COMMUNITY LEVERS FOR BENEFIT SHARING

by
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INTRODUCTION

Conflicts between state and local governments over development activities with intense local effects, such as hydraulic fracturing, often center on whether state authority preempts local ordinances. Local governments can use their regulatory authority to pressure industry to enter into benefit sharing arrangements. Local regulation, however, is not the only source of community leverage. This Article explores various sources of community leverage, including tort actions brought by local governments and individuals, as well as extralegal mechanisms. A community's

* Professor of Law, University of California, Davis, School of Law. Thanks to the organizers and participants of the Lewis & Clark Business Law Fall Forum, and the editors at the Lewis & Clark Law Review, for helpful suggestions. Thanks also to Dean Kevin Johnson, Associate Dean Madhavi Sunder, and the U.C. Davis School of Law for supporting this project, and to Kelly Healy and Erika Watts for their research assistance.

understanding of its sources of leverage will enable the community to better appreciate its bargaining power, which in turn can lead to more equitable sharing of benefits from development projects. While sharing of substantive benefits can be a critical component of corporate social responsibility (CSR), procedures for public participation and community engagement are also important.

Part I of this Article explains the importance of identifying community levers for benefit sharing by noting various contexts in which development pursuant to state authorization may impose burdens on local communities. Part II discusses specific levers for benefit sharing, including zoning authority, common law claims, constitutional claims, statutory processes, and political pressure. Part III explores three specific contexts where legal levers were used to prompt benefit sharing. Ultimately, a community's bargaining power depends not only on the legal levers available to it, but also on its resources, history, development alternatives, and other factors.

I. BACKGROUND: LOCAL COMMUNITIES, STATE-LEVEL DECISION MAKING, AND BENEFIT SHARING

Local governments begin with limited authority. As creations of the state, local governments may exercise only those powers granted by a state's constitution and laws.[1] Under the predominant approach (also known as "Dillon's Rule"), express or implied state authorization is necessary for local governments to exercise local lawmaking authority.[2] Some states grant home rule authority, however, which enables qualifying local governments to exercise lawmaking authority in certain areas without further state authorization.[3] Under either approach, local authority is subject to state limitation, and state policies may override local preferences where state and local views conflict.

Conflicts between local communities, state regulators, and resource developers have been particularly prominent in the context of hydraulic fracturing (or "fracking"). Hydraulic fracturing can bring about economic growth, lower energy prices, and energy security, but also can cause pollution, water depletion, noise, and other adverse effects.[4] In contrast

[1] *See* ANTIEAU ON LOCAL GOVERNMENT LAW § 1.02 (2d ed. 2014).

[2] *See id.* § 21.01.

[3] *See id.* § 21.02; Jarit C. Polley, Comment, *Uncertainty for the Energy Industry: A Fractured Look at Home Rule*, 34 ENERGY L.J. 261, 268, 272–73 (2013).

[4] *See* CTR. FOR SCI. & DEMOCRACY, MANAGING THE RISKS OF UNCONVENTIONAL OIL AND GAS DEVELOPMENT: WHAT LOCAL COMMUNITIES CAN LEARN FROM OTHERS' EXPERIENCES 3 (2015), http://www.ucsusa.org/sites/default/files/attach/2015/07/ucs-managing-risks-unconventional-oil-gas-development-2015.pdf; Grace Heusner, Allison Sloto, & Joshua Ulan Galperin, *Defining and Closing the Hydraulic Fracturing*

to ordinary industrial, commercial, or residential development projects, which generally are subject to the authority of local planning processes, hydraulic fracturing activity is governed largely at the state level.[5] This allocation of authority, combined with "geographically mismatched costs and benefits," has exacerbated conflicts between industry and local interests.[6] Local interests sometimes have the opportunity to participate in state-level decision processes regarding fracking activity, but those processes may not adequately weigh local concerns.

Some local governments have responded by enacting bans on hydraulic fracturing, but with limited success.[7] Preexisting or newly enacted state laws may preempt local bans.[8] State preemption does not necessarily leave local governments without any recourse, however. Most states allow for local regulation of land use impacts from hydraulic fracturing as long as such regulation does not infringe upon state authorization of the activity itself.[9]

Neither the centralization of authority for decisions having intense local effects, nor the accompanying conflict between developers and local communities, is unique to hydraulic fracturing. Decisions regarding the siting of hazardous waste facilities,[10] power-generating facilities, and

Governance Gap, 95 DENV. L. REV. (forthcoming 2017) (manuscript at 40–43); David B. Spence, *The Political Economy of Local Vetoes*, 93 TEX. L. REV. 351, 358–68 (2014).

[5] *See* Spence, *supra* note 4, at 369–70, 398.

[6] David B. Spence, *Federalism, Regulatory Lags, and the Political Economy of Energy Production*, 161 U. PA. L. REV. 431, 497 (2013); *see also* Albert C. Lin, *Fracking and Federalism: A Comparative Approach to Reconciling National and Subnational Interests in the United States and Spain*, 44 ENVTL. L. 1039, 1072 (2014); Spence, *supra* note 4, at 384 (suggesting that "the most certain and tangible costs of fracking fall most heavily on locals," whereas the distribution of benefits "seems more diffuse than the distribution of costs").

[7] *See* Heusner et al., *supra* note 4, manuscript at 1–2; Spence, *supra* note 4, at 357.

[8] *See, e.g.*, OKLA. STAT. ANN. tit. 52, § 137.1 (West 2016) (local government may regulate oil and gas activities provided the "rules and regulations are not inconsistent with . . . Title 52 of the Oklahoma Statutes or the Corporation Commission"); TEX. NAT. RES. CODE § 81.0523 (West 2015) (statute enacted to preempt local bans); City of Longmont v. Colo. Oil & Gas Ass'n, 369 P.3d 573, 585 (Colo. 2016) (holding that state law preempted local ban on fracking); State *ex rel.* Morrison v. Beck Energy Corp., 37 N.E.3d 128, 135–37 (Ohio 2015) (finding conflict between city ordinances and state permitting scheme for oil and gas wells).

[9] *See* Heusner et al., *supra* note 4, manuscript at 34; *see, e.g.*, *id.* manuscript at 17 (Colorado).

[10] *See* Roger E. Kasperson, *Hazardous Waste Facility Siting: Community, Firm, and Governmental Perspectives*, *in* HAZARDS: TECHNOLOGY AND FAIRNESS 118, 134–35 (1986); Gary D. Taylor & Mark A. Wyckoff, *Intergovernmental Zoning Conflicts Over Public Facilities Siting: A Model Framework for Standard State Acts*, 41 URB. LAW. 653, 680 (2009). Similarly, the federal government decides the siting of high-level radioactive waste repositories with limited input by individual states. *See* Kasperson, *supra*, at 135.

other utility infrastructure are typically made at the state level.[11] While the construction and operation of these facilities undeniably affects local communities, states retain siting authority over them on the rationale that societal well-being requires the overriding of local interests.[12] State siting procedures typically provide for a state-level board with decision-making authority, reliance on technical criteria, opportunity for public hearing or comment, and preemption of local permitting requirements.[13] Local communities sometimes welcome the economic opportunity a waste disposal facility or power plant may bring. However, organized and politically powerful communities tend to resist such facilities, whose health and environmental burdens fall disproportionately on the poor and politically weak.[14]

In these siting controversies, as well as other contexts, benefit sharing is a possible means of addressing health, environmental, and community concerns, promoting equity, and building better relationships between developers and local communities.[15] But what exactly is benefit sharing? Benefit sharing can refer to hazard mitigation measures, monetary payments, or other forms of compensation.[16] Compensation may have the purpose of making communities whole. For example, in-kind awards may replace affected resources or ameliorate risks created by a facility; contingency funds can assure a response should an accident occur; and property value guarantees can protect property owners from potential losses in value. Compensation may also provide amenities or funds beyond what is required to remedy harms caused by the facility. Such compensation arguably makes communities better off than they would be without the facility.[17]

In the context of this conference, it is worth reflecting on the extent to which benefit sharing qualifies as CSR. One understanding of CSR requires corporations to consider the impact of their activities on society

[11] *See* Taylor & Wyckoff, *supra* note 10, at 680.

[12] *See* Kasperson, *supra* note 10, at 134–35.

[13] *See* Taylor & Wyckoff, *supra* note 10, at 680.

[14] *See* Kasperson, *supra* note 10, at 133–34.

[15] *See id.* at 136; Howard C. Kunreuther, *Hazard Compensation and Incentive Systems: An Economic Perspective*, *in* HAZARDS: TECHNOLOGY AND FAIRNESS, *supra* note 10, at 145, 152. Community benefits agreements may provide for benefit sharing even where local communities retain full approval authority over a development project. *See* Edward W. De Barbieri, *Do Community Benefits Agreements Benefit Communities?*, 37 CARDOZO L. REV. 1773, 1780, 1785–86 (2016). This Article highlights the levers available to local communities absent such authority.

[16] *See* Kunreuther, *supra* note 15, at 153.

