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Human Rights and Fracking in England: The Role of the Oregon Permanent People's Tribunal

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"The dictates of public conscience can become a recognized source of law and a tribunal emanating directly from the conscience of the people reflects an idea that is bound to grow. It is claimed that institutions derive their power from the people, but actually these two have moved further and further apart and only a major public initiative can try to build a bridge between the people and power."

—Lelio Basso[1]

Abstract

The potential impacts of fracking on the environment and health, as well as impacts on local communities and their "quality of life," are well documented. This paper outlines the potential human rights impacts of fracking and argues for a human rights-based, participatory, and justice-based approach to regulation. In particular, it discusses the findings of the recent Permanent Peoples' Tribunal session on human rights, fracking, and climate change, held in Oregon, United States, and the potential impact of the tribunal's decision on other jurisdictions where fracking takes place, particularly England.

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Introduction

The government of the United Kingdom (UK) is promoting the development of its unconventional natural gas resources in England, following the United States' commercial success employing horizontal drilling combined with hydraulic fracturing ("fracking") to extract shale gas.[2] The potential impacts of fracking on the environment and health, as well as impacts on local communities and their "quality of life," are well documented.[3] The UK commenced commercial drilling in the North of England on October 15, 2018, despite community concerns and legal challenges that suggest potential harm to human health, impacts on environmental quality, inadequate procedural fairness, and limited distributive justice.[4] The UK does not have a written environmental constitution or any explicit environment-related provisions in the Human Rights Act of 1998, which draws its content from the European Convention on Human Rights. This lack of explicit recognition of environmental rights arguably makes it easier for the UK government to promote a pro-fracking agenda in England aligned with a political agenda rather than broader societal and environmental standards and safeguards. Despite calls for human rights impact assessments in relation to fracking, the UK government is resisting the development of further legislation largely on the grounds that it is confident the current regulatory regime is "more than robust enough" and due to its strong desire to promote technological development and industrial growth through the extraction of shale gas using fracking.[5]

This paper outlines the potential human rights impacts of fracking and argues for a human rights-based, participatory, and justice-based approach to regulation. In this context, the paper discusses the findings of the recent Permanent Peoples' Tribunal session on human rights, fracking, and climate change, held in Oregon, United States, and the potential impact of the tribunal's decision on other jurisdictions where fracking takes place, particularly England.[6]

An argument for a human rights framework

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," setting the scene for the normative landscape and codifying the basis for parameters in relation to the roles of states in the lives of their citizens.[7] Here, human rights were codified to allow an individual to "be" and to "live" a fundamentally "free" life, subject to the social contract norms of civil society (criminal law and so on), with dignity and without arbitrary interference. A useful normative standard in interpreting the application of human rights law, particularly in an environmental context, operates around notions of consent, contract, capacity, and causation. Did I agree ("contract") to be "interfered" with in this way? Do I have the capacity (including the opportunity) to make a decision (mentally or procedurally) about the way I am being affected by the decisions of others, and thus did I "consent" to the effects of said action or inaction? Where there is a lack of compromise, it is fair to say that there is likely to be an injustice or potential breach of human rights, or procedural unfairness. We attempt to explore these ideas in this paper within the context of fracking, analyzing certain notions of environmental rights and pollution.

Central to our argument is the notion that pollution, caused by the acts of others, may cause harm to humans, their health, and their environment. There are obligations on states to uphold human rights, including rights related to the environment and the global commons, in order to prevent harm and interference in such instances.

International human rights law recognizes the "interdependence between human rights and the integrity of the environment."[8] In other words, "to enjoy human rights fully, it is necessary to have a safe and healthy environment; and to have a safe and healthy environment, it is critical to protect human rights."[9] We posit that the regulation of fracking requires a robust framework that addresses environmental and public health impacts, as well as the

related potential impacts on human rights. To date, this appears not to have been the case in England.

