

# 11 An assessment of current regulation and suggestions for a citizen-centred approach to the governing of UK hydraulic fracturing

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## Introduction

For reasons of economics and security of supply, the UK government began promotion of the development of unconventional natural gas resources, in hopes of emulating the USA's "shale gas revolution" (US EIA, 2014; UK DECC, 2015). The UK is in the preliminary stages of licenced drilling, exploration and testing for development of its shale gas resources (Standing, 2016; Bradshaw, 2017). The British Geological Survey estimated the volume of shale gas in 11 counties in Northern England at 40 trillion cubic metres (BGS, DECC, 2013). After legal challenges by communities where resource development was proposed (Preston New Road Action Group (acting through Susan Holliday) and PNR v The Secretary of State for Communities and Local Government and Others), the UK began exploratory drilling at the Preston New Road (PNR) site in 2017 (Bickle et al., 2012). This is significant as development of this technology – new in the UK – is coming on the heels of the recent populist vote to leave the European Union (EU). Currently, the UK's environmental laws are based on EU Directives. Additionally, the European Commission provides a *non-binding* Recommendation on minimum principles for the exploration and production of hydrocarbons, including shale gas, using high-volume hydraulic fracturing (European Union, European Commission recommendation, 2014). This Recommendation offers best-practice guidance, and indicates the future regulatory direction of the Commission. Preambular paragraph 1 states that: "(1) Member States have the right to determine the conditions for exploiting their energy resources, as long as they respect the need to preserve, protect and improve the quality of the environment," with paragraph 2 acknowledging that the "[. . .] hydraulic fracturing technique raises specific challenges, in particular for health and environment." These paragraphs point to the need for the UK to consider health and environmental effects, but leave a degree of discretion as to how and to what extent hydraulic fracturing should be regulated. The UK government is resisting the development of specific legislation largely on two grounds: first, they are confident that the current regulatory regime is "more than robust enough" and second, they hope to promote technological development and industrial growth (Stokes, 2016).

Furthermore, after “Brexit,” the UK must either maintain the EU’s law and policies or develop UK equivalents to protect the environment and public health. There are particular concerns over possible “zombie legislation,” where many of the UK’s current laws from the EU are either hard to transpose, easy to erode, or have no governing body (outside the EU) to enforce them, with the expectation that environmental safeguards will be further diluted after exiting the EU (Reid, 2016; Edgar, 2017).

The potential risks to the environment and public health thus call for an inclusive participatory and accountable approach to regulation of hydraulic fracturing, as damage may violate an individual’s right to live in a safe and healthy environment. To this end, consultation, public participation and consent issues become vital. The UK has no “free-standing” legislation on public participation in environmental decision-making but takes its cue from EU law (Directives 2003/35/EC, 85/337/EEC and 96/61/EC). As conventional hydrocarbon resources are depleted, producers turn increasingly to unconventional resources that require more involved and potentially hazardous processes (Short and Szolucha, 2017). The procedures to extract the unconventional energy are increasingly “extreme,” and are driven by “unsustainable energy consumption” (Short et al., 2015). Therefore, the potential for impacts – both physical and social – is similarly increased. Calls for a wider, more accountable and inclusive approach to fracking regulation have included public protests and legal challenges (Bradshaw, 2017). This chapter explores the specific local context of shale gas extraction in Lancashire in the north of England and examines how policy development can strengthen protections. We demonstrate here that a broader understanding of impacts and an improved approach to assessing these impacts is needed. We further examine how international legal and policy frameworks may play a part in protecting citizens and their communities when local and national legal regimes fail to safeguard human rights and access to justice.

## Methodology

A review of existing literature on shale gas technologies in the UK was conducted, as well as a review of human rights treaties and mechanisms and other research relevant to the UK context and, in particular, the Lancashire area.

During the initial scoping process, semi-structured interviews were conducted to highlight differing opinions on key concepts. These interviews focused on environmental and public health impacts of fracking, technical aspects of the process, legal and policy implications of fracking, and public perceptions of the technology. Furthermore, after identification of study sites and development of policy focus, additional semi-structured interviews were conducted. Validation and reliability testing was conducted to ensure that questions were as open-ended and unbiased as possible. This was achieved through a “pilot interview” in September 2016, followed by subsequent interviews in October 2016 and June 2017, as well as in October 2017. Interviews were conducted in Lancashire near Preston New Road; Lytham St. Anne’s; and in the greater London area.