[17] *See* Vicki Been, *Compensated Siting Proposals: Is It Time to Pay Attention?*, 21 FORDHAM URB. L.J. 787, 792 (1993); Robin Gregory et al., *Incentives Policies to Site Hazardous Waste Facilities*, 11 RISK ANALYSIS 667, 673 (1991).

and the environment.[18] Alternatively, CSR may impose a more forceful, substantive obligation "to pursue objectives advancing the interests of all groups . . . affected by their activities."[19] Benefit sharing with local communities generally comports with either of these understandings of CSR. However, CSR also can refer to the adoption of various methods designed to promote accountability and transparency, including codes of conduct and management and reporting systems focused on social and environmental objectives.[20] Mitigation measures, compensation payments, or other benefit sharing steps may be consistent with this view of CSR, but a complete CSR strategy requires more. Voluntariness is also a component of some understandings of CSR.[21] Typically, the notion of voluntariness means that companies are going beyond legal mandates.[22] But voluntariness also may touch on the motives behind a company's actions. Namely, voluntariness may connote that companies are acting for reasons other than to increase sales, improve their reputation, or otherwise promote their own interests.[23]

CSR may even connote a subjective desire for society's well-being or "an intimate conviction and an attitude toward [one's] neighbours, mankind and towards human existence itself."[24] Benefit sharing in response to community protest or litigation may not satisfy this last notion of CSR, which represents more an aspiration than an operational objective. In the vast majority of circumstances, "the willingness of corporations to undertake [CSR] initiatives in relation to any social group depends, in large measure, on the capacity of that group to inflict damage on the

[18] *See* DAVID HUNTER, JAMES SALZMAN & DURWOOD ZAELKE, INTERNATIONAL ENVIRONMENTAL LAW & POLICY 1386 (4th ed. 2011).

[19] Kevin Campbell & Douglas Vick, *Disclosure Law and the Market for Corporate Social Responsibility*, *in* THE NEW CORPORATE ACCOUNTABILITY: CORPORATE SOCIAL RESPONSIBILITY AND THE LAW 241, 242 (Doreen McBarnet et al. eds., 2007).

[20] *See* David Monsma, *Equal Rights, Governance, and the Environment: Integrating Environmental Justice Principles in Corporate Social Responsibility*, 33 ECOLOGY L.Q. 443, 475–80 (2006). For a brief history of CSR, see Jerome J. Shestack, *Corporate Social Responsibility in a Changing Corporate World*, *in* CORPORATE SOCIAL RESPONSIBILITY: THE CORPORATE GOVERNANCE OF THE 21ST CENTURY 113, 114–16 (Ramon Mullerat ed., 2d ed. 2011).

[21] *See* ANDREAS RÜHMKORF, CORPORATE SOCIAL RESPONSIBILITY, PRIVATE LAW AND GLOBAL SUPPLY CHAINS 10–11 (2015); Monsma, *supra* note 20, at 473–74.

[22] *See* RÜHMKORF, *supra* note 21, at 11.

[23] *See* Shestack, *supra* note 20, at 120–23 (discussing "compelling reason[s] for a pro-active CSR," including enhanced reputation, better brand recognition, higher employee morale, and reduced earnings volatility); *cf.* Michael Hopkins, *Criticism of the Corporate Social Responsibility Movement*, *in* CORPORATE SOCIAL RESPONSIBILITY: THE CORPORATE GOVERNANCE OF THE 21ST CENTURY, *supra* note 20, at 543, 547 ("*all* CSR activities are linked to improving a company's bottom line").

[24] Ramon Mullerat, *A Few Concluding Remarks*, *in* CORPORATE SOCIAL RESPONSIBILITY: THE CORPORATE GOVERNANCE OF THE 21ST CENTURY, *supra* note 20, at 555, 556.

corporation by threatening its social licence to operate."[25] That benefit sharing may occur in response to protests or threats does not necessarily undermine its value or importance. However, the gap between benefit sharing and the aspirational understanding of CSR does underscore CSR's broader goals beyond the substantive sharing of benefits: developing procedures to enhance the voice of local communities and other stakeholders, establishing working relationships between industry and communities, and fostering corporate attitudes that are more attentive to society and the environment.

II. SOURCES OF LOCAL LEVERAGE

Though benefit sharing may be only one component of CSR, it is often a critical one. This Part explores various sources of community leverage to negotiate benefit sharing arrangements, including zoning authority, tort and other common law claims, constitutional claims, statutory processes, and political pressure. The degree of leverage in any particular context depends in large part on the allocation of siting and regulatory authority between state and local governments, a complex matter beyond the scope of this Article.[26] In many instances, communities nonetheless have significant means of leverage to demand from industry the sharing of benefits, whether directly or through local government.

A. Zoning Authority

Land use authority and related police powers designed to protect public health and welfare are the most obvious and direct sources of local leverage.[27] Through zoning enabling acts, most states have granted local governments broad powers to conduct land use planning, determine the

[25] Ciaran O'Faircheallaigh, *Aboriginal-Mining Company Contractual Agreements in Australia and Canada: Implications for Political Autonomy and Community Development*, 30 CANADIAN J. DEV. STUD. 69, 77 (2010).

[26] For scholarship exploring the subject, see, for example, Alexandra B. Klass, *Property Rights on the New Frontier: Climate Change, Natural Resource Development, and Renewable Energy*, 38 ECOLOGY L.Q. 63, 95–118 (2011) (discussing property rights and permitting frameworks for solar and wind energy installations in various states); Ashira Pelman Ostrow, *Process Preemption in Federal Siting Regimes*, 48 HARV. J. ON LEGIS. 289, 290 (2011) (advocating a "Process Preemption" approach in which Congress "empowers local governments to make primary siting decisions, subject to federal constraints on the decisionmaking *process*"); Spence, *supra* note 4, at 376–97 (discussing whether state or local regulation of hydraulic fracturing is most likely to produce decisions that maximize welfare).

[27] *See* Diana Stares, James McElfish & John Ubinger, Jr., *Sustainability and Community Response to Local Impacts*, *in* SHALE GAS AND THE FUTURE OF ENERGY: LAW AND POLICY FOR SUSTAINABILITY 101, 103 (John C. Dernbach & James R. May eds., 2016); *see also* Ross A. Hammersley & Kate E. Redman, *Local Government Regulation of Large-Scale Hydraulic Fracturing Activities and Uses*, 93 MICH. B.J., 36, 38–39 (June 2014).

location of varied land uses, and regulate building height, size, and design.[28] In the course of exercising these powers, local governments routinely attach conditions, or exactions, to address the impacts of a particular land use.[29] Developers may be required to pay for not only streets, wawater mains, and other infrastructure essential to developing a property, but also other public facilities, such as schools, parks, and fire stations.[30] Exactions provide a relatively straightforward instance of benefit sharing: a local government and applicant negotiate the conditions the applicant will accept in order to obtain local government approval.[31]

Takings doctrine limits the exactions a local government may demand to those that are "qualitatively linked and quantitatively proportionate" to the harms of a project.[32] Thus, exactions typically focus on ameliorating negative externalities rather than providing affirmative incentives to local communities.[33] Furthermore, conflict between state and local governments over local land use restrictions may prompt challenges to those restrictions. These challenges may contend that such restrictions lie beyond those powers granted to the local authority, or that they conflict with or are otherwise preempted by state law.[34] While home rule provisions in some state constitutions allow local governments to legislate on issues of local concern,[35] states may retain exclusive authority over certain permitting processes.[36]

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[28] *See* JULIAN CONRAD JUERGENSMEYER & THOMAS E. ROBERTS, LAND USE PLANNING AND DEVELOPMENT REGULATION LAW §§ 3.5, 4.1 (3d ed. 2013).

[29] *See* Timothy M. Mulvaney, *Exactions for the Future*, 64 BAYLOR L. REV. 511, 512 (2012).

[30] *See id.* at 517–18.

[31] *See* Mark Fenster, *Takings Formalism and Regulatory Formulas: Exactions and the Consequences of Clarity*, 92 CALIF. L. REV. 609, 622–24 (2004); *see also* Timothy M. Mulvaney, *Proposed Exactions*, 26 J. LAND USE & ENVTL. L. 277, 290–92 (2011) (discussing negotiations between developer and local government regarding potential mitigation measures in *St. Johns River Water Mgmt. Dist. v. Koontz*, 5 So. 3d 8 (Fla. Dist. Ct. App. 2009), *rev'd*, 133 S. Ct. 2586 (2013)).

[32] Mulvaney, *supra* note 29, at 521; *see also* Dolan v. City of Tigard, 512 U.S. 374, 386–91 (1994); Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 837–38 (1987). Exactions may be subject to limitations of state law as well. *See* Mulvaney, *supra* note 29, at 521.

[33] *See* Mulvaney, *supra* note 29, at 517.

[34] *See* Jesse J. Richardson, Jr., *Local Regulation of Hydraulic Fracturing*, 117 W. VA. L. REV. 593, 597–98 (2014).

[35] *See* Shaun A. Goho, *Municipalities and Hydraulic Fracturing: Trends in State Preemption*, 64 PLAN. & ENVTL. L. 3, 5 (2012).

[36] *See, e.g.*, Michelle Bryan Mudd, *A "Constant and Difficult Task": Making Local Land Use Decisions in States with a Constitutional Right to a Healthful Environment*, 38 ECOLOGY L.Q. 1, 22–24 (2011) (discussing Illinois provision prohibiting citizens or local governments from challenging agency permits for activities regulated under the Illinois Environmental Protection Act).

