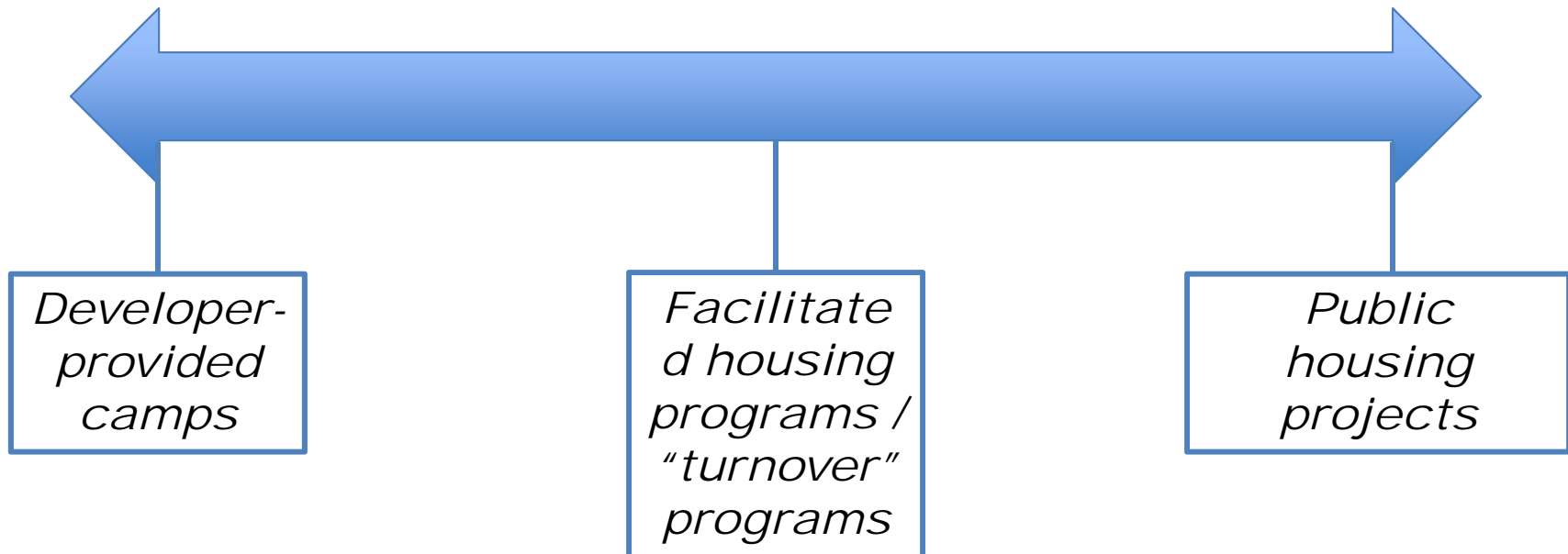


Alternatives to resolve concerns Environmental & Community

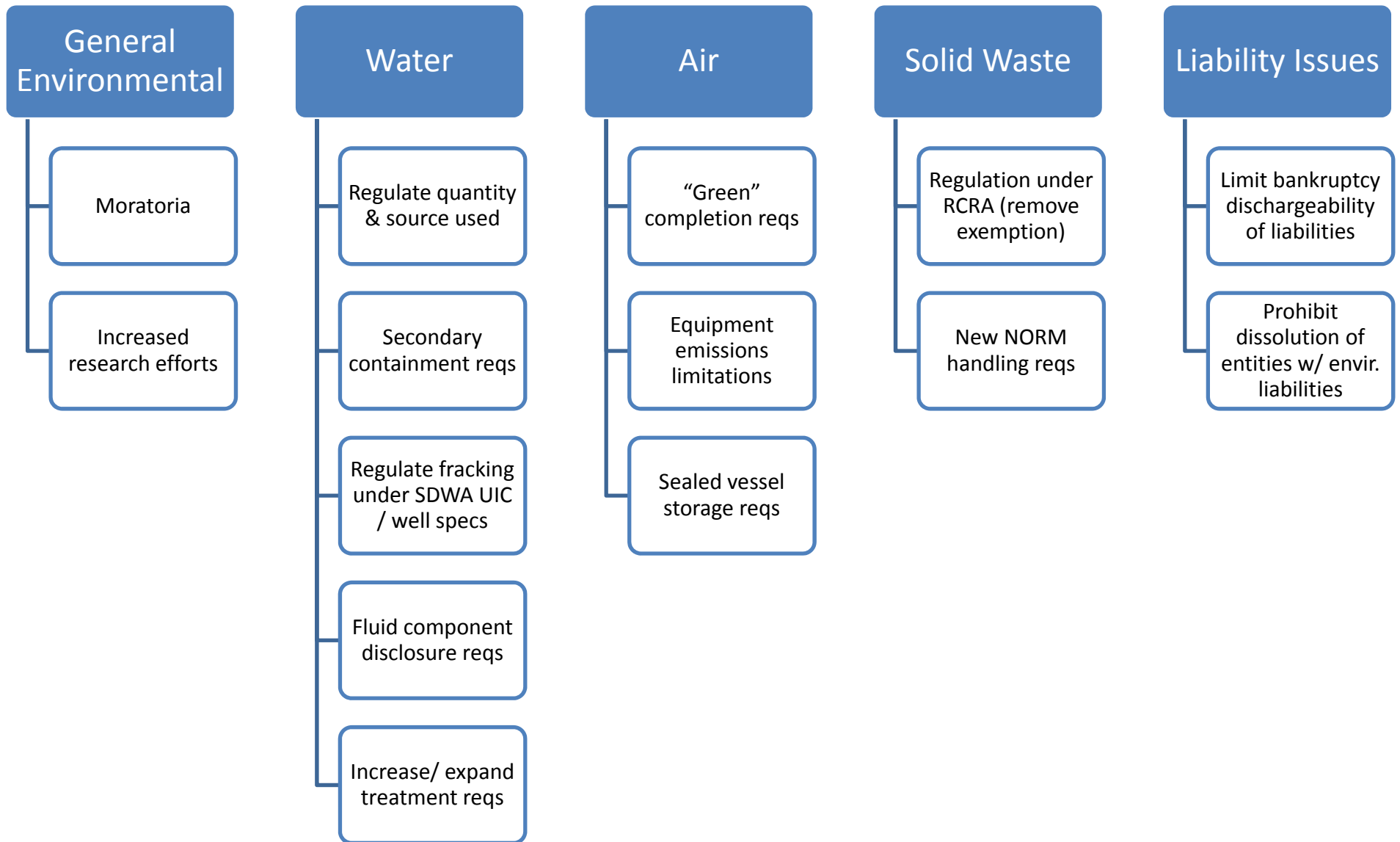
*Private-only