All names were removed and interviews coded with a number corresponding to the date and interview number per interview period. The interviews were two-fold, as they served (1) to develop a grounded case study and better understanding of the context in Lancashire and (2) to broaden understanding of the topic, identify gaps in understanding and reduce researcher bias.

### **Potential environmental and health risks of fracking**

Potential environmental and public health risks from fracking are well-documented, primarily from data collected in the United States, and include risks to ground and surface water, air quality, agricultural productivity, ecosystem pattern and process, permanent changes in “quality of life,” heavy industrialisation due to expanding operations, and loss of property value (Howarth, 2014; O’Leary, 2014). Sources of risk include fluids used in the extraction process, toxic gases, liquids and solids that exist naturally underground, both from fracking itself and the waste disposal. Studies have shown there is potential for contamination leading to environmental and public health risk at all stages, from preparation of the well to decommissioning at the end of its functional life (Howarth et al., 2011; Colborn, et al., 2014; Moore et al., 2014).

In addition to the physical or environmental risks, there are significant social and psychological risks. The resource-intensive methods of fracking have the potential to change the landscape *and* the social and cultural dynamics of local communities as they become industrialised (Jalbert et al., 2017).

### **Current regulatory framework in the UK**

Current regulation of fracking in the UK involves a complex patchwork of regulations drawn from EU Recommendations and Directives, local planning regulations, permitting requirements and health and safety site laws. We consider the most important of these below.

#### ***Environmental impact assessment***

Environmental Impact Assessment (EIA) in England is driven by EU EIA Directive (Directive 2014/52/EU amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment) that mandates environmental assessment for EU member states. The Town and Country Planning (EIA – England) Regulations 2017, in force as of 16th May 2017, implement the EU Directive in the UK. New changes under this 2017 legislation now require human health and climate change impacts to be taken into account in a scoping study and offer more scope for consideration of broader issues related to fracking. However, pre-2017 Assessments for projects currently pending or ongoing may have either skipped these steps or not have even been required to submit an EIA.

A project's EIA offers some room for consideration of “bigger picture” issues, especially noting the recent EU-driven amendments to include human health and climate change impacts. In addition to the limits of EIAs pointed out in the introduction to this volume (Szolucha, 2018), impact assessment procedure in the UK is further linked to the politicised planning system, a limitation being that “it comes into play only after strategic decisions have already been taken” (Ryall, 2009: 29). For example, Article 15 (1) states: “A person who is minded to make an EIA application may ask the relevant planning authority (Local Authority or Minerals Planning Authority) to state in writing their opinion as to the scope and level of detail of the information to be provided in the environmental statement (a ‘scoping opinion’).” In relation to UK fracking (which is classed as an Annex II EIA (EU) (Schedule 2 (UK) project), the screening studies have ruled out the need for fully scoped EIA's for *exploratory* fracking.

***UNECE convention on access to information, public participation in decision making and access to justice in environmental matters***

The Aarhus Convention was in part designed to ensure that accountable aspects of the EIA process, such as public participation in environmental decision-making and access to environmental information, are implemented in a citizen-centred manner across Europe. However, there are some legal problems associated with the implementation of the Aarhus Convention in the UK. In 2014, the European Court of Justice determined that the UK had failed to facilitate access to environmental judicial review procedures due to high costs. The Convention requires that access to justice not be “prohibitively expensive” under Article 9<sup>1</sup> and Directive 2003/35/EC and that individual circumstances of claimants be taken into account. This is particularly significant in relation to local fracking protests in Lancashire as several campaigners had given up their employment to dedicate their time to protest – and drive out – shale gas development operations. The expenses associated with seeking judicial review of EIA and planning decisions and licencing consents may have prevented them from seeking redress (Leigh Day and Co., 2015). The 2017 report of the Aarhus Convention Compliance Committee reported that the UK is making it more difficult, and not easier, for citizens to access justice under the Aarhus Convention mechanisms, largely through imposing financially prohibitive conditions on applicants. So, while the legislation is in place and in theory allows for judicial review of fracking decisions, the expenses associated with accessing the legal system have been discouragingly expensive, or more accurately, the costs associated with losing a case dissuade complainants from bringing a case. But we acknowledge the value of environmental NGOs going to court to safeguard the rights of citizens and the environment. The Government's Civil Procedure (Amendment) Rules 2017 (SI 2017/95) is now being reviewed due to a

successful High Court Case brought by environmental NGOs who challenged the cost caps on accessing judicial review.