Hydraulic fracturing policy offers a prominent example of such state–local conflict. As already noted, numerous local jurisdictions have banned hydraulic fracturing.[37] Other jurisdictions have imposed information disclosure requirements, visual and traffic impact mitigation measures, site restoration mandates, and health, safety, and environmental regulations.[38] Preemption challenges to such restrictions have yielded varying results.[39] Generally, local ordinances that address traditional zoning matters—such as the location and negative externalities of hydraulic fracturing activity—have fared better than ordinances that ban all such activity or govern everyday operations.[40] Takings claims might also be used to attack local fracking regulation. Generally, takings doctrine requires compensation for regulation that eliminates all economically beneficial use.[41] However, fracking bans might not trigger compensation requirements if property owners retain some economically beneficial use or if fracking would constitute a nuisance.[42] Ultimately, local zoning authority can be a significant source of leverage to address negative externalities even in the face of potential preemption or takings claims.

B. Common Law

The common law, especially tort law, is an important source of community leverage. Tort law addresses injuries to persons, property, and the environment that economic activity can cause—injuries that in many instances would violate principles of CSR.[43] While the *ex post* compensation provided by tort law might be considered a form of benefit sharing, the following discussion focuses on the use of tort law *ex ante* as a lever by local communities to prompt benefit sharing.

Tort law can have an especially important role where states have preempted direct regulation by local governments. Because tort remedies

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[37] *See* Carolyn G. Loh & Anna C. Osland, *Local Land Use Planning Responses to Hydraulic Fracturing*, J. AM. PLAN. ASS'N 222, 229 tbl.2 (2016) (listing local policy responses to hydraulic fracturing); Uma Outka, *Intrastate Preemption in the Shifting Energy Sector*, 86 U. COLO. L. REV. 927, 956–57 (2015) (articulating a spectrum of local approaches including bans, moratoria, resolutions, and restrictions).

[38] *See* CTR. FOR SCI. & DEMOCRACY, *supra* note 4, at 5–6.

[39] *See* Outka, *supra* note 37, at 966–75 (discussing intrastate preemption controversies involving hydraulic fracturing); Richardson, *supra* note 34, at 607–21 (discussing litigation regarding local authority to regulate hydraulic fracturing in Colorado, New York, Pennsylvania, and West Virginia).

[40] *See* Goho, *supra* note 35, at 8; Loh & Osland, *supra* note 37, at 224; Richardson, *supra* note 34, at 622.

[41] Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1015 (1992).

[42] *See* Spence, *supra* note 4, at 398–406 (discussing potential application of takings doctrine to local fracking bans).

[43] *See generally* RÜHMKORF, *supra* note 21, at 164–68 (discussing overlap between tort law and CSR).

often address past behavior—in contrast to health and environmental regulation, which typically focuses on future conduct—there is a reasonable basis for concluding that the former should be less vulnerable to preemption.[44] In recent years, the Supreme Court's federal preemption doctrine has declined to distinguish between state regulation by statute and state regulation through the common law.[45] However, a line of earlier Court decisions suggested that tort claims should survive the enactment of regulatory schemes because tort claims offer a damages remedy that regulation does not.[46] Although this line of decisions does not govern state displacement of tort actions, the rationale for distinguishing tort actions from regulation would support a presumption against their displacement.[47]

1. Private Tort Claims

Litigation against hydraulic fracturing operators provides a sense of the tort claims potentially available to local communities.[48] The causes of action alleged in these cases have included trespass, private nuisance, negligence, negligence per se, strict liability, medical monitoring, and violation of state environmental statutes.[49] Both trespass and private nuisance involve infringement on the rights of a real property owner, and are frequently invoked by neighbors affected by nearby economic activity.[50] Trespass requires an intentional physical invasion of land, whereas private nuisance requires unreasonable interference with the use or enjoyment of land.[51] Other tort claims involve more generalized claims of harm to persons or property. Negligence allows a defendant to be held

[44] *See* Betsy J. Grey, *Make Congress Speak Clearly: Federal Preemption of State Tort Remedies*, 77 B.U. L. REV. 559, 562, 571–75 (1997).

[45] *See The Supreme Court, 2004 Term—Leading Cases*, 119 HARV. L. REV. 376, 381 (2005); *see also* Christina E. Wells, William E. Marcantel & Dave Winters, *Preemption of Tort Lawsuits: The Regulatory Paradigm in the Roberts Court*, 40 STETSON L. REV. 793, 794–96 (2011) (suggesting that the Roberts Court has adopted a regulatory paradigm rather than a compensatory paradigm in framing tort lawsuits).

[46] *See* Grey, *supra* note 44, at 559–65.

[47] *But see* Natale v. Everflow E., Inc., 959 N.E.2d 602, 610–12 (Ohio Ct. App. 2011) (holding nuisance claim preempted where state regulations set out standards governing drilling and operation of wells, state and city had approved and licensed defendant's well, and defendant operated well within permitted limits).

[48] *See* Peter Hayes & Steven M. Sellers, *Fracking Boom Likely to Trigger More Litigation, Lawyers Say*, 30 TOXICS L. REP. (BNA) 905 (Sept. 10, 2015).

[49] *See* Michael Goldman, *A Survey of Typical Claims and Key Defenses Asserted in Recent Hydraulic Fracturing Litigation*, 1 TEX. A&M L. REV. 305 (2013); Frank Leone & Mark Miller, *Hydraulic Fracturing: New Science and New Developments in Environmental & Toxics Litigation*, 30 TOXICS L. REP. (BNA) 637 (June 25, 2015).

[50] *See* RESTATEMENT (SECOND) OF TORTS § 158 (AM. LAW INST. 1965) (trespass); *id.* § 821D (AM. LAW INST. 1979) (private nuisance).

[51] *See id.* § 158 (trespass); *id.* § 822 (private nuisance).

liable for unreasonable conduct that causes harm.[52] Negligence per se applies to a statutory or regulatory violation that proximately caused a plaintiff's harm, where the statute or regulation was designed to protect against the type of harm suffered.[53] Strict liability rather than negligence governs the conduct of a defendant who engages in abnormally dangerous activity.[54] Medical monitoring, which some jurisdictions recognize, allows plaintiffs who have not yet suffered physical injuries to recover the cost of future medical examinations to detect injuries that may be caused by a defendant's conduct.[55] Finally, state environmental statutes may impose tort-like liability for the costs of responding to environmental contamination.[56]

Whether local communities' private tort claims are successful may turn on their ability to demonstrate that a particular activity caused their harm. Though plaintiffs in hydraulic fracturing tort cases often face an uphill challenge in demonstrating that defendants caused their injuries, they have begun to experience some success in jury trials.[57] The first sizable jury verdict in favor of plaintiffs in a hydraulic fracturing case, a $2.9 million April 2014 verdict for Texas landowners, alleged harm from the air emissions of fracking operations.[58] The verdict was based on private nuisance, though the complaint also alleged assault, intentional infliction of emotional distress, negligence, trespass, strict liability, and other claims.[59] Damages covered lost property value, past mental anguish, and

[52] *See* 1 RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 3 (AM. LAW INST. 2005).

[53] *See id.* § 14.

[54] *See id.* § 20.

[55] *See* Adam P. Joffe, *The Medical Monitoring Remedy: Ongoing Controversy and a Proposed Solution*, 84 CHI.-KENT L. REV. 663, 665 (2009).

[56] *See* Goldman, *supra* note 49, at 318.

[57] *See* Hayes & Sellers, *supra* note 48; Matthew J. Douglas, Harris D. Sherman, & Joseph G. Phillips, *Fracking Litigation Update: Despite Successful Pre-Trial Motions, Pennsylvania Jury Awards Multi-Million Dollar Verdict*, ARNOLD & PORTER ADVISORY (Mar. 29, 2016), http://www.arnoldporter.com/en/perspectives/publications/2016/03/fracking-litigation-update. Many hydraulic fracturing tort cases have been settled, often under confidentiality provisions that forbid parties from disclosing settlement terms. *See* Jim Efstathiou Jr. & Mark Drajem, *Drillers Silence Fracking Claims with Sealed Settlements*, BLOOMBERG (June 5, 2013), http://www.bloomberg.com/news/articles/2013-06-06/drillers-silence-fracking-claims-with-sealed-settlements.

[58] Final Judgment at 4–5, Parr v. Aruba Petroleum, Inc., No. 11-01650-E (Dall. Cty. Ct. July 9, 2014), 2014 WL 10779139; *see also* Hilary M. Goldberg, Melanie Stallings Williams & Deborah Cours, *It's a Nuisance: The Future of Fracking Litigation in the Wake of* Parr v. Aruba Petroleum, Inc., 33 VA. ENVTL. L.J. 1, 13 (2015); Hayes & Sellers, *supra* note 48. The claims in the case, described frequently as a fracking case, focused on activities common to all oil and gas wells. *See* Goldberg et al., *supra*, at 11–12.

