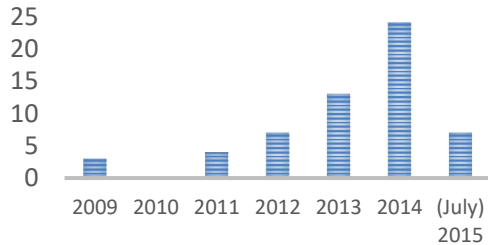


M THOMAS & N PIDGEON

Publication frequency of public perceptions papers in the US and Canada



Public perceptions review: findings

- mixed levels of awareness and support
- negative associations with the term ‘fracking’
- mistrust of industry and government
- perceived inequitable risk/benefit distribution
- perceived benefits tend to be economic
- perceived risks tend to be environmental/social

Shale development in the US and Canada
public perceptions and engagement

Engagement review: findings

- many parties carry out engagement activities
- a variety of formats are used
- companies often engage in one-way information provision
- little engagement is at the earliest stages of development
- most elicits responses of interested and affected parties



Background

We can learn much that will help to anticipate the emergence of public representations of shale gas in Europe by reviewing what has already occurred in the US and Canada where shale operations are more established.

Engagement with shale development is not easy, due to many factors including inequitable impacts, scientific uncertainty and mistrust of industry and government. However, potentially affected people have a right to be heard, and public engagement can improve decision making and increase the acceptability of decisions. From a community perspective, effective engagement with industry can lead to lease deals and fracking bans. From an industry perspective, companies are increasingly recognising that effective engagement is essential to obtain a ‘social license’ to operate.

Study

In our first report, we reviewed 55 research articles from 2009 until 2015, investigating public perceptions of shale gas / oil extraction via hydraulic fracturing in the US and Canada. Based on our initial reading of these articles and those relating to wider energy literature, we developed nine themes, including: awareness/knowledge, attitudes, risk/benefit perceptions, and regulation. The articles were then examined to gain insights into how these themes manifested, and their findings were then synthesised.

In our second report, we reviewed 26 engagement efforts carried out by US and Canadian companies, alliances, government agencies, academics and activists. For each, we summarised: the methods used, the stage of development in which engagement occurred, the issues explored, the participants, and whether there was provision for multi-way communication. We then drew on these findings, alongside insights from the literature, to make recommendations for future engagement.

Results

Studies report mixed levels of awareness of shale operations, tending towards higher awareness in areas with existing development. Individuals tend to have negative associations with the term ‘fracking’, but public views are mixed as to whether benefits outweigh the risks or vice versa. Perceived benefits tend to be economic (e.g. individual gains, job creation), while perceived risks tend to be environmental and/or social (e.g. impacts on water). Papers also point to ethical issues (e.g. risk/benefit distribution, procedural justice, quality of life). Levels of support/opposition vary. Views on regulation also vary, but there is widespread distrust of responsible parties (particularly industry and government), stemming from perceived unfairness, heavy-handed corporate tactics, and a lack of transparency.

Many parties (e.g. government, community groups, companies) are carrying out engagement using a variety of formats (e.g. public meetings, citizen science, qualitative research). Much does not occur at the earliest stages of development, and rarely asks the most fundamental question -whether shale development should proceed at all- instead commonly focusing on questions of impact minimisation, regulation and gaining support. The majority tend to elicit responses of interested and affected parties, with less attention paid to the views of the wider public.

Recommendations 1: perceptions

- There are a number of important differences between the North American and European context, and the studies reviewed here are not a substitute for further **research in Europe**.
- We found that studies tend to focus on areas in which shale extraction is established, where concerns often centre on localized issues like water contamination and traffic. A focus on **national contexts** may elicit wider considerations such as climate change and energy security.
- While a mix of approaches were used in the cases that we reviewed, there is a strong focus on quantitative surveys and qualitative interviews. Future work might consider techniques such as **deliberative** workshops or **ethnographic** approaches, which can offer more insight into co-produced meanings, complex and contingent judgements.
- The continually shifting shale landscape, including oil prices fluctuations, political change, and growing evidence of negative environmental impacts, mean that research should **continue** to chart public perceptions.

See also Thomas, M., Pidgeon, N., Evensen, D., Partridge, T., Hasell, A., Enders, C., Harthorn, B.H. and Bradshaw, M. 2017. Public perceptions of hydraulic fracturing for shale gas and oil in the United States and Canada. *WIREs Climate Change*, e450. 10.1002/wcc.450

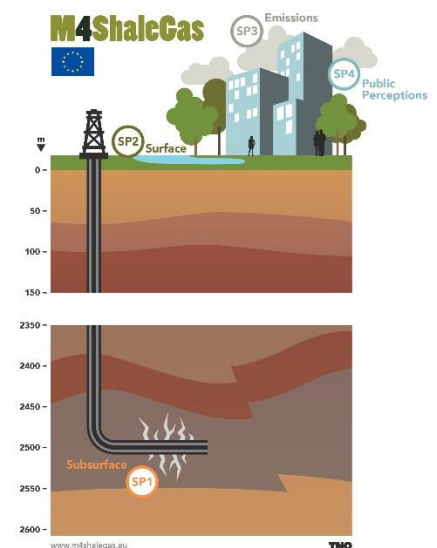
Recommendations 2: engagement

- While the following guidelines lend themselves particularly to engagement where members of the public are participants (e.g. industry engagement), many also apply to that *led* by members of the public (e.g. activism).
- We recommend that engagement forms a key aspect of potential development, with **investment** of adequate time and resources.
- Consideration might be given to **who** participates and **how** they participate. Conveners may wish to consider the 'type' of participant (e.g. regulator, landowner, lay public), how large the sample should be, and how local/national contexts might shape their responses.
- We recommend that engagement begins at the **earliest** stages of development, and that organisers reflect on how the timing of an engagement activity might influence participants' responses.
- **Methods** may be selected and adapted according to the specific circumstances, participants and goals of the engagement. Methods range from blog posts, through qualitative interviews, citizen science, town hall meetings and protest marches.
- Organisers might wish to facilitate **multi-way communication** and deliberation, allowing for the consideration of a variety of viewpoints and potential solutions.
- We recommend that **openness** and transparency be maintained throughout. For example, forums and results should be adequately publicised, and organisers should remain truthful and unbiased during the engagement process.
- We also recommend a strong commitment to **acting** on recommendations that emerge, and providing feedback to participants.

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The Project

M4ShaleGas examines the potential environmental impacts and risks related to **shale gas** exploration and exploitation in Europe with the goal to build a technical and social knowledge base on best practices and innovative approaches for **measuring, monitoring, mitigating, and managing** these impacts.



4 sub-programs:

- SP1-subsurface
- SP2-surface
- SP3-air emissions
- SP4-public perceptions

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Coordination:

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