### ***Gaps in current UK regulation***

The extent to which risks to human health and environment are adequately addressed by the regulatory framework is debatable. There is a system of checks and balances in place that might appear adequate – in theory – but are these the “correct” checks and balances and is the regime asking the “correct” questions, regulating the “correct” issues, setting the “right” standards and applying the “correct” safeguards? Also, whose interests are being safeguarded by the current fracking regime? For our purposes, we define “correct” and “right” as achieving standards that safeguard human health and environment to a level and standard expected of progressive societies, benchmarked by other regimes or jurisdictions (Fleming, 2017) which may take an alternate political view of fracking that promotes accountability, fairness, legitimacy and inclusion in decision making and a universal pro-environment stance. Some commentators refer to this standard of regulation as being “fit for purpose” or “robust.” (Tawonezvi, 2017). The EU largely supports public participation in environmental decision-making and protest but the UK is not transparent or “encouraging” of the exercise of these civil rights, potentially undermining the right to protest<sup>2</sup> and effective public participation, particularly as a large part of the fracking debate concerns the need to obtain “social licence” (Smith and Richards, 2015; Bradshaw and Waite, 2017).

Controversy surrounding the development of fracking activities in the UK partly stems from the days of the coalition leadership under David Cameron (Conservative) and Nick Clegg (Liberal Democrats) in the UK, when on 12 February 2015, the Infrastructure Bill received Royal Assent, without much public knowledge or debate. This bill eliminated the need for consent to access private property to drill under homes (in the UK, the land under a private property and the mineral resources are owned by the Crown), allowing licenced fracking companies to frack under homes without permission of the inhabitants. Section 4A of the Petroleum Act 1998 (inserted by Section 50 of the Infrastructure Act 2015) requires operators who wish to conduct associated hydraulic fracturing to apply for Hydraulic Fracturing Consent from the Department for Business, Energy and Industrial Strategy. However, the main authorities in England responsible for licencing are oriented towards the business and energy side of fracking and not so much the environmental side (Hawkins, 2015).

### ***Gaps in environmental assessment***

We can argue that the existing regulatory structures do not adequately address the specific environmental and health risks (Hawkins, 2015). The current legal regime requires that an application to drill must go through the local

planning/mineral authority process and operators must consult with the relevant environment agency as to the environmental impact assessment requirements before permits are issued. The EIA process is not only designed to flag potential environmental impacts but should go further in identifying how such impacts might breach individual human rights. This is problematic, as “*exploratory*” fracking projects have been exempted from the mandatory EIA Annex I projects.<sup>3</sup> From an environmental and human rights perspective this exemption misses a logical step: just because something is *exploratory* does not mean it lacks adverse environmental *consequences*. The ECJ–Austria case instructs competent authorities to evaluate exploratory fracking on an Annex II case-by-case basis, which allows for discretion, though all of the cumulative impacts of all drilling activities in an area are considered (European Commission, 2016). Further, EIA mandates public participation, but the extent of the public input varies depending on how proactively the process is handled and whether EIA takes place.

The Health & Safety Executive is also involved as a regulator of well safety and design, yet has no remit beyond site and worker safety. While these processes are in place, and, if followed, make hydraulic fracturing legal, the way that these processes are carried out in practice may not necessarily mean that all potential environmental and human consequences have been fully and accurately taken into account or that broader issues have been addressed. Furthermore, it has been argued that the regulations cater primarily to the needs of the industry (Szolucha, 2015).