[59] Final Judgment, *supra* note 58, at 4; *see also* Goldberg et al., *supra* note 58, at 11–12.

pain and suffering.[60] Another verdict, also based on private nuisance, awarded $4.2 million to Pennsylvania landowners who alleged that fracking and waste disposal operations had contaminated groundwater.[61]

Why have private nuisance claims proven most successful in these cases? For one, nuisance is a classic tool for addressing the sort of land use conflicts that are increasingly common in hydraulic fracturing cases.[62] Proof of injury in nuisance—i.e., interference with the use and enjoyment of property—may be relatively straightforward for plaintiffs who suffer from increased noise, odor, traffic, vibrations, or pollution exposure. Proof of causation for these sorts of injuries in a nuisance case also may be easier than proving causation in a negligence action, which may require a plaintiff to trace contamination to a particular operator.[63]

Furthermore, while nuisance and negligence both require an inquiry into reasonableness, that inquiry has a different focus in each instance. Private nuisance focuses on the existence of a harmful condition rather than on the defendant's conduct.[64] In the context of nuisance, reasonableness analysis weighs the social utility of the defendant's activity against the harms caused by the activity.[65] In the context of negligence, by contrast, reasonableness analysis assesses the defendant's conduct against an objective standard of reasonable conduct. Proof of negligence often requires expert testimony to establish the applicable standard of care and the defendant's breach of that standard.[66]

Nuisance claims also can be contrasted with trespass claims. Trespass requires a physical and intentional invasion of land. Private nuisance requires neither a physical nor intentional invasion, as a landowner may recover even for the disturbance of peace of mind connected to the use and enjoyment of land.[67]

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[60] *See* Final Judgment, *supra* note 58, at 4–5.

[61] *See* Douglas et al., *supra* note 57 (discussing Ely v. Cabot Oil & Gas Corp., 38 F. Supp. 3d 518 (M.D. Pa. 2014)).

[62] *See* Ellen M. Gilmer, *Age-Old Legal Tool Poses Modern Threat for Oil and Gas*, E&E NEWS (July 16, 2014), http://www.eenews.net/stories/1060002897. Surface estate owners who allege nuisance claims against owners of minerals underlying that surface are less likely to be successful in jurisdictions where the surface estate is deemed servient to the subsurface estate. *See* Hannah Wiseman, *Beyond* Coastal Oil v. Garza*: Nuisance and Trespass in Hydraulic Fracturing Litigation*, 57 ADVOCATE 8, 8, 10 (2011).

[63] *See* Efstathiou Jr. & Drajem, *supra* note 57; Gilmer, *supra* note 62; *see also* Kaoru Suzuki, *The Role of Nuisance in the Developing Common Law of Hydraulic Fracturing*, 41 B.C. ENVTL. AFF. L. REV. 265, 288–89 (2014) (suggesting that courts may be more willing to allow inferences of causation).

[64] *See* RESTATEMENT (SECOND) OF TORTS § 821D (AM. LAW INST. 1977).

[65] *See id.* § 826; Efstathiou Jr. & Drajem, *supra* note 57.

[66] *See* Goldberg et al., *supra* note 58, at 9.

[67] *See* Suzuki, *supra* note 63, at 288 (citing RESTATEMENT (SECOND) OF TORTS § 821D cmt. b). *But cf.* Douglas et al., *supra* note 57 (noting the court in *Ely v. Cabot Oil & Gas Corp.* constrained potential damages to "inconvenience and discomfort"

The potential for nuisance claims to arise out of hydraulic fracturing activity has led at least one company to negotiate agreements containing a "noise and nuisance easement."[68] Under one such agreement, an oil and gas operator paid neighboring landowners cash in return for "a permanent non-exclusive easement and right of way over and above [the landowners'] property for the noise, dust, light, smoke, odors, fumes, soot or other air pollution, vibrations, adverse impacts or other conditions or nuisances which may emanate from or be caused by [the operator's] operations."[69] The agreement also included provisions releasing the company from legal liability for current or future operations.[70]

2. Public Common Law Claims

Thus far, tort-based challenges to hydraulic fracturing have been brought largely by private plaintiffs. Such private challenges could prompt the negotiation of benefit sharing arrangements. However, purely private efforts to compel benefit sharing can result in arrangements that confer benefits on a select few rather than the entire affected community.[71] Private tort actions tend to address harms to private interests but are less likely to protect interests shared by the community at large.[72] Thus, in evaluating sources of community leverage, claims that public entities could bring on behalf of the community are equally important. Foremost among the available public common law claims are public nuisance and public trust.

Public Nuisance

Originating in common law criminal prosecutions, public nuisance is more commonly a source of civil liability today.[73] Public nuisance protects the public against unreasonable and substantial interference with a pub-

caused by nuisance and excluded mental and emotional discomfort). Establishment of trespass claims in fracking cases is also prevented by the existence of mineral leases between landowners and operators. *See* Goldberg et al., *supra* note 58, at 9.

[68] Mike Lee, *Driller Uses Novel "Nuisance Easement" to Address Well Site Criticisms*, ENERGYWIRE (June 5, 2014), http://www.eenews.net/energywire/2014/06/05/stories/1060000764.

[69] *See id.* (quoting one such agreement).

[70] *See* Naveena Sadasivam, *Aggressive Tactic on the Fracking Front*, PROPUBLICA (July 2, 2014), https://www.propublica.org/article/aggressive-tactic-on-the-fracking-front.

[71] *Cf.* De Barbieri, *supra* note 15, at 1789 (noting concerns of extortion and lack of representativeness when unelected negotiators enter into community benefits agreements).

[72] RÜHMKORF, *supra* note 21, at 169.

[73] *See* Donald G. Gifford, *Public Nuisance as a Mass Products Liability Tort*, 71 U. CIN. L. REV. 741, 790–809 (2003) (providing a historical account of the development of public nuisance doctrine). Thomas Merrill, while conceding that courts and commentators accept without qualification "[t]he idea that public nuisance is a form of tort liability," contends that the doctrine is more "properly regarded as a public action rather than a tort." Thomas W. Merrill, *Is Public Nuisance a Tort?*, 4 J. TORT L. 1, 5, 20 (2011).

lic right.[74] Mere interference with the public interest does not suffice, however; public nuisance requires interference "with the use of a public place or with the activities of an entire community."[75] In determining whether such interference is unreasonable, courts weigh various factors, including the gravity of the harm, the utility of the actor's conduct, the financial burden of compensating for the harm, and the continuing nature of the conduct or resultant harm.[76] Some jurisdictions also require that the defendant control the instrumentality causing the nuisance, or that the defendant's conduct be tortious.[77]

Public nuisance may be asserted under circumstances analogous to private nuisance—namely, where a defendant interferes with the use of public land or facilities. But public nuisance claims are not limited to such circumstances. Indeed, understanding the breadth of public nuisance is critical to appreciating the leverage it can offer to a community in negotiating for shared benefits. Public nuisance, in contrast to private nuisance, is not tied to land.[78] Public nuisance protects public rights, and though the notion of a public right is somewhat vague, it generally refers to the protection of public resources such as air, water, public rights-of-way, and community values.[79] Virtually any activity that interferes with the health, safety, convenience, peace, or even morals of the public could fall within its scope.[80] Noxious smells, loud noises, traffic obstructions, environmental pollution, and the like all can constitute public nuisances if significant and public in nature.[81]

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[74] *See* RESTATEMENT (SECOND) OF TORTS § 821B(1) & cmt. a (AM. LAW INST. 1977); DAN B. DOBBS, THE LAW OF TORTS § 467, at 1334 (3d reprt. 2004) (defining public nuisance as "a substantial and unreasonable interference with a right held in common by the general public, in use of public facilities, in health, safety, and convenience"); Gifford, *supra* note 73, at 813–30 (outlining principles governing public nuisance).

[75] Gifford, *supra* note 73, at 815.

[76] *See* RESTATEMENT (SECOND) OF TORTS §§ 821B & cmt. e, 826.

[77] *See* Albert C. Lin, *Deciphering the Chemical Soup: Using Public Nuisance to Compel Chemical Testing*, 85 NOTRE DAME L. REV. 955, 974 & n.97 (2009).

[78] *See* Gifford, *supra* note 73, at 778–79.

[79] *See* Merrill, *supra* note 73, at 8–11.

[80] *See* W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 90, at 643–44 (5th ed. 1984). California, for example, defines a nuisance as "[a]nything which is injurious to health, including, but not limited to, the illegal sale of controlled substances, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property." CAL. CIV. CODE § 3479 (West 2016). Public nuisance is defined as "[a nuisance] which affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal." *Id.* § 3480.

[81] *See* KEETON ET AL., *supra* note 80, at 643–44; *see, e.g.*, CAL. HEALTH & SAFETY CODE § 5411 (West 2016) (prohibiting discharge of sewage or other waste in a manner that will result in a nuisance).

The ability to identify these injuries to the community—i.e., "public bad[s]"[82]—can offer critical leverage to local governments seeking to compel benefit sharing. Historically, public nuisance actions "were prosecuted exclusively by local public officials or the attorney general on behalf of the Crown."[83] Today, public nuisance actions continue to be brought primarily by public officials.[84] As a general matter, local officials possess the power to bring public nuisance claims.[85] Furthermore, because the ability of private parties to bring public nuisance claims is very limited,[86] local officials are often the only parties with both the ability and incentive to pursue these claims.[87]

Public nuisance actions are ultimately public actions on a community's behalf. The fact that the traditional forms of relief awarded in public nuisance cases include abatement orders and criminal sanctions[88] underscores the public nature of the claim.[89] Public nuisance can be a powerful tool for addressing negative externalities imposed on a community. However, public nuisance actions cannot compel benefit sharing where such externalities are absent. In such circumstances, public trust doctrine may prove more useful.