There are myriad human rights and environmental agreements, but varying degrees to which they are implemented and enforced. The Permanent Peoples' Tribunal (PPT) was set up to "quality control" the responsibilities of states, to audit and monitor their (in)actions, and to issue advisory opinions. As indicated by the apostrophe in the tribunal's name, this forum is for and on behalf of all *peoples*, and it acts independently of political and other vested interests of states:

> The importance and strength of decisions by the PPT rest on the moral weight of the causes and arguments to which they give credibility, as well as the integrity and capability to judge of the Tribunal members." The goal of PPT Sessions is "recovering the authority of the Peoples when the States and the International Bodies failed to protect the right of the Peoples.[10]

The PPT, comprising 10 experts in human rights and environmental law, was co-hosted by the Spring Creek Project for Ideas, Nature, and the Written Word and took place on May 14–18, 2018, in Oregon, United States.[11] The session, which was also live-streamed globally, was convened to address four questions from petitioners (who in this case were legal experts representing "nature's rights"):

1. Under what circumstances do fracking and other unconventional oil and gas extraction techniques breach substantive and procedural human rights protected by international law as a matter of treaty or custom?
2. Under what circumstances do fracking and other unconventional oil and gas extraction techniques warrant the issuance of provisional measures, a judgment enjoining further activity, remediation relief, or damages for causing environmental harm?
3. What is the extent of responsibility and liability of states and non-state actors for violations of human rights and for environmental and climate harm caused by these oil and gas extraction techniques?
4. What is the extent of responsibility and liability of states and non-state actors, both legal and moral, for violations of the rights of nature related to environmental and climate harm caused by these unconventional oil and gas extraction techniques?

In addressing these four questions, the tribunal considered the following six areas of concern:

1. Human physical and mental health
2. Climate change, including both the human and earth rights dimensions
3. Environmental, ecosystem, atmospheric, hydrologic, and seismicity concerns relevant to both human rights and earth rights
4. Public participation concerns related to decision-making on oil and gas exploration, extraction, and policy
5. Fuels infrastructure concerns related to human and earth rights, including exploration, drilling, extraction, transport, and end-use processes, as well as infrastructure needed for transport, storage, and export of product and waste (for example, pipelines, storage facilities, waste treatment facilities, compressor stations, and so forth)
6. Social and cultural impacts on individuals, families, and communities that affect their human rights.

The tribunal received a range of expert evidence and testimony, which it found to

> clearly demonstrate that the processes of fracking contribute[s] substantially to anthropogenic harm, including climate change and global warming, and involve[s] massive violations of a range of substantive and procedural human rights and the rights of nature. Thus the industry has failed to fulfil its legal and moral obligations. The evidence also shows that governments have, in general, failed in their responsibility to regulate the industry so as to protect people, communities and nature. In addition, they have failed to act

> promptly and effectively to the dangers of climate change that fracking represents.[12]

We do not go into depth in discussing the tribunal's findings but instead raise some salient points in relation to the current situation in England.

The need for rights-based regulation

There have been many opportunities to develop a *sui generis* human rights impact assessment for fracking in the UK (and perhaps this is on the to-do lists of Scotland, Wales, and Northern Ireland's devolved administrations, which do not currently permit fracking), but it does not seem forthcoming from the UK Parliament. The England and Wales regulatory framework for fracking emphasizes petroleum regulation and, to a lesser extent, planning (where construction of the well site requires planning permission, which may be linked to environmental impact assessments and public consultations that might provide space for procedural human rights considerations). There is arguably little scope for the consideration of environmental human rights concerns under current regulations, which are based largely on petroleum, minerals, and energy.

There are many existing human rights agreements at the international and regional levels, including the 1948 Universal Declaration of Human Rights, the 1969 American Convention on Human Rights, the 1950 European Convention on Human Rights, the 1987 African Charter on Human and Peoples' Rights, and the United Nations Convention on the Rights of the Child. Related mechanisms for accessing justice include the Inter-American Court of Human Rights, the European Court of Human Rights, and the African Court on Human and Peoples' Rights. Some of these human rights agreements explicitly recognize a right to environment in some form (such as article 24 of the African Charter), while others do not (such as the Convention on the Rights of the Child)—however, the latter "allow" us to argue that the fulfillment of existing human rights is contingent on certain standards of environmental protection and other rights such as the right to health.[13]

In the UK context, it can be argued that a technology such as fracking, which has the potential to adversely affect environmental and public health, should be evaluated through a human rights impact assessment and regulated under a framework of human rights protections.[14] Questions posed in relation to the above are manifold and are largely equity based: Who benefits from the technology and who is set to suffer adverse impacts? What are the adverse impacts likely to be and how can they be mitigated or avoided, particularly when the technology and techniques are new to the UK? And has there been an open and public decision-making procedure that takes account of a variety of framings and views on the issues? Complementary to a human rights impact assessment approach would be the application of the precautionary principle—before fracking can be allowed to proceed—requiring that proponents of this technology undertake risk assessments to demonstrate what the related health, environmental, and other impacts might be. These processes encourage accountability and the halting of any activities that may damage the environment and human health.