In this context, Short et al. (2015) make the case that there is a need for a human rights assessment and incorporation of human rights in the decision-making processes and to empower local citizens. Szolucha (2016) has shown that there is a need for greater research, and incorporation of the social impacts as well as the physical, environmental impacts of shale gas extraction on local communities.

### **Consent**

The notion of consent is also a convoluted and potentially controversial one. Does consent to frack need to be sought explicitly? From whom would the consent need to be obtained: property owners (note here the UK approach of changing the trespass law (Section 50 of the Infrastructure Act, 2015) so as to circumvent the need to obtain explicit consent to access land), those likely to be directly affected by impacts in the immediate vicinity or even those globally at risk from greenhouse gas emissions? For consent to be explicitly obtained, information about risks and benefits needs to be available, so that informed decisions can be reached. If there is a lack of scientific evidence, this needs to be disclosed, and the precautionary principle would likely be applied through consent not being explicitly granted. However, for this process to work, citizens need to be fully informed and able to understand the risks. This requires evidence and proactive, open dialogue on the part of those promoting fracking,

but it is not certain that this has been the case in the UK to date. Consent is about legitimacy, yet with the number of protests and level of local dissent, it seems that consent to fracking in Lancashire has not been obtained.

Given the documented risks of fracking, and the significant opposition to the industrial process by local communities, there is a compelling case to apply the precautionary principle (Fleming and Reins, 2016) when developing a regulatory framework. The application of the precautionary principle would require a priori assumptions about risk and the potential for breach of human rights and environmental standards. However, this does not currently appear to be the UK strategy. The logical outcome of this approach is that there may well be impacts from fracking on human health and the environment but, based on currently available evidence, we will have to “wait and see” what the impacts are. The precautionary approach, which would require that we not proceed with a new technology such as fracking in the event of scientific uncertainty about impacts, is not supported by the pro-fracking community. This is because it underpins arguments for complete moratoria on fracking activities until risk assessments rule out levels of consequential harm to humans and the environment. Thus, we do not know what level of harm is acceptable.

### **Case study of fracking in Lancashire, UK**

#### *Background to the Lancashire case*

In 2011, Cuadrilla Resources dug two test wells near Blackpool in Northern England, but operations were halted when small tremors at the site were recorded. Following this cessation of operations, the government commissioned a study by the Royal Society and Royal Academy of Engineering. The jointly produced final report issued in June 2012 concluded that risk is low if the process is monitored adequately (Bickle et al., 2012). However, it remained unclear what “monitored adequately” can actually mean in this context. In a BBC interview, the Report’s Chair, Prof. Robert Mair, said: “The UK regulatory system is up to the job for the present very small exploration activities, but there would need to be strengthening of the regulators if the government decides to proceed with more shale gas extraction, particularly at the production stage” (Black, 2012).

The UK has a multi-stage approval process a company must complete in order to be allowed to drill, including: a licence issued by the Oil and Gas Authority; landowner consent, environmental assessments, local planning permissions, health and safety inspections of well design, and examination for protection against seismic triggers (Leigh Day, 2015). In early 2015, the UK’s Environment Agency (EA) issued drilling permits to Cuadrilla Resources at one of two sites in Lancashire, following public examination of the plans to protect the community and environment. The applications, however, remained controversial due to public and scientific fears that the technology might harm water supplies, trigger earthquakes or pose other environmental or health risks.

In June 2015, the Lancashire County Council turned down Cuadrilla's application to drill for the two sites – near Roseacre Wood and Little Plumptre – due to potential noise and traffic impacts. Cuadrilla refuted these claims and appealed the denial to the Secretary of State for Local Communities; Lancashire County Council responded by calling their decision to deny the applications “democracy in action” (BBC, 2016). While local communities in Northern England remain concerned over safety and health risks (Bradshaw, 2017), the current Conservative UK government supports development of natural gas resources through implementation of fracking technology (Schaps, 2016). In late 2016, the UK's Secretary of State for Communities and Local Government overturned the earlier Lancashire County Council's rejection of a drilling application by Cuadrilla Resources (Halliday, 2017; Vaughan, 2016).