Public Trust

Public trust, a property law doctrine rooted in the common law, provides that certain resources belong to the people and must be administered by the state for their benefit.[90] Traditionally, the doctrine applied to a fairly narrow range of resources—tidal and navigable waters and the lands beneath them.[91] In recent decades, however, several courts have expanded the scope of public trust protection to other resources, includ-

[82] Merrill, *supra* note 73, at 8.

[83] *Id.* at 12; *see also* Lin, *supra* note 77, at 983–84 (discussing public nuisance as an exercise of police power authority).

[84] *See* DOBBS, *supra* note 74, at 1335; Merrill, *supra* note 73, at 12.

[85] *See* Merrill, *supra* note 73, at 41–42 (noting the matter is governed by state law).

[86] *See* DOBBS, *supra* note 74, at 1335 (explaining when private plaintiffs may sue for public nuisance).

[87] *Cf.* David B. Spence, *Corporate Social Responsibility in the Shale Patch?*, 21 LEWIS & CLARK L. REV. 387, 405 (2017) (remarking that in hydraulic fracturing context, "state regulators may not have a sufficient incentive to regulate as stringently as locals would if given the chance").

[88] *See* KEETON ET AL., *supra* note 80, at 643; Merrill, *supra* note 73, at 17; *see also* Gifford, *supra* note 73, at 805, 814.

[89] *See* Merrill, *supra* note 73, at 5 (contending that "public nuisance is properly regarded as a public action rather than a tort").

[90] Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 475 (1970).

[91] *See* WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW: AIR AND WATER § 2.20, at 158–59 (1986).

ing wildlife, parkland, and dry-sand beaches.[92] The doctrine also may implicate resources that are connected to other resources that fall squarely within the public trust, as a 2014 California decision illustrates. Though that decision stopped short of finding that the public trust protects groundwater itself, it nevertheless held that the doctrine protects navigable waterways from harm caused by groundwater extraction.[93]

Some states have codified public trust doctrine, whereas others have incorporated it into their constitutions.[94] Importantly, the doctrine does not prohibit private development, use, or ownership of trust resources.[95] Rather, public trust serves as "a kind of inherent easement for certain public purposes";[96] a state may not use or dispose of trust resources in a way that substantially impairs the public interest.[97] In the context of hydraulic fracturing, for example, the doctrine imposes a duty on state and local governments to consider the impact of oil and gas development on public trust resources.[98] Accordingly, citizens and communities can wield public trust doctrine as a sword to challenge government or private actions that violate public trust purposes.[99] Alternatively, government can deploy the doctrine as a shield against claims that its restrictions on private activity have taken private property and thus require compensation.[100]

Robinson Township v. Commonwealth of Pennsylvania illustrates the potential power of public trust doctrine to protect local authority to regu-

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[92] *See* Alexandra B. Klass, *Modern Public Trust Principles: Recognizing Rights and Integrating Standards*, 82 NOTRE DAME L. REV. 699, 707–08 (2006) [hereinafter Klass, *Modern Principles*].

[93] *See* Lars-Eric Hedberg, *Special Report: Waters in Public Trust—California Ruling Could Change How Wells Are Regulated*, BLOOMBERG BNA (Mar. 26, 2015), https://www.bna.com/special-report-waters-n17179924570/ (discussing Envtl. Law Found. v. State Water Res. Control Bd., No. 34-2010-80000583 (Cal. Super. July 15, 2014) (order after hearing on cross-motions for judgment on the pleadings)).

[94] *See* Klass, *Modern Principles*, *supra* note 92, at 714. The doctrine has both federal and state aspects in that it "contain[s] a federal prohibition on any state efforts to abrogate the doctrine entirely, but allow[s] states a wide berth to expand the doctrine's protection beyond a federal minimum." *Id.* at 705.

[95] Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387, 435 (1892); *see also* Alexandra B. Klass, *Fracking and the Public Trust Doctrine: A Response to Spence*, 93 TEX. L. REV. 47, 50 (2015) [hereinafter Klass, *Fracking*].

[96] Carol M. Rose, *Joseph Sax and the Idea of the Public Trust*, 25 ECOLOGY L.Q. 351, 351 (1998); *see also* Klass, *Modern Principles*, *supra* note 92, at 702.

[97] *Ill. Cent. R.R. Co.*, 146 U.S. at 435, 452–53.

[98] *See* Klass, *Fracking*, *supra* note 95, at 58.

[99] *See* Klass, *Modern Principles*, *supra* note 92, at 727–42; Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631, 645–46 (1986).

[100] *See* Klass, *Modern Principles*, *supra* note 92, at 729–30.

late.[101] In an effort to facilitate hydraulic fracturing, the Pennsylvania legislature enacted a law curbing local governments' zoning authority over oil and gas operations.[102] Local governments and residents contended that the law violated article I, section 27 of the Pennsylvania constitution, which declares the state's public natural resources to be "the common property of all the people" and the state to be "trustee of these resources."[103] Noting that this constitutional trust duty extends to political subdivisions of the state, a plurality of the Pennsylvania Supreme Court agreed with the plaintiffs. The new law, the plurality explained, infringed upon local governments' public trust duties to "'conserve and maintain' the public natural resources, including clean air and pure water, 'for the benefit of all the people.'"[104] Specifically, those duties include an obligation (1) "to refrain from permitting or encouraging the degradation, diminution, or depletion of public natural resources," whether through direct state action or the state's failure to restrain private action, and (2) "to act affirmatively to protect the environment, via legislative action."[105]

Robinson Township's forceful articulation of public trust duties and its anchoring of those duties in a state constitutional text is "a bit of an outlier."[106] The opinion—as well as decisions from other jurisdictions—nonetheless underscores local governments' role in protecting public trust resources. Elsewhere, the Wisconsin Supreme Court, for example, has explicitly recognized that the state legislature "may legitimately delegate authority to local units of government to act in matters involving the state's 'public trust' duties . . . ."[107] In *Just v. Marinette County*, that court rejected a takings challenge to a county shoreland zoning ordinance, framing the ordinance as a proper exercise of the state's delegated public trust duty to protect navigable waters.[108] In a subsequent case, *Wisconsin's Environmental Decade, Inc. v. Department of Natural Resources*, the same court affirmed the vitality of a city's public trust duties.[109] The California courts

[101] 83 A.3d 901 (Pa. 2013). Alexandra Klass suggests that public trust doctrine in California may similarly hinder state efforts to override local restrictions on fracking. Klass, *Fracking*, *supra* note 95, at 55.

[102] *Robinson Twp.*, 83 A.3d at 970–73.

[103] PA. CONST. art. I, § 27.

[104] *Robinson Twp.*, 83 A.3d at 978 (quoting PA. CONST. art. I, § 27); *see also id.* at 979–82 (invalidating provision permitting oil and gas operations as a use of right in all zoning districts).

[105] *Id.* at 957–58.

[106] Spence, *supra* note 4, at 374.

[107] Wis.'s Envtl. Decade, Inc. v. Dep't of Nat. Res., 271 N.W.2d 69, 76 (Wis. 1978); *see also* Just v. Marinette County, 201 N.W.2d 761, 769 (Wis. 1972).

[108] 201 N.W.2d at 768–69.

[109] The court nonetheless rejected the city's efforts to repudiate a state permit allowing chemical treatment of local lakes on the ground that the state had exclusive power to supervise such chemical treatment. *Wis.'s Envtl. Decade, Inc.*, 271 N.W.2d at 71, 76.

similarly have documented and approved the California legislature's delegation of public trust authority to local governments.[110]

The potential invocation of public trust doctrine to compel benefit sharing is somewhat ironic in that public trust resources are inherently public. As the seminal public trust opinion in *Illinois Central R.R. Co. v. Illinois* makes clear, the state retains control over public trust resources and has a continuing obligation to manage them for public purposes.[111] Demanding that private actors comply with regulations that advance the public trust is not, technically, a form of benefit sharing. The underlying resources have always been public and simply may not be appropriated for the sole benefit of private actors.

Though public trust doctrine can be a powerful tool for local leverage, its utility will be limited by its scope. For the most part, public trust's protections apply only to certain water-related resources. Moreover, some jurisdictions have yet to recognize the doctrine explicitly.[112]

C. Constitutional Claims

As the *Robinson Township* opinion demonstrates, state constitutions can provide leverage for benefit sharing.[113] Public trust and constitutional environmental claims overlapped in that case,[114] yet state constitutions may provide an independent basis for legal claims against state agencies that authorize resource development or even against resource developers themselves. Indeed, a handful of state constitutions explicitly recognize rights to a healthful environment that extend more broadly than public trust protections.[115]

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[110] Pers. Watercraft Coal. v. Bd. of Supervisors, 100 Cal. App. 4th 129, 145–46 (Cal. Ct. App. 2002) (holding that county ordinance banning use of personal watercraft did not violate public trust doctrine); Graf v. San Diego Unified Port Dist., 7 Cal. App. 4th 1224, 1231–33 (Cal. Ct. App. 1992) (rejecting challenges to port district ordinances that restricted mooring and anchoring in bay); *see also* City of Long Beach v. Lisenby, 166 P. 333, 336 (Cal. 1917) (noting that state may delegate public trust authority regarding tidal and submerged lands to city).