The current UK regime and England's experience with fracking has highlighted a lack of accountability, gaps in access to public information and participation, and an erosion of local powers in light of "national interest," evidenced in the recent overturning of the Lancashire County Council's decision *not* to grant planning permits for shale gas drilling.[15] John Whitton et al. maintain that public opposition to shale gas in the UK is exacerbated by a convoluted planning and regulatory framework, which arguably further leads to public mistrust and additional power disparity issues.[16] In the North of England, homeowners and community residents have expressed concern over the undermining of their rights to property, to health, and to private and family life due to the lack of a legally required human rights impact assessment. The UK government has recently approved commercial extraction at the Preston New Road sites in Lancashire, England. It can be argued, however, that the regulatory regime does not address stakeholder concerns with respect

to social rights and health risks, as it is concerned mainly with licensing, infrastructure, site health and safety, and the mechanics of drilling.

Further, the public's lack of trust in the fracking industry in England could be linked to the way that companies have historically interacted with communities. Acknowledging the lack of trust in decision makers—and developing ways to remedy the problem—has not been considered in environmental impact assessments or other relevant legal mechanisms.[17] Thus, assessing and regulating shale gas through a human rights framework may help manage issues related to accountability, trust, and power and the disparity between local concerns, national interest, and industry needs.[18]

Substantive human rights issues related to fracking

It can be argued that a benchmark for environmental human rights would ideally require a zero-tolerance approach to pollution.[19] This way, there would be no impact on the rights to health, life, or water, for example. We refer to the previous section, however, where we mention consent, capacity, and compromise. Societies and communities cannot function without economic input (the economic arguments in favor of fracking have been discussed at length in the academic literature), and a compromise is needed.[20] If we are to reach a compromise, we need consultation, dialogue, and consideration of all issues and stakeholder views and concerns. One way to achieve this compromise (even if it tells us that fracking should not proceed in certain locales) is through a human rights impact assessment. We are aware of the variance in semantics and standards surrounding environmental rights discourse and take the following position in relation to fracking and human rights:

1. The natural environmental needs to be "healthful" in that it must be intrinsically robust and giving of health to humans, flora, and fauna.
2. If we require compromise on an issue, such as fracking, we need to set environmental standards at a level that accounts for the most vulnerable in our communities, including children, those with illnesses, pregnant women, and marginalized groups (such as those living in comparatively less affluent communities) in order to ensure that human rights objectives are fulfilled.
3. International and regional human rights and environmental treaties that the UK has signed and ratified can be drawn on to leverage action on particular human rights standards related to fracking in England.

The right to water is enshrined in several international conventions, including the Convention on the Rights of the Child, which "tak[es] into consideration the dangers and risks of environmental pollution," and a 2010 resolution of the United Nations General Assembly that states that "safe drinking water and sanitation is a human right, essential for the full enjoyment of life and all other human rights."[21]

The right to water is relevant for our purposes because shale gas extraction has the potential to contaminate groundwater, streams, rivers, and lakes through the migration of chemicals used in fracking fluids to underground water sources; spillage during "frackfluid" handling; improper disposal of wastewater; and underground injection of wastewaters.[22] All stages of the fracking water cycle have a potential impact on the quality of water resources, including drinking water supplies and, in turn, health. Furthermore, given that fracking fluid contains a mixture of chemicals, often not fully known, there is a risk of water contamination due to accidental surface spills and leaks.[23] Moreover, during the flowback stage, fracking fluid returns to the surface along with any injected chemicals, but it can also bring to the surface toxic materials that occur naturally underground, including radioactive materials.[24] Additionally, large quantities of water are required in the fracturing process, which can be particularly problematic in areas where water sources are already stressed (such as areas that suffer frequent droughts), affecting humans both directly and indirectly (for example, via impacts on the surrounding flora and fauna, which can have effects on the local area).[25]

Studies have found that chemicals in fracking fluids may have dangerous health and environmental effects in sufficient concentrations and exposures.[26] However, if the chemical mix is recognized as a "proprietary blend," the company may not be required to disclose its composition. Additionally, fracking activities may use chemical quantities that are below required thresholds but without accounting for cumulative effects, or the techniques and technology may not be included in legislation on account of being relatively new or being regulated under the umbrella of other processes that do not require such disclosure.