### ***Public perspectives and local response***

Short and Szolucha (2017) have shown from several years of research in the Lancashire area that while the local communities are informed and engaged, many feel a strong sense of dissatisfaction with the planning process and feel that there is a lack of equity in the very procedures designed to provide a “voice” to local communities. The concerns of local citizens and feelings of not being engaged or involved in the planning processes, lack of procedural justice and feelings of bias towards the industry and central government interference in local affairs, including amending planning and applications rules, is likely only going to be exacerbated as the extraction operations proceed (Short and Szolucha, 2017). Moreover, merely the debate – or proposed development – of shale gas may be enough to cause increased levels of stress and anxiety in the community (Szolucha, 2016; Short and Szolucha, 2017).

Our research of local communities in the Lancashire area corroborates these findings. Residents there told us that there were inadequate mechanisms for hearing – and addressing – the concerns of local community members. Residents frequently expressed feeling in a “David and Goliath” situation, facing development backed by powerful gas firms with political clout. They further described that citizens' representation was eroded both from the local county council's inability to deny drilling permits (likely largely on account of the ability of the government to override local decisions), as even those who supposedly represented the best interests of the community were powerless when confronted with the industry. Even those connected to the oil and gas industry echoed the idea that it doesn't represent or listen to the local community. One interviewee, a member of an environmental NGO, who also works in the oil industry, explained that while he is “proud of his work” [in the industry], he also believes that there is a “systematic lack of logic and transparency on all levels [in the way fracking has developed] in Lancashire.”

These feelings appear to have led local citizens to become what Jessica Smartt Gullion calls “reluctant activists” (Smartt Gullion, 2017). For example, members of the group Residents Action on Fylde Fracking (RAFF) explained that



they're just "an average group of concerned citizens. Once you start to learn about (the dangers of fracking) you'll wish you never knew." RAFF explains that their mission is "an immediate halt to fracking and gas extraction in Fylde before a full and complete evaluation of the risks."

Another group of local community members who have turned to activism to "get their voice heard" is the "Frack-Free Nanas." The Nanas derived their name from the fact that they consider themselves typical grandmothers. In October 2016, one member explained that "Nana is a state of mind. It means you care about leaving the world intact for your grandchildren. You care about your role in the world, your stewardship. We didn't set out to fight this, we learned about it, and the more we heard, the more we realised we couldn't just sit back." This group's activism has a strong focus on intergenerational equity.

Another member of Nanas explained that: "I guess I joined the Nana's late, a few years ago. I remember when we had those earthquakes, and I felt it. I started seeing them [the Nanas, Frack-Free Lancashire] in their yellow, and thought, well my daughters, my family, I should find out what it's [fracking] all about." Another member added: "We're peaceful, but you know, don't threaten a mother's children. . . . We've seen what happens. They tell you it'll make money but what happens when you have to buy all your water? They can't take our quality of life."

A visitor from Liverpool who came to learn more about the risks of shale gas explained that she felt the majority of the people in Blackpool [in Lancashire region] are opposed to fracking, as their community will be directly affected by the proposed drilling. But she said that "it's a bit different in Liverpool, where people are not quite as clued up about all the dangers. Many of them don't even know what's happening on their land, to their neighbours." She said that the effects on the region are worrisome and that the decisions are made far away in London by people who don't have to live with the results:

You have this beach town, it used to be much nicer, the beaches were nicer, and people would come here for vacations. Now there are fewer tourists and it'll only get worse. People see what happens, hear about the dangers and damage, and no one wants to come back . . . will only make things worse. They [in London] think that they can just come and frack us, that it's far away in the north and no one cares. But we care, and we stand together. It's the first time we're seeing Lancashire and Yorkshire banding together . . . united against fracking.

A Nana told us why she – and other local members – didn't trust the government's promises about the positive results of fracking in the area:

Well, you don't really have redistribution of wealth here. That's why we don't believe what they say about fracking being good for our local communities, because there are some parts, well, with the tourism, there just wasn't proper allocation and distribution [of wealth/ profits from tourism].