[111] 146 U.S. 387, 452–55 (1892).

[112] *See* Klass, *Modern Principles*, *supra* note 92, at 712–13.

[113] *See* John C. Dernbach, *The Potential Meanings of a Constitutional Public Trust*, 45 ENVTL. L. 463, 483 (2015) (noting that plurality's analysis in *Robinson Township* "is anchored primarily in public trust," even though the Pennsylvania constitution "contains both general environmental rights and public trust provisions").

[114] *See* Jack R. Tuholske, *U.S. State Constitutions and Environmental Protection: Diamonds in the Rough*, 21 WIDENER L. REV. 239, 248 (2015).

[115] *See* James R. May & William Romanowicz, *Environmental Rights in State Constitutions*, *in* PRINCIPLES OF CONSTITUTIONAL ENVIRONMENTAL LAW 305, 306 (James R. May ed., 2011). Almost half the states have constitutional provisions that address environmental or natural resource issues in some way. *See id.*

Such constitutional provisions raise a number of issues, including "whether the [environmental] right is self-executing, who may vindicate the right, who may be held accountable for constitutional breach[,] and for what . . . ."[116] Expressing concerns about restraining economic development or displacing legislative enactments, some state courts have held environmental constitutional provisions unenforceable.[117] Other courts have found that these provisions may be enforced only with implementing legislation.[118] However, in a few states—most notably, Montana, Hawaii, and Pennsylvania—courts have held these provisions directly enforceable, particularly when plaintiffs seek to limit state authority.[119] These courts have further recognized that such provisions impose a duty on local governments to protect environmental resources.[120] In these jurisdictions, state constitutional provisions can serve as a basis for local regulation and lawsuits by communities to compel benefit sharing.

Perhaps the most expansive interpretations have surrounded Montana's constitutional provisions. These provisions not only grant all persons "the right to a clean and healthful environment," but also recognize a duty of "[t]he state and each person" to "maintain and improve a clean and healthful environment."[121] In *Montana Environmental Information Center v. Department of Environmental Quality*, the Montana Supreme Court held these provisions to be implicated by a statute exempting certain mining operations from environmental review.[122] The court found that the plaintiffs, who consumed water from and engaged in recreation in the waterbodies that might be affected, had standing to enforce their constitutional right against the state.[123] The court further held that the right to a clean environment is a fundamental right subject to strict scrutiny protection and that it may be infringed only by demonstrating a compelling state interest.[124] And in a subsequent case, the court found the constitutional duty to maintain and improve a clean and healthful environment applies to private parties as well as state officials.[125]

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[116] *Id.* at 307.

[117] *See id.* at 307, 311; *see, e.g.*, Tuholske, *supra* note 114, at 241–42 (discussing Illinois courts' refusal to give substantive effect to environmental provisions in state constitution).

[118] *See* May & Romanowicz, *supra* note 115, at 309–10.

[119] *See id.* at 309.

[120] *See* Mudd, *supra* note 36, at 9–11; *see, e.g.*, Kelly v. 1250 Oceanside Partners, 140 P.3d 985, 1006 (Haw. 2006) (holding that "the County has a duty, as a political subdivision of the State, to protect the [State's] waters").

[121] MONT. CONST. art. II, § 3; *id.* art. IX, § 1.

[122] 988 P.2d 1236, 1249 (Mont. 1999).

[123] *Id.* at 1243.

[124] *Id.* at 1246.

[125] Cape-France Enters. v. Estate of Peed, 29 P.3d 1011, 1017 (Mont. 2001) (stating that under environmental provisions of Montana constitution, "it would be unlawful for Cape-France, a private business entity, to drill a well on its property in

Outside the United States, some 60 or so national constitutions grant environmental rights.[126] The wording and interpretation of these constitutional provisions vary widely, as do their applications, enforceability, and remedies.[127] Courts in some countries, particularly in Latin America, have enjoined specific projects as violations of constitutional environmental rights, but in many countries these provisions "lie dormant," awaiting future litigation to flesh out their details.[128]

D. Processes

Environmental impact assessment and other planning processes offer further points of local leverage. The National Environmental Policy Act (NEPA) requires the federal government to prepare an environmental impact statement for "major Federal actions significantly affecting the quality of the human environment."[129] Federal actions include projects undertaken directly by federal agencies as well as "actions approved by [federal] permit or other regulatory decision."[130] Procedural rather than substantive in effect, NEPA provides an opportunity for public participation during the assessment process, and the threat of a NEPA lawsuit may keep a proposed project from moving forward.[131] Nonetheless, NEPA's scope is limited to projects having significant federal involvement.

State assessment and permitting processes, where they exist, may apply more broadly. Fifteen states, the District of Columbia, and Puerto Rico have enacted analogs to NEPA.[132] Like NEPA, these state environmental policy acts generally require government agencies to analyze the environmental impacts of specified actions.[133] These statutes may apply to local governments, extending environmental assessment requirements to a wide range of private activities, including development projects necessitating local government permits.[134] Furthermore, the substantive re-

the face of substantial evidence that doing so may cause significant degradation of uncontaminated aquifers and pose serious public health risks").

[126] James R. May, *Constituting Fundamental Environmental Rights Worldwide*, 23 PACE ENVTL. L. REV. 113, 114 (2006).

[127] James R. May & Erin Daly, *Vindicating Fundamental Environmental Rights Worldwide*, 11 OR. REV. INT'L L. 365, 366–67 (2009).

[128] *Id.* at 405–06.

[129] 42 U.S.C. § 4332(C) (2012).

[130] 40 C.F.R. § 1508.18 (2015).

[131] *Id.* § 1503; Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc., 435 U.S. 519, 557–58 (1978).

[132] *See* DANIEL R. MANDELKER ET AL., NEPA: LAW AND LITIGATION § 12:2, at 852–54 (2016 ed.); Paul Weiland, Robert Horton & Erik Beck, *Environmental Impact Review*, *in* GLOBAL CLIMATE CHANGE AND U.S. LAW 153, 165 (Michael B. Gerrard & Jody Freeman eds., 2d ed. 2014).

[133] *See* MANDELKER ET AL., *supra* note 132, § 12:1, at 851.

[134] *See id.*

quirements found in some of these laws[135] give local communities additional leverage to mitigate harms or demand benefit sharing.

Aside from state environmental policy acts, state permitting processes also may offer opportunities for local engagement.[136] Certain types of siting decisions may be subject to mandatory procedures for community participation. Hazardous waste siting laws, for example, may require consultation with a citizen advisory board or inclusion of community representatives on oversight commissions.[137] Community participation requirements may apply to siting decisions as well as to ongoing management of a facility.[138] Participatory procedures can be as important as substantive measures in establishing the trust essential to community acceptance.[139] Indeed, in the absence of adequate trust, developer offers to share benefits may be viewed with suspicion and rejected.[140]

Even when a permitting decision is committed to state authorities, the opportunity to participate in administrative processes can provide leverage and stimulate community organizing efforts. Community participation in administrative hearings can broaden the inquiry of a permitting process that might otherwise focus on narrow technical criteria. In one example, environmental justice advocates used power plant permitting hearings to prompt a community-wide health assessment and to sensitize decision makers to environmental justice concerns.[141]

E. Other Sources of Legal Obligations

Local authority to assess fees and taxes also can be an important source of leverage. As discussed above, local governments may impose impact fees and exactions as a condition precedent to governmental ap-

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[135] *See, e.g.*, CAL. PUB. RES. CODE §§ 21002–2.1 (West 2016).

[136] *See also* GINGER GIBSON & CIARAN O'FAIRCHEALLAIGH, WALTER & DUNCAN GORDON FOUND., IBA COMMUNITY TOOLKIT: NEGOTIATION AND IMPLEMENTATION OF IMPACT AND BENEFIT AGREEMENTS 34 (2010) (noting that federal or provincial laws governing resource development in Canada may call for benefits agreements or consultation); Rachel A. Kitze, Note, *Moving Past Preemption: Enhancing the Power of Local Governments over Hydraulic Fracturing*, 98 MINN. L. REV. 385, 406–09, 413 (2013) (describing incipient efforts in Colorado to involve local governments in state hydraulic fracturing program and setting out proposal to include local officials directly in state regulatory process).

[137] *See* Gregory et al., *supra* note 17, at 672; *see also* Been, *supra* note 17, at 811–15, 819–20 (discussing mandatory siting agreement negotiation process under Massachusetts Hazardous Waste Facility Siting Act and facility siting requirements in Wisconsin).

[138] *See* Gregory et al., *supra* note 17, at 672.

[139] *See id.*

[140] *See id.*

[141] *See* Clifford Rechtschaffen, *Fighting Back Against a Power Plant: Some Lessons from the Legal and Organizing Efforts of the Bayview-Hunters Point Community*, 3 HASTINGS W.–N.W. J. ENVTL. L. & POL'Y 407, 412–20 (1996).

proval.[142] Local governments may also assess other types of fees, including regulatory fees and special assessments. Regulatory fees, which are intended to offset the costs of processing permits, conducting inspections, and providing other regulatory services, must generally correspond to the cost of the governmental service provided.[143] Special assessments, which pay for localized improvements, may not exceed the value of the special benefit to the payer.[144] Local governments also have authority to impose property taxes, and in some cases sales taxes, although their authority in this area is often subject to legal and practical constraints.[145]

Although this Article has focused primarily on benefit sharing levers available to local communities under state law, other bodies of law also merit a brief mention. While no federal law generally governs benefit sharing, the details of a specific situation may trigger the application of certain federal laws and lead to benefit sharing. For example, a recent citizen suit alleges that injection wells disposing of hydraulic fracturing wastewater violate the Resource Conservation and Recovery Act.[146] Such citizen suits could prompt benefit sharing negotiations between local communities and defendants.

International law generally imposes no direct obligations on private parties, who must comply only with those obligations incorporated into domestic law.[147] However, international law increasingly sets out benefit sharing norms that may be relevant to private conduct. For example, the Convention on Biological Diversity (CBD) requires member nations to adopt measures aimed at sharing benefits from developing genetic resources.[148] In addition, the Nagoya Protocol to the CBD focuses specifical-

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[142] *See supra* Part II.A; *see also* Rechtschaffen, *supra* note 141, at 415–16.

[143] *See* CTR. FOR SCI. & DEMOCRACY, *supra* note 4, at 9; Laurie Reynolds, *Taxes, Fees, Assessments, Dues, and the "Get What You Pay For" Model of Local Government*, 56 FLA. L. REV. 373, 409 (2004).

[144] *See* Reynolds, *supra* note 143, at 397–98.

[145] *See* Erin Adele Scharff, *Powerful Cities?: Limits on Municipal Taxing Authority and What to Do About Them*, 91 N.Y.U. L. REV. 292, 296, 303–04 (2016); *see also* Spence, *supra* note 4, at 393 (noting that local governments could be given more power to capture economic rewards associated with hydraulic fracturing).

[146] *See* 42 U.S.C. § 6972(a)(1)(B) (2012) (RCRA provision authorizes citizen suits regarding handling, treatment, or disposal of waste that may "present an imminent and substantial endangerment to health or the environment"); Steven M. Sellers, *Earthquakes, Fracking, Disposal Wells . . . and Litigation*, 31 TOXICS L. REP. (BNA) 398 (Apr. 26, 2016) (citing Complaint for Declaratory and Injunctive Relief Under 42 U.S.C. § 6972(a)(1)(B) at 1, Sierra Club v. Chesapeake Operating LLC, No. 5:16-cv-00134-F (W.D. Okla. Feb. 16, 2016)).

[147] *See, e.g.,* Skiriotes v. Florida, 313 U.S. 69, 72–73 (1941) ("International law is . . . the law of all States of the Union but it is . . . concerned with international rights and duties and not with domestic rights and duties.").

[148] Convention on Biological Diversity art. 15, ¶ 7, June 5, 1992, 1760 U.N.T.S. 79.

ly on access and benefit sharing issues and makes clear that fair and equitable sharing of benefits should extend to indigenous and local communities that hold genetic resources.[149] To promote fair and equitable sharing, the protocol mandates the establishment of procedures for obtaining prior informed consent and approval.[150] The CBD and Nagoya Protocol apply only to genetic resources, but they reflect a growing recognition that benefits from resource development activities should be shared more equitably.

F. Extralegal Sources of Leverage

Consideration of potential sources of local leverage should not overlook political strategies and other extralegal tools. Through traditional and new forms of media, publicity campaigns, and lobbying, communities can pressure companies to share benefits.[151] Such extralegal efforts can be the predominant motivation for industry to engage in benefit sharing, as local opposition can delay a project, threaten its financial viability, and sully a company's reputation.[152]

Community engagement with industry need not be adversarial, however. Working relationships between industry and local communities can foster trust, promote advance consultation, and enable better communication and problem solving.[153] A number of hydraulic fracturing operators have recognized the benefits of community engagement and adopted plans that set out objectives of protecting community health and the environment, promoting local economic development, and earning community acceptance.[154] In addition, a leading industry organization has issued guidelines that encourage hydraulic fracturing operators to

[149] Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity art. 5 & Annex I, Oct. 29, 2010, UNEP/CBD/COP/DEC/X/1 [hereinafter Nagoya Protocol]; ELISA MORGERA, ELSA TSIOUMANI, & MATTHIAS BUCK, UNRAVELING THE NAGOYA PROTOCOL 117–18 (2014).

[150] Nagoya Protocol, *supra* note 149, at art. 6.

[151] *See* O'Faircheallaigh, *supra* note 25, at 76; *see also, e.g.*, Richard Levick, *Colorado Rejects Fracking: The Money's Not Talking; Social Media Is*, FORBES (Nov. 7, 2013), http://onforb.es/1dPAzrh (contending that anti-fracking activists have outmaneuvered industry through sophisticated social media outreach).

[152] *See* Ciaran O'Faircheallaigh, *Community Development Agreements in the Mining Industry: An Emerging Global Phenomenon*, 44 COMMUNITY DEV. 222, 226 (2013) (discussing benefit sharing in context of impact and benefit sharing agreements in Australia); Jason Prno, Ben Bradshaw, & Dianne Lapierre, *Impact and Benefit Agreements: Are They Working?* (Paper presented at the Canadian Inst. of Mining, Metallurgy & Petroleum Annual Conference, May 11, 2010), http://www.impactandbenefit.com/UserFiles/Servers/Server_625664/File/IBA%20PDF/CIM%202010%20Paper%20-%20Prno,%20Bradshaw%20and%20Lapierre.pdf.

[153] *See* CTR. FOR SCI. & DEMOCRACY, *supra* note 4, at 7.

[154] *See* Stares et al., *supra* note 27, at 112–13.

communicate with communities in a structured way and to account for local norms and concerns.[155]

Extralegal sources of leverage such as reputation or community pressure are often described in connection with a "social license to operate."[156] These sources of leverage do not rely on binding law. They nevertheless can be parlayed into legal form through community benefit agreements (CBA) and similar instruments. Negotiated between a developer and community representatives, a CBA "specifies the public benefits and amenities that a particular developer will provide to the impacted community in exchange for the community's support of its proposed project."[157] These private agreements often go beyond impact mitigation in requiring a developer to improve local facilities, housing, or employment opportunities.[158] Not surprisingly, CBAs function best where local leverage has substantial legal and extralegal components—i.e., when "the community base is large and where the developer needs community support in order to obtain subsidies, approvals, or regulatory variances . . . ."[159] CBAs ultimately can facilitate broader participation and improve substantive outcomes, but also raise concerns regarding the transparency of the processes by which they are reached and the extent to which they reflect the actual interests of affected communities.[160]

III. ILLUSTRATIONS

This Part offers examples demonstrating the use of legal levers to prompt benefit sharing in three contexts: hydraulic fracturing, mining projects on Canadian aboriginal lands, and hazardous waste facility siting. While these examples suggest the potential effectiveness of various levers, benefit sharing alone may not equitably resolve conflicts involving resource development.

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[155] AM. PETROLEUM INST., COMMUNITY ENGAGEMENT GUIDELINES 2 (2014); *see also* Stares et al., *supra* note 27, at 112–13.

[156] *See* Stares et al., *supra* note 27, at 110.

[157] Patricia E. Salkin & Amy Lavine, *Understanding Community Benefits Agreements: Equitable Development, Social Justice and Other Considerations for Developers, Municipalities and Community Organizations*, 26 UCLA J. ENVTL. L. & POL'Y 291, 293 (2008); *see* Alejandro E. Camacho, *Community Benefits Agreements: A Symptom, Not the Antidote, of Bilateral Land Use Regulation*, 78 BROOK. L. REV. 355, 361 (2013).

[158] *See* Salkin & Lavine, *supra* note 157, at 292. A CBA may be incorporated into a development agreement between the developer and municipality, enabling enforcement by the latter. *See id.* at 295.

[159] *Id.* at 297.

[160] *See* Camacho, *supra* note 157, at 364–65, 374–75.

A. Hydraulic Fracturing

Agreements between hydraulic fracturing operators and the town of Erie, Colorado illustrate the collaboration that can result from industry engagement with a community.[161] These agreements include mitigation measures that addressed some local concerns about noise, pollution, and other impacts. The town used its leverage to achieve a modest amount of control and to establish lines of communication between operators and the community. However, the agreed-upon measures do not extend beyond mitigation to affirmatively share benefits.

Impacts from drilling operations prompted Erie residents to petition operators and town leaders to address their concerns.[162] The town opted not to ban fracking operations—in contrast to various other Colorado municipalities—but instituted a moratorium as it considered changes in city ordinances that would toughen the permitting process.[163] Community pressure combined with the threat of local regulation led to the negotiation of agreements in which operators agreed to use specified best practices that exceed state standards.[164] One agreement, for example, mandates bigger setbacks, stricter noise limits, additional air quality inspections, and regular meetings with residents and town officials.[165] In return, the agreement exempts operators from obtaining local planning approvals.[166] Equally important, operators must give advance notice to nearby residents prior to applying for drilling permits from the state, and mediation is mandatory if the agreement's terms are violated.[167] In sum, the agreement addresses some of the leading community concerns, offers operators greater certainty, and establishes ongoing communications between operators and the community.

[161] *See* YALE-PACE LAND USE COLLABORATIVE, ADDRESSING THE LOCAL IMPACTS OF HYDRAULIC FRACTURING: CASE STUDY: ERIE, COLORADO (2015) [hereinafter ERIE CASE STUDY]; Heusner et al., *supra* note 4, manuscript at 47.

[162] *See* ERIE CASE STUDY, *supra* note 161, at 3–4.

[163] *See id.* at 4–6.

[164] *See id.* at 4–7. State regulators have declined to include some of the agreements' specifications in state-issued permits, leaving enforcement of those specifications to the town. *See* Whitney Bryen, *Encana: "We Stand Behind Agreement" with Erie on Fracking*, DAILY CAMERA (Feb. 17, 2016), http://www.dailycamera.com/erie-news/ci_29529007/encana-we-stand-behind-agreement-erie-fracking; Whitney Bryen, *Erie Questions Validity of Encana Agreement Following State's Cool Response*, DAILY CAMERA (Feb. 16, 2016), http://www.dailycamera.com/erie-news/ci_29525407/erie-questions-validity-encana-agreement-following-states-cool.

[165] *See* Cathy Proctor, *Encana, Erie Reach Groundbreaking Agreement on Oil and Gas Operations*, DENV. BUS. J. (Aug. 26, 2015), http://www.bizjournals.com/denver/blog/earth_to_power/2015/08/encana-erie-reach-groundbreaking-agreement-on-oil.html.

[166] *See id.*

[167] *See id.*

Agreements between hydraulic fracturing operators and communities could move beyond impact mitigation to include affirmative benefit sharing. The United Kingdom, for example, is contemplating establishment of a shale wealth fund using a share of the tax proceeds from hydraulic fracturing.[168] The British government initially planned to distribute proceeds from the fund to local governments but is now considering direct cash payments to individual households.[169] Critics have characterized the proposal as a bribe and contended that it would fail to address environmental concerns.[170]

As the cool response to the British government's proposal suggests, the process of engaging with local communities and learning about their concerns may be as important as the substantive benefits that a resource developer offers. The Erie agreements nonetheless demonstrate that local governments have some leverage over hydraulic fracturing operators and can use that leverage to express local concerns and mitigate project impacts.

B. Mining on Canadian Aboriginal Lands

Impact and benefit agreements (IBAs) between industry and aboriginal communities in Canada illustrate the synergistic operation of multiple forces to prompt benefit sharing. In an IBA, "an Aboriginal group accepts some restrictions to the exercise of their traditional rights and Aboriginal title" and allows access to their lands for resource development in return for economic benefits (including employment) and impact mitigation measures.[171] Canada has been a pioneer in promoting the negotiation of IBAs for mining projects, and the practice is increasingly common in other countries as well.[172]

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[168] *See Households Could Get Fracking Payments Under Government Plans*, BBC NEWS (Aug. 7, 2016), http://www.bbc.com/news/uk-37000975.

[169] *See id.*; Daniel Boffey, *Local People to Get Cash Payments from Fracking*, GUARDIAN (Aug. 6, 2016), https://www.theguardian.com/environment/2016/aug/06/fracking-local-people-payments-theresa-may. Similarly, Alaska dedicates one quarter of its oil taxes to its Permanent Fund, which pays an annual dividend to every state resident. *See* Christopher L. Griffin, Jr., *The Alaska Permanent Fund Dividend and Membership in the State's Political Community*, 29 ALASKA L. REV. 79, 82–83, 83 n.19 (2012).

[170] *See* Boffey, *supra* note 169; Rowena Mason, *Trying to Bribe Public to Accept Fracking Won't Work, Say Campaigners*, GUARDIAN (Aug. 7, 2016), https://www.theguardian.com/environment/2016/aug/07/fracking-bribe-public-accept-greenpeace-labour-cash. *But cf.* Naveed H. Paydar et al., *Fee Disbursements and the Local Acceptance of Unconventional Gas Development: Insights from Pennsylvania*, 20 ENERGY RES. & SOC. SCI. 31 (2016) (finding positive association between distribution of impact fee revenues to local government and support for unconventional gas development in Pennsylvania).

[171] Ken J. Caine & Naomi Krogman, *Powerful or Just Plain Power-Full? A Power Analysis of Impact and Benefit Agreements in Canada's North*, 23 ORG. & ENV'T 76, 80 (2010).

[172] *See* O'Faircheallaigh, *supra* note 25, at 69.

The negotiation of IBAs in Canada is driven by various legal obligations.[173] First, Canada's constitution recognizes aboriginal and treaty rights,[174] including a duty to consult with aboriginal groups when their rights are likely to be infringed.[175] This duty to consult technically lies with the government, but as a matter of practice, project developers typically carry out the consultation.[176] As the real parties in interest, the developers have critical knowledge regarding each project and are responsible for paying for benefits and mitigation measures.[177] Consultation requires at a minimum the disclosure of information regarding the development proposal and may also include aboriginal participation in designing and conducting studies, but aboriginal groups do not have an absolute right to reject the proposal.[178] Second, Canada has enacted various land claim agreements between aboriginal groups and the government recognizing aboriginal ownership of certain resources.[179] Such agreements provide for compensation and consultation rights.[180] Third, other levers may motivate development of IBAs, including specific statutes, environmental assessment and regulatory approval processes, and the desire of industry to obtain a social license for its activities.[181]

Canada's mandated approach to benefit sharing with aboriginal groups appears attractive at first glance. The legal obligation to consult on resource development projects undoubtedly gives aboriginal groups an opportunity to voice their concerns and leverage to extract concessions. But mandated benefit sharing is not a cure-all. Developers enter IBA negotiations possessing advantages in knowledge, capacity, influence, and resources.[182] Moreover, because IBAs are typically negotiated

[173] *See* IRENE SOSA & KARYN KEENAN, IMPACT BENEFIT AGREEMENTS BETWEEN ABORIGINAL COMMUNITIES AND MINING COMPANIES: THEIR USE IN CANADA 8 (2001) ("The negotiation of IBAs is now considered to be a *de facto*, albeit unwritten, regulatory requirement in the North.").

[174] Rights of the Aboriginal Peoples of Canada, § 35, Part II of the Constitution Act, 1982, being Schedule B to the Canada Act, 1982, c 11 (U.K.).

[175] *See* Sandra Gogal, Richard Riegert, & JoAnn Jamieson, *Aboriginal Impact and Benefit Agreements: Practical Considerations*, 43 ALTA. L. REV. 129, 130–31 (2005) (discussing Section 35(1) of the Constitution Act of 1982 and case law).

[176] *See id.* at 133.

[177] *See id.*

[178] *See id.* at 131–33.

[179] *See id.* at 136–38; SOSA & KEENAN, *supra* note 173, at 4 (describing such agreements as "modern treaties").

[180] *See* Gogal et al., *supra* note 175, at 136–38.

[181] *See id.* at 138–41; GIBSON & O'FAIRCHEALLAIGH, *supra* note 136, at 34–35.

[182] *See* Guillaume Peterson St-Laurent & Philippe Le Billon, *Staking Claims and Shaking Hands: Impact and Benefit Agreements as a Technology of Government in the Mining Sector*, 2 EXTRACTIVE INDUSTRIES & SOC'Y 590, 597 (2015); *see also* Shalanda H. Baker, *Why the IFC's Free, Prior, and Informed Consent Policy Does Not Matter (Yet) to Indigenous Communities Affected by Development Projects*, 30 WIS. INT'L L.J. 668, 700 (2012)

after developers have made significant investments and environmental alterations, discussions tend to focus narrowly on mitigation rather than on social and cultural impacts or a community's broader vision for development.[183] Uneven distribution of benefits, or the perception of uneven distribution, can undermine community cohesion.[184] The signing of an IBA can even leave a community worse off because the terms of the agreement—which are often confidential—may preclude a community from using litigation, public protest, or other means to attempt to block a project.[185] Furthermore, implementation and enforcement of IBAs has been weak,[186] though specific provisions may be incorporated into IBAs to foster more effective implementation.[187] Finally, the limited role of government in the IBA process arguably allows the government to shirk its fiduciary obligations to aboriginal peoples under the guise of self-determination.[188] Bilateral negotiations between communities and a developer are framed not only as a means of satisfying the government's duty to consult and accommodate aboriginal peoples, but also as a substitute for the often arduous process of settling disputed land claims.[189]

The concerns just noted underscore the importance of relative bargaining power to achieving fair and socially responsible benefit sharing. Mandated benefit sharing may offer some leverage to local communities, but additional measures may be necessary to counter historic and contextual factors that favor resource developers.

C. Hazardous Waste Facility Siting Agreements

State agencies largely determine where to site hazardous waste facilities. However, a few states have established procedures mandating direct negotiations between each project developer and host community.[190] In theory, such an approach allows local communities to protect their interests through impact mitigation, compensation payments, or affirmative

(observing that international project developers tend to be "sophisticated, repeat industry players" in contrast to affected indigenous communities).

[183] *See* Baker, *supra* note 182, at 692–93 ("[O]nce affected indigenous communities become