"Free market"
"Grassroots"*

*Public/Private
Partnerships*

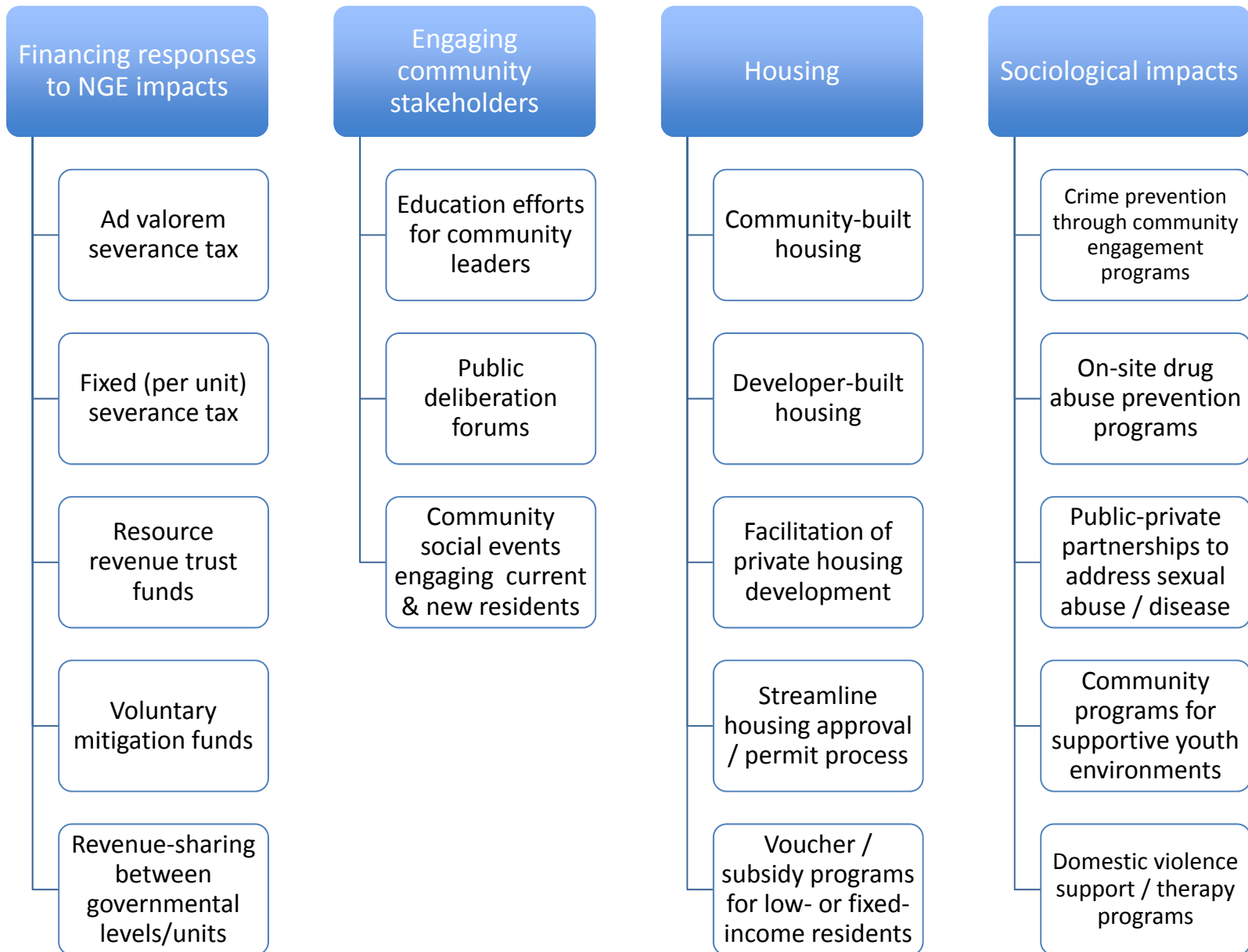
*Government-only
"Command & Control"
"Top-Down"*



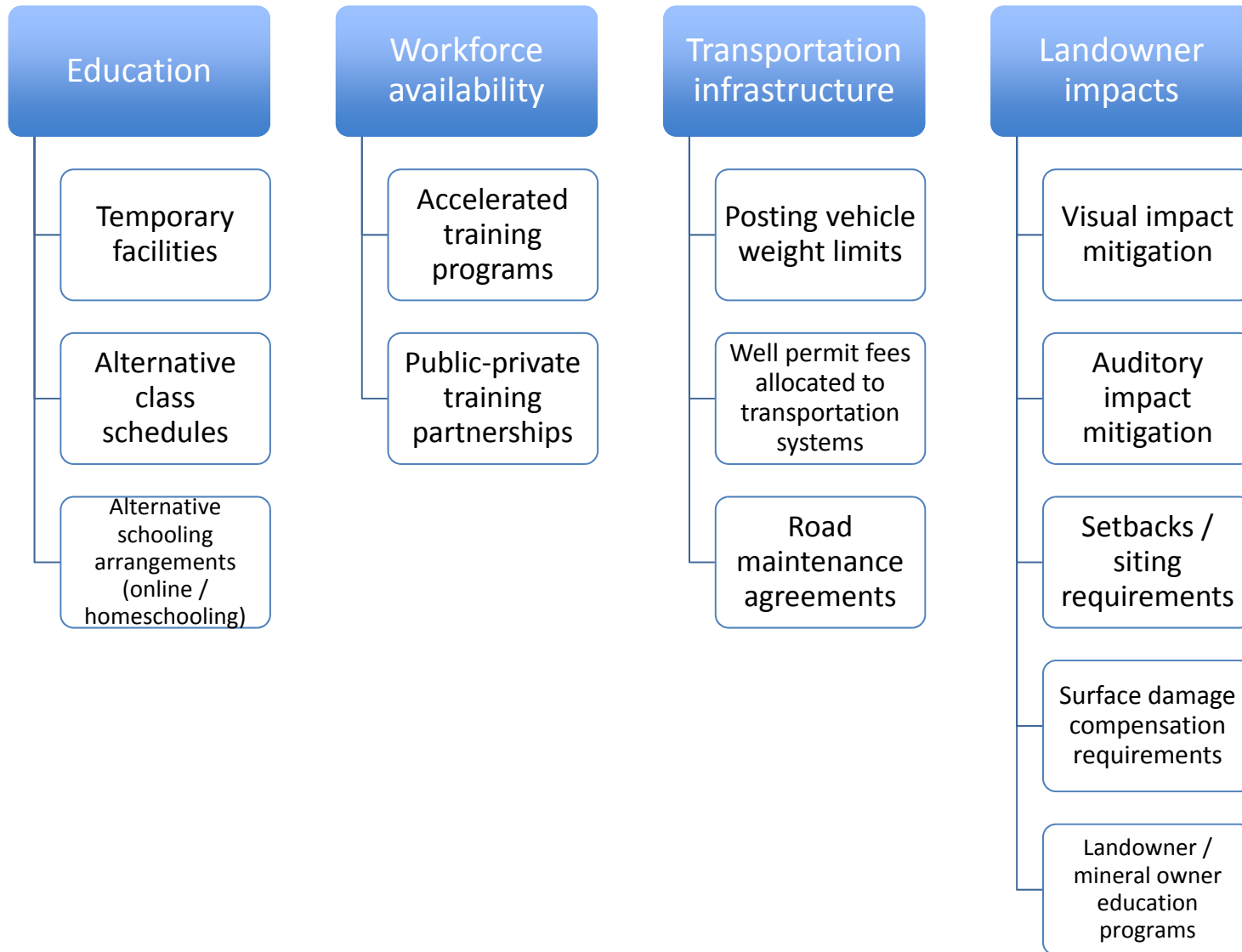
Alternatives: Environmental



Alternatives: Community

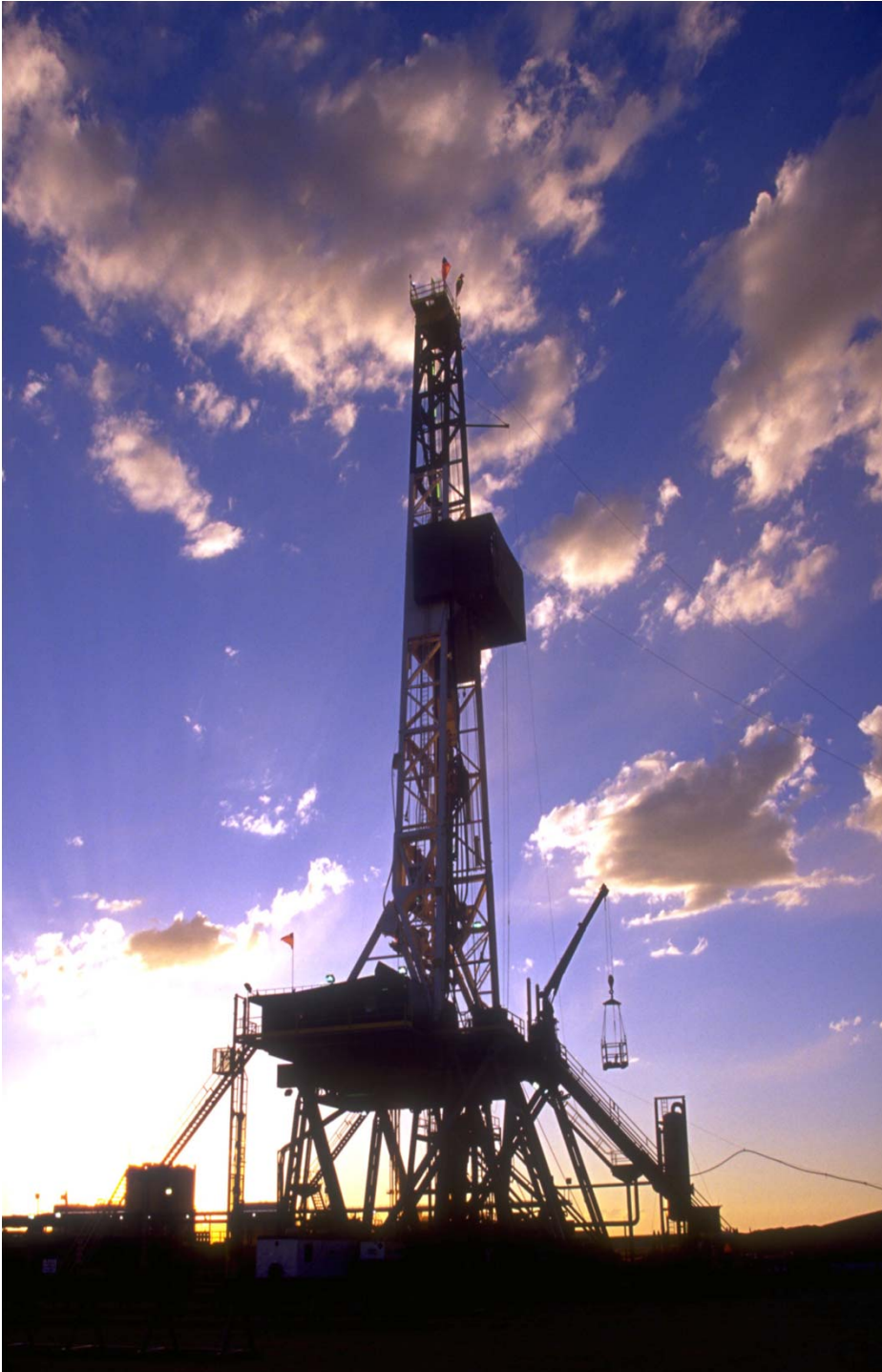


Alternatives: Community



Conclusions

- **Much uncertainty about natural gas extraction issues remains**
- **All stakeholders have numerous options for action**
- **Informed dialog among stakeholders at every level is critical**
- **Short term impacts are generally known**
- **Long term impacts less certain**
- **More research on fracking is needed**
- **More research on alternative solutions is needed**
- **Education and transparency are important**



THANKS!

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