Recent studies have shown that there is a significant opposition to shale gas development in England, as demonstrated by the quarterly Department of Business, Energy and Industrial Strategy surveys (BEIS, 2017a), which showed that in a survey of 2,180 UK households conducted between in April 2017, only 19% support shale gas, whereas 30% oppose it, and 49% stating that they neither oppose nor support shale gas development, with a majority stating their reasons as “not knowing enough about it” (Bradshaw, 2017). The survey (BEIS, 2017a) found that the most commonly cited reasons for opposition were risks or uncertainty; concern over environmental degradation; contamination of water; and risk of seismic activity, in addition to the view that hydraulic fracturing is not a “safe” process (Bradshaw and Waite, 2017).

Thus, from the survey data, it can be concluded that there is a need for greater public engagement and access to information. Our recent research conducted in Lancashire underscores the level of concern and opposition to shale gas in the local area. Of 58 respondents interviewed between 14th and 18th October, 2016, 41 expressed “concern” or apprehension about the potential development when asked “how do you feel about the prospect of shale gas development or hydraulic fracturing in this area,” with over half citing concern over either water quality or contamination, air pollution or methane leakage, land and environmental quality, and health impacts. Even of the 16 respondents who said they were in support or in favour of the proposed shale gas development, five said they were still concerned over potential risk or uncertainty.

A large portion of the individuals surveyed expressed concern and a desire for further information. This need for further information can also be evidenced by the attendance numbers at an event which was held in a local venue in Lytham St Annes on 27 June 2017 to provide an open forum to talk about the process of fracking and its development in the Fylde area. The event was described as an open forum (“neither in favour of nor against fracking”) for people to bring their questions, and local community members and representatives from tourist facilities, police as well as supporters of fracking from the business community and industry were encouraged to attend the event. However, although the free event at the local venue had a capacity of 450 people, already half an hour before the event was due to start, the venue was packed to capacity and additional people were not admitted. This shows the level of concern and the fact that residents do use opportunities for engagement and dissemination of information. Many attendees stated that they felt compelled to attend the event because their questions were not being adequately addressed by the local county officials.

Another sentiment that came up frequently in informal interviews is the notion of lack of *representation* and the needs and rights of the community being overlooked in the face of potential economic gain. As one resident of the Fylde explained, the decision to overturn Lancashire County Council’s refusal to grant a permit was overturned because of “a fat check from London. That’s what this is. There’s no democracy when you overturn a democratic decision. It’s just money.” Another continued, “our unelected Prime Minister offered

him [Javid – Community Secretary] probably money, political favours, or just pressured him.”

Others interviewed expressed concern over strong differences in opinion as dividing the community: “We’ve never had anything like this, where we have no representation, no one standing up for what we say or want.” Residents described the stress over being “pitted against their friends” with potentially opposite or differing opinions. Many have become “reluctant activists” because they feel no one else is representing them. Thus, the shared values of the residents of the Fylde are directly related to a feeling of lack of *representation* and a need to “take matters into their own hands.”

### **Human rights framework – making the case for application of human right mechanisms**

#### *Is energy a universal right?*

As other chapters in this volume demonstrate (see Cantoni et al., 2018; Szolucha, 2018), there is a need to develop a more robust understanding of the impacts of shale gas. This is because the potential for negative impacts, particularly as we move towards more and more “extreme” types of energy extraction, outweigh the potential benefits (Sovacool, 2014). In this section, we argue for a human rights-centred approach to the regulation of shale gas development, highlight key impacts of fracking and discuss potential benefits of using a human rights framework to mitigate its possible harmful effects.

A 2017 National Association for the Advancement of Colored People (NAACP) report calls for “the establishment of a universal right to uninterrupted energy service” (Franklin and Kurtz, 2017; Marcias, 2017). Therefore, decisions about whether and how to proceed with fracking and properly regulate it must include an evaluation of the need to provide energy while balancing potential risks to basic human rights including the right to a healthy environment with clean air, safe and available food and water and guaranteed safety and shelter.

Current international human rights law recognises that in order “to enjoy human rights fully, it is necessary to have a safe and healthy environment” (Knox, 2014). Furthermore, “human rights and environmental protection goals have common objectives, including those of improving the lives of others and attaining social goods” (Macdonald Makuch, 2016). As hydraulic fracturing combined with horizontal drilling is a “new technology,” we need a robust regulatory framework that considers environmental impacts, public health impacts, economic impacts, and the related potential impacts on human rights (Finkel et al., 2013), as environmental degradation “adversely affect[s] the enjoyment of a broad range of human rights” (Knox, 2012).

In 1945, the United Nations General Assembly adopted the Universal Declaration of Human Rights as a “common standard of achievement for all peoples and all nations” and “the foundation of freedom, justice and peace in the

world” (United Nations, 1948). Regional human rights treaties include the European Convention on Human Rights, implemented to a certain extent in the UK by their Human Rights Act. A recurring theme in local and global human rights law and mechanisms is the relationship between environmental protection and the ability of humans to live a healthy life, as adequate living standards – including access to water, food, shelter and health – depend on a healthy environment.<sup>4</sup> Thus, any technology with the potential for adverse impacts on the environment or public health should be first evaluated through a human rights impact assessment and regulated under a framework of human rights protections.

Human rights standards should be applied when faced with consequences such as groundwater contamination. The right to water is established in several international conventions – including the 1989 Convention on the Rights of the Child (Article 24) and the 2006 Convention on the Rights of Persons with Disabilities (Article 28) – and has also been acknowledged by the UN Committee on Economic, Social and Cultural Rights (United Nations, 2003; Sisters of Mercy, 2015). Furthermore, according to the 2010 United Nations General Assembly, “safe drinking water and sanitation is a human right, essential for the full enjoyment of life and all other human rights” (United Nations, 2010; Sisters of Mercy, 2015).

Chemicals contained in fracking fluids may have dangerous health or environmental effects, yet if they are “proprietary blends” the company may not be required to disclose their chemical composition to communities or health professionals. Withholding information on chemicals used in fracking violates the human right to information. According to the United Nations Human Rights Committee, it is the responsibility of states to “proactively put in the public domain Government information of public interest” and ensure that access to information is “easy, prompt, effective and practical” (UN HRC, 2011; Sisters of Mercy, 2015). In Europe, the public’s right to information is codified in the United Nations Economic Commission for Europe’s Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention, United Nations, 1998). The Aarhus Convention explicitly lays out the right to access to information and participation in decision making in environmental matters (United Nations, 1998).

Fracking and associated waste transport and disposal processes may impact agriculture through depletion of water resources or soil or water quality degradation, thus affecting the right to safe food. The right to food is recognised in the International Covenant on Economic, Social and Cultural Rights and the Convention on the Rights of the Child, among others. According to the Committee on Economic Social and Cultural Rights, this right includes accessibility and availability of quality food “free from adverse substances.” (United Nations, 1999; Sisters of Mercy, 2015)<sup>5</sup>

The United Nations Committee on Economic Social and Cultural Rights states that the right to health includes access to “safe and potable water and

adequate sanitation, an adequate supply of safe food, nutrition and housing, healthy occupational and environmental conditions,” in addition to rights to a “healthy natural environment” and “adequate supply of safe and potable water” (United Nations, 2003; Sisters of Mercy, 2015).

Additional impacts of fracking include potential effects on property values and risk from induced seismicity, and may impact the human right to safe shelter, recognised in Article 11 of the International Covenant on Economic, Social and Cultural Rights (1966). Further, negative impacts may be a breach of the right to property and family life if there are consequences for the property inhabitants, such as those related to safety, dust, truck traffic, “quality of life” and noise.

Human rights regulations offer a logical and sensible approach to ensuring that the future unconventional gas development does not come at the high cost of impacting basic human rights. The human rights framework can be used both as a tool in facilitating decision making and as a framework within which to ensure appropriate regulation of hydraulic fracturing to extract shale gas.