According to the United Nations Human Rights Committee, states are required to "proactively put in the public domain Government information of public interest" and ensure that access to information is "easy, prompt, effective and practical."[27] 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).[28] The Aarhus Convention lays out the rights to access information and to participate in decision-making in environmental matters. In the United States, the right to information is recognized in the Convention on the Rights of the Child, the International Covenant on Civil and Political Rights, and other documents.[29] Although there are cases where information about chemical constituents, such as the proprietary formula for Coca-Cola, are not made public, the case of fracking fluid is more problematic because of the notion of consent. Thus, although the chemicals in something such as a food product may cause harm to human health, individuals can arguably decide if they want to ingest the product, as opposed to exposure to fracking fluids, which may happen regardless of an individual's choice. Also, negative publicity and media scare-mongering may make public perceptions of fracking's impacts even more egregious.[30]

Moreover, the fulfillment of other human rights, including the right to life, is contingent on the right to water. While it may seem extreme to invoke the right to life in the case of fracking in the UK, we have yet to know what the long-term cumulative effects of fracking fluid in the environment are, which could justify calls for precaution in this regard. Also, it is possible to claim that the right to life has a wider reach beyond communities in the UK. If we accept that fracking has a carbon footprint, the effects of fracking will affect the environment in other countries, thereby affecting the right to life of persons outside the UK who are suffering the life-altering effects of global climate change.[31]

The right to food is enshrined in the International Covenant on Economic, Social and Cultural Rights; the Convention on the Rights of the Child; and other conventions.[32] According to the Committee on Economic Social and Cultural Rights, this right ensures the accessibility and availability of food "free from adverse substances."[33] Food supply may be at risk from fracking activities as a result of depleted water resources and the degradation of soil or water quality.[34]

The right to health is recognized in the Convention on the Rights of the Child and the International Covenant on Economic, Social and Cultural Rights. According to the Committee on Economic Social and Cultural Rights, the right to health includes access to "safe and potable water and adequate sanitation, an adequate supply of safe food, nutrition and housing, [and] healthy occupational and environmental conditions," in addition to "reduction of the population's exposure to harmful substances such as radiation and harmful chemicals or other detrimental environmental conditions that directly or indirectly impact upon human health."[35]

Other potential impacts of fracking include effects on property values and risk from induced seismicity, the latter of which could affect the right to safe shelter, recognized in the International Covenant on Economic, Social and Cultural Rights.[36]

Standard of living and basic human rights

The human rights framework also protects the right to an adequate standard of living. A 2017

NAACP report calls for "the establishment of a universal right to uninterrupted energy service."[37] Therefore, decisions about whether and how to proceed with fracking activities and how to regulate them should include an evaluation of the need for energy balanced against potential risks to the rights to a healthy environment and to adequate housing. Concerns expressed with respect to fracking include distrust of both the industry and government, the use of potentially risky chemicals, land access, and community impacts from the shale gas boom-bust-recovery cycle.[38] On the other hand, fracked natural gas may reduce atmospheric pollution and potentially reduce greenhouse gas emissions, as compared to other sources of energy, such as coal. In this way, fracking may ameliorate the very threats to health and the environment that are arguably caused by the practice.[39] Thus, accepted rights frameworks may conflict with one another. Decisions about these sorts of tradeoffs can often be facilitated by an external third party, underscoring the potentially significant role of a body such as the PPT.

When local and national environmental legislation prove inadequate to ensure communities' protection from the potential impacts of fracking, we have the option of triggering human rights-based obligations enshrined in international law. This approach may offer a means of attaining some form of legal accountability and standard setting while waiting for the UK's legal framework for fracking to be more fully developed. In addition, using internationally recognized human rights protections may relieve concerns regarding the demise of European Union standards and the obsolescence of European Union law in the UK once "Brexit" has been concluded.

While a human rights framework, when appropriately invoked, can be a useful mechanism to evaluate the potential risks that fracking poses to humans and the environment, what happens when international legal bodies fail to provide adequate remedies for the risks and impacts—whether material or procedural—experienced by individuals and communities? The PPT is one example of a mechanism that can be used to identify potential transgressions and issue declaratory opinions as a civil society initiative.

Permanent Peoples' Tribunal: Session on human rights, fracking and climate change

The PPT is a "civil society public opinion tribunal" founded on the principles contained in the 1976 Algiers Charter (the Universal Declaration of the Rights of Peoples).[40] The tribunal was established in 1979 in Bologna, Italy, as a direct extension of the Russell Tribunals on Vietnam (1966–1967) and Latin America (1973–1976).[41] Lelio Basso, an Italian democratic socialist politician and lawyer, suggested that the PPT become a permanent institution and an "instrument and platform to give recognition, visibility and a voice to the peoples suffering violations of their fundamental rights."[42] The PPT thus engages citizens and communities and, employing internationally established human rights law, enables judges to render advisory opinions on the human rights impacts of various issues.[43]

Independent of state governments and authorities, the PPT hears cases where "*prima facie* evidence suggests abridgement of basic rights of ordinary people."[44] Recent cases heard by the tribunal include Canadian mining in Latin America (2014) and agrochemical transnational corporations (2011).[45]

On May 14–18, 2018, the PPT held a session on human rights, fracking, and climate change, which was hosted by the Spring Creek Project at Oregon State University in the United States and was live-streamed globally. At this session, the tribunal heard oral testimony and examined evidence from submitted reports and briefs with the aim of issuing an advisory opinion on key legal questions regarding the potential impacts of hydraulic fracturing and climate change:

> Under what circumstances do fracking and other unconventional oil and gas extraction techniques warrant the issuance of either provisional measures, a judgment enjoining further activity, remediation relief, or damages for causing environmental harm?

> What is the extent of responsibility and liability of States and non-state actors for violations of human rights and for environmental and climate harm caused by these oil and gas extraction techniques.
>
> What is the extent of responsibility and liability of States and non-state actors, both legal and moral, for violations of the rights of nature related to environmental and climate harm caused by these unconventional oil and gas extraction techniques?[46]

Prior to the tribunal's May 2018 session, four preliminary hearings were held: one in Virginia, United States; two in Ohio, United States; and one in Australia. These initial hearings gathered testimony for review by judges and legal experts in advance of the main PPT session in May.[47] The international body of judges included scientists with expertise in geology, hydrology, toxicology, and environmental science; experts in economics and resource extraction; and legal scholars with experience in criminal justice, international law, and water and environmental law.[48]

The tribunal's preliminary statement

On June 4, 2018, the judges issued a preliminary statement based on the testimony regarding fracking, its impact on climate change, and its impacts on the rights of nature and humans collected during the five-day session. The statement explained that because of the "overwhelming volume and comprehensiveness" of the evidence received, the 10 judges comprising the tribunal's panel would need several months to complete their comprehensive opinion and recommendations. Due to the "great significance and public concern" regarding the issues considered, the judges issued the preliminary statement to encourage "public discussion and action to abate the negative effects of fracking."[49] Based on evidence from hundreds of independent publications, this preliminary statement noted that

> The evidence clearly demonstrates that the processes of fracking contribute substantially to anthropogenic harm, including climate change and global warming, and involve massive violations of a range of substantive and procedural human rights and the rights of nature. Thus the industry has failed to fulfil its legal and moral obligations.
>
> The evidence also shows that governments have, in general, failed in their responsibility to regulate the industry so as to protect people, communities and nature. In addition, they have failed to act promptly and effectively to the dangers of climate change that fracking represents.
>
> Finally, this particular Session of the PPT has been an experiment of collaboration and communication. It has sought to overcome the economic constraint of limited resources which impede what should be a permanent, timely exercise of assessing, monitoring, preventing and transforming the universe of violations which occur in the present global scenarios, where the decisions on policies which go against the fundamental rights of nature and of human communities are taken, imposed and directed centrally by those who have unlimited resources.[50]

The judges' preliminary statement concluded that the successful "experiment" of the tribunal could be turned into a "flexible and powerful tool which could allow the struggles of the communities of the world" to be globally communicated and could promote effective solutions and justice.[51] Therefore, although the judges' final advisory opinion has yet to be rendered, the recent PPT session on human rights, fracking, and climate change provides an example of both why human rights mechanisms are key for the regulation of a new technology—particularly one with significant potential impacts—and how international human rights law and an open forum for presenting testimony can be an important tool for protecting citizens' basic human rights. Furthermore, the literature demonstrates the role of civil society associations in bringing greater public accountability to global governance.[52] In this manner, civil society bodies such as the PPT have the potential to enhance the transparency of

global governance, encourage compliance by monitoring and reviewing global regulations, facilitate redress for evidenced harms and transgressions, and encourage the development of additional accountability mechanisms.[53] The PPT is recognized and respected by the various interested parties—communities living near fracking, urban activists, government regulators, oil and gas companies, and others. For example, the third session of the PPT addressed industrial and environmental hazards and human rights and was held in 1992 in Bhopal and Bombay, India. The session, which built on earlier hearings in the United States and Thailand, was held in Bhopal—the site of the chemical disaster—in order to enable access to justice for the aggrieved parties.[54] The tribunal can thus play a crucial role in ensuring access to justice and redress for aggrieved parties, as well as publicizing human rights transgressions and promoting justice.[55]

Conclusion

In the case of hydraulic fracturing to extract shale gas, where there is a potential for human rights violations as evidenced from cases in the United States and other countries, there is an important role for the long-established and respected PPT in promoting justice and ensuring human rights protections to the fullest extent. Particularly regarding the potential impacts of fracking on people's health and the environment, as well as the rights to social inclusion and access to participation, the expert opinion of a civil society body such as the PPT can help promote procedural justice and fairness by highlighting potential rights transgressions and acting as a global forum to promote redress. In this manner, the tribunal can fill crucial gaps in the regulation of contentious issues such as shale gas extraction and can set an important precedent for promoting and protecting international human rights.

References

1. Permanent People's Tribunal, *Permanent People's Tribunal* (2015). Available at http://permanentpeoplestribunal.org/?lang=en.
2. M. R. Aczel and K. E. Makuch, "Environmental impact assessments and hydraulic fracturing: Lessons from two U.S. states," *Case Studies in the Environment.* (2018), pp. 1–11.
3. Ibid.
4. "Fracking starts at landmark Lancashire site," *Guardian* (October 15, 2018); "Regulators grant environmental permits for Lancashire fracking site," *Guardian* (January 16, 2015); J. Skea, "To develop or not to develop: One nation or localization," in S. Gamper-Rabindran (ed), *The shale dilemma: A global perspective on the political, economic, and scientific issues surrounding fracking and shale development* (Pittsburgh, PA: University of Pittsburgh Press, 2018); M. J. Bradshaw, "Unconventional gas in the United Kingdom," in R. Q. Grafton, I. G. Cronshaw, and M. C. Moore (eds), *Risk, rewards and regulation of unconventional gas: A global perspective* (Cambridge: Cambridge University Press, 2017), pp. 167–196.
5. E. Stokes, "Regulatory domain and regulatory dexterity: Critiquing the UK Governance of 'fracking'," *Modern Law Review* 79 (2016), pp. 961–986; P. Clark and A. Bounds, "Ministers freed to intervene in fast-track fracking drive," *Financial Times* (2015).
6. Permanent People's Tribunal on Human Rights, Fracking, and Climate Change, *What is the Permanent Peoples' Tribunal?* (2018). Available at https://www.tribunalonfracking.org/what-is-the-permanent-peoples-tribunal.
7. Universal Declaration of Human Rights, G.A. Res. 217A (III) (1948), preamble.
8. Sisters of Mercy (NGO), Mercy International Association: Global Action, *International human rights law and fracking: A guide to rights-based advocacy* (New York: Mercy Global Action, 2015), p. 13; K. Makuch, "Chapter 29," in J. May and E. Daly (eds), *Environmental rights of children, human rights and the environment: Legality, indivisibility, dignity and geography* (Cheltenham: Edward Elgar, 2019).
9. See Makuch (2019, see note 8); Office of the United Nations High Commissioner for Human Rights, *Statement by John H. Knox, independent expert on human rights and the environment at "the development of environmental human rights"* (November 6, 2014). Available at http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=15274&Lan-gID=E#sthash.hry74xCt.dpuf.
10. Permanent People's Tribunal on Human Rights, Fracking, and Climate Change, *What is the Permanent Peoples' Tribunal?* (see note 6).
11. Ibid.
12. Permanent People's Tribunal, *Session on human rights, fracking and climate change: The preliminary statement of the PPT* (2018). Availableathttp://permanentpeoplestribunal.org/session-on-human-rights-fracking-and-climate-change-the-preliminary-statement-of-the-ppt/?lang=en.
13. Makuch (2019, see note 8).
14. D. Short and A. Szolucha, "Fracking Lancashire: The planning process, social harm and collective trauma,"

Geoforum (2017); A. Grear, E. Grant, T. Kerns, et al., "A human rights assessment of hydraulic fracturing and other unconventional gas development in the United Kingdom" (Global Network for Human Rights and the Environment, Environment and Human Rights Advisory, Human Rights Consortium, 2014).

15. Short and Szolucha (see note 14).

16. J. Whitton, K. Brasier, I. Charnley-Parry, and M. Cotton "Shale gas governance in the United Kingdom and the United States: Opportunities for public participation and the implications for social justice," *Energy Research and Social Science* 26 (2017), pp. 11–22.

17. A. Szolucha, "Fracturing democracy? State, fracking and local power in Lancashire," *Open Democracy* (July 27, 2015); M. Aczel and K. Makuch, "An assessment of current regulation and suggestions for a citizen-centered approach to the governing of UK hydraulic fracturing," in A. Szolucha (ed), *Energy, resource extraction and society: Impacts and contested futures* (New York: Routledge, 2018).

18. D. Short, J. Elliot, K. Norder, et al., "Extreme energy, 'fracking' and human rights: A new field for human rights impact assessments?" *International Journal of Human Rights* 19/6 (2015), pp. 697–736.

19. See J. Hancock, *Environmental human rights: Power, ethics and law* (Farnham: Ashgate Publishing, 2003), pp. 107–117.

20. C. Blanchard and M. Lawn, "The economic impact on UK energy policy of shale gas and oil," *Bloomberg New Energy Finance* (2013); E. J. Moniz, H. D. Jacoby, A. J. M. Meggs, et al., *The future of natural gas: An interdisciplinary MIT Study* (Cambridge, MA: Massachusetts Institute of Technology, 2011).

21. Convention on the Rights of the Child (CRC), G.A. Res. 44/25 (1989), art. 24; United Nations General Assembly, Res. 64/292, UN Doc. A/RES/64/292 (2010).

22. Sisters of Mercy (see note 8), p. 21; United States Environmental Protection Agency, *The hydraulic fracturing water cycle* (2015). Available at http://water.epa.gov/lawsregs/rulesregs/sdwa/index.cfm.

23. M. Finkel, J. Hays, and A. Law, "The shale gas boom and the need for rational policy," *American Journal of Public Health* 103/7 (2013).

24. T. Colborn, C. Kwiatkowski, K. Schultz, and M. Bachran, "Natural gas operations from a human health perspective," *Human and Ecological Risk Assessment* 17 (2011), pp. 1039–1056; A. W. Nelson, "Understanding the radioactive ingrowth and decay of naturally occurring radioactive materials in the environment: An analysis of produced fluids from the Marcellus shale," *Environmental Health Perspectives* (2015).

25. P. Lee, "EPA concludes fracking a threat to U.S. water supplies," *Propublica* (December 14, 2016). Available at https://www.propublica.org/article/epa-concludes-fracking-a-threat-to-u.s.-water-supplies.

26. Colborn et al. (see note 24); M. L. Finkel and J. Hays, "The implications of unconventional drilling for natural gas: A global public health concern," *Public Health* 127/10 (2013), pp. 889–893.

27. Human Rights Committee, General Comment No. 34, Article 19: Freedoms of Opinion and Expression, UN Doc. CCPR/C/GC/34 (2011), para. 19.

28. Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (1998).

29. Committee on the Rights of the Child, General Comment No. 12, The Right of the Child to be Heard, UN Doc. CRC/C/GC/12 (2009)https://www2.ohchr.org/english/bodies/crc/docs/AdvanceVersions/CRC-C-GC-12.pdf; Human Rights Committee, General Comment No. 27: Articl 12 (Freedom of Movement) (1999).

30. D. Evensen, C. Clarke, and R. Stedman, "A New York or Pennsylvania state of mind: Social representations in newspaper coverage of gas development in the Marcellus Shale," *Journal of Environmental Studies and Sciences,* 4 (2014), pp. 65–77.

31. C. E. Bond, J. Roberts, A. Hastings, et al., *Life cycle assessment of greenhouse gas emissions from unconventional gas in Scotland* (Glasgow: ClimateXChange, 2014); C. McGlade, M. Bradshaw, G. Anandarajah, et al., *A bridge to a low-carbon future? Modelling the long-term global potential of natural gas* (London: UK Energy Research Council, 2014).

32. Committee on Economic, Social and Cultural Rights, General Comment No. 12, The Right to the Adequate Food, (1999).

33. Ibid., para. 8.

34. Sisters of Mercy (see note 8).

35. Committee on Economic, Social and Cultural Rights, General Comment No. 14, The Right to the Highest Attainable Standard of Health, UN Doc. E/C.12/2004/4 (2000), paras. 11, 15.

36. International Covenant on Economic, Social and Cultural Rights, G.A. Res. 2200A (XXI) (1966), art. 11.

37. M. Franklin and C. Kurtz, *Lights out in the cold: Reforming utility shut-off policies as if human rights matter* (Baltimore, MD: 2017); K. Marcias, "NAACP says electricity is a basic human right, demands end to power shutoffs," *Dailykos* (April 10, 2017). Available at http://www.dailykos.com/story/2017/4/10/1651915/-According-to-the-NAACP-electricity-is-a-basic-human-right-demands-end-to-power-shutoffs.

38. K. B. Mulloy, "Occupational health and safety considerations in oil and gas extraction operations," *Shale Gas: Promises and Challenges* 44 (2014), pp. 41–46.

39. J. Broderick and K. Anderson, "Has US shale gas reduced CO2 emissions?" (Tyndall Centre for Climate Change, 2012); McGlade et al. (see note 31).

40. Permanent People's Tribunal on Human Rights, Fracking, and Climate Change, *Homepage* (2018). Available

at www.tribunalonfracking.org.

41. Ibid.

42. Ibid.

43. Ibid.

44. Ibid.

45. Fondazione Lelio e Lisli Basso, *Session on the Canadian mining industry* (2016). Available at http://permanentpeoplestribunal.org/wp-content/uploads/2015/11/PPT-VERDICT_EN1.pdf; Fondazione Lelio e Lisli Basso, *Session on agrocultural transnational corporations* (2012). Available at http://permanentpeoplestribunal.org/37-session-on-agrochemical-transnational-corporations-bengaluru-3-6-december-2011/?lang=en.

46. Permanent People's Tribunal on Human Rights, Fracking, and Climate Change, *What is this session about?* (2018). Available at https://www.tribunalonfracking.org/what-is-this-session-about.

47. Ibid.

48. Permanent People's Tribunal on Human Rights, Fracking, and Climate Change, *Panel of judges selected by the Permanent Peoples' Tribunal to hear this session* (2018). Available at https://www.tribunalonfracking.org/judges.

49. Fondazione Lelio e Lisli Basso, *Permanent Peoples' Tribunal, preliminary statement* (2018). Available at https://www.tribunalonfracking.org/wp-content/uploads/2018/06/PPT_Statement-Post-Session_HR_FR_CC_4_6_18.pdf.

50. Ibid.

51. Ibid.

52. J. A. Scholte, "Civil society and democratically accountable global governance," *Government and Opposition* 39/2 (2004), pp. 211–233; T. G. Weiss and L. Gordenker (eds), *NGOs, the UN, and global governance* (Boulder, CO: Rienner, 1996); P. Willetts (ed), *"Conscience of the world": The influence of non-governmental organisations in the UN system* (Washington, DC: Brookings Institution, 1996).

53. Scholte (see note 52).

54. Fondazione Lelio e Lisli Basso, *Permanent Peoples' Tribunal, findings and judgements Bhopal* (2015). Available at http://permanentpeoplestribunal.org/findings-and-judgements-bhopal.

55. "Bhopal: 10 years later—Why the Permanent Peoples' Tribunal?" *New Solutions: A Journal of Environmental and Occupational Health Policy* 5/1 (1995), pp. 11–12.