Public perceptions of Carbon Capture and Storage

IEA CCS Summer School
Nottingham University
22nd July 2013

Sarah Mander
Why does social acceptance matter?

- Social acceptance of new technologies is central to successful deployment

Source: Greenpeace
Public understanding of CO$_2$

Does CO$_2$?
- Explode
- Is it flammable?
- Is it unhealthy?
Public understanding of CO₂

- Which of the following statements do you think applies to CO₂?

- It is unhealthy: 74%
- It is a water pollutant: 18%
- It is flammable: 9%
- It is explosive: 7%
- It is safe to breathe: 7%
- It is harmless: 6%
- Other (SPONTANEOUS): 2%
- None (SPONTANEOUS): 2%
- Don’t know: 9%
- Only positive statements: 7%
- Only negative statements: 76%

Source: Eurobarometer
Public understanding of CO$_2$

- Misconception of CO$_2$, impacts on misconceptions of CCS (Itaoka et al, 2012)
- Associated with ‘soot’ or ‘exhaust gases’ (Itaoka et al, 2012; Wallquist et al, 2009)
- Low levels of understanding of properties of CO$_2$, or everyday uses (de Best-Waldhober et al, 2009, 2011)
- Good understanding of CO$_2$ correlates with positive view of CCS (de Best-Waldhober et al, 2009, 2011)
Public awareness of CCS

- Have you ever heard of CO₂ capture and storage?

Source: Eurobarometer
Public perceptions of CCS

- People are unfamiliar with CCS compared to other low carbon technologies
- People prefer other low carbon technologies
  - energy efficiency
  - wind
  - solar
  - marine
  - nuclear (to a certain extent)
- CCS is acceptable as part of a wider portfolio of options
Public perceptions of CCS

- Support for CCS is dependent upon:
  - Acknowledgement that climate change is happening
  - The acceptance of the need to mitigate carbon emissions

- Issues of concern include:
  - Safety
  - Reliability
  - Risks
  - Costs and finance
  - Governance
  - Monitoring
Building social acceptance

- **Flexibility**
  - Implementation
  - Framing

- **Engagement**
  - Engage early
  - Know the community
  - Local benefits
  - Communicate appropriate information
  - Engage in an appropriate way to build trust

- **Sources of information**
Thank you

Any questions?

s.mander@manchester.ac.uk
References

- Engagement and communication strategies


- Analysis of opinion shaping factors


- CASSEM project book – Understanding the challenges of CO2 storage
Sources of information

- Which 3 of the following would you trust to give you information about CCS

- Universities and research institutions 45%
- Non-governmental organisations (NGOs) 31%
- Journalists (TV, radio, newspapers) 24%
- Regional and local authorities 23%
- The (NATIONALITY) Government 20%
- The European Union 14%
- Energy companies 13%
- Friends and family 13%
- Other (SPONTANEOUS) 1%
- None (SPONTANEOUS) 5%
- Don't know 8%

Source: Eurobarometer
The importance of trust

- Perceived risks of new technologies are often a far greater threat, financially, politically and socially than the original physical threat.
- The risk society phenomenon has important implications about the communication of CCS, particularly in relation to:
  - Trust
  - Communication of uncertainties related to both CCS and climate change
- Information will be treated with caution until people can:
  - Understand the information
  - Ascertain the reliability of the information
  - Decide whether they could trust the experts
- Face to face interactions are crucial to building trust.
The importance of trust

- Trust in the organisations concerned is a crucial element of public acceptability of a project.
- Companies have to be open about their motives
  - Claims that it’s all about the environment will not be well received from private companies
  - The economic case needs to be made
- Trust is easy to lose and hard to regain