### **Why hasn't a human rights approach already been established/used?**

Although a strong case (Gear et al., 2014) has been made for the incorporation of human rights mechanisms in both decision-making and planning procedures prior to shale gas operations beginning, this has not been done. Eric Posner, in his work “*The Twilight of Human Rights*” (2014), argues that one issue with human rights law is that it is too easy for nations to agree/sign treaties, yet cost prohibitive and resource-intensive to seek justice, as we have noted above with regard to judicial review in the UK. Furthermore, even in the few cases where tribunals have been successful in getting “justice” (once evidence of violated rights is proven), the penalties, either through pressure imposed by other countries or the financial damages a state that has been found to have caused a transgression, are not significant enough to change a state's behaviour. Just as it may sometimes be easier for polluting entities to simply pay fines imposed for pollution rather than to change their behaviour (see Stretesky et al., 2013), it may similarly be easier for states not act to stop their transgression of human rights. Additional problems include the fact that international human rights treaties “do not force any meaningful obligations” on state regulators, either because the treaties are vague and ambiguous, or because they may conflict with other treaties or international laws (Posner, 2014). For example, an argument in “favour” of shale gas extraction is the right to economic development – and if laws are conflicting or ambiguous, states can either make a case that they have been compliant or cannot be blamed for transgressing if they are in conflict with other laws.

Having considered these limitations, an argument in favour of human rights as a language and mechanism to protect communities from fracking “harm” is

that the potential violation of internationally accepted basic rights can potentially draw greater awareness, through garnering increased media attention as well as providing a framework for identification of “human rights indicators.” While there is a great deal of data on the environmental and health impacts of shale gas – in other words, the “scientific” case against shale gas, or at least the need for proper regulation – these studies do not express or invoke the social, emotional and human impacts. There is still little recognition among policy-makers in the UK of the social impacts of shale gas extraction, and that the social impacts such as emotional stress can occur even before any actual drilling or site preparation takes place (Szolucha, 2016; Short and Szolucha, 2017). A human rights approach has the potential to provide a language with which local communities, public officials and planners, and other stakeholders can express the potential impacts, yet in a more “human” manner, focusing on social and rights implications in addition to technical or scientific ones.

International human rights conventions may be more successful in serving as a toolkit for local communities: by providing useful language for expressing social and environmental harm, they have the potential to unite the technocratic evidence against fracking with the shared experiences of the local people which are marked by feelings of marginalisation by and bias on the part of the central government. A human rights framework would therefore facilitate addressing the unique and particular local social and environmental impacts, through providing a framework for assessment and identification of impacts as well as a potential regulatory and policy tool to protect citizens’ basic rights.

In conclusion, through evaluation of the specific social context of the Lancashire region, where fracking is being utilised in exploratory drilling with the intention to begin commercial extraction soon, it is clear that there are inadequate legal mechanisms to assess, monitor and prevent the negative impacts of shale operations to the environment and local communities. Citizens express feeling that the “system” is biased against them, and that there is a lack of public engagement and mechanisms to voice opinions and participate in decision-making that impacts the communities in a variety of ways. Human rights can arguably serve as a framework to engage citizens, but it’s unclear if and how this can actually be accomplished, aside from providing a platform to raise public awareness. There is a lack of documentation on successful mechanisms that have incorporated human rights, and costs associated with seeking energy justice are prohibitively high. Further research is needed on how to engage local communities in a meaningful and successful way. Currently, the Permanent People’s Tribunal, a “Civil Society public opinion tribunal,” is conducting work with sessions to examine the human rights impacts of fracking and climate change with the goal to engage citizens and local communities and ask judges to come to an advisory opinion, using internationally accepted human rights law standards on key questions related to hydraulic fracturing. This initiative, among others, can potentially be extended upon to fill the gap in data and move towards more citizen-centred solutions (Permanent People’s Tribunal, 2015).

## Notes

- 1 The Aarhus Convention will remain legally binding on the UK upon exit from the EU. Currently, the Convention is implemented via EU Directives, yet the UK will have to ensure compliance with the mother Convention.
- 2 See: 1950 European Convention on Human Rights, especially Articles 9 to 11; and the 1966 International Covenant on Civil and Political Rights, especially Articles 18 to 22 and UK Human Rights Act 1998, Article 11.
- 3 See: Judgment of European Court of Justice, 11. 2. 2015 – case c-531/13 Marktgemeinde Strasswalchen and others, Austria.
- 4 See: Article 24 of the African Charter; Article 11 of the San Salvador Protocol to the American Convention on Human Rights, adopted in 1988.
- 5 Committee on Economic, Social and Cultural Rights, General Comment No. 12 (1999), The Right to Adequate Food, Par. 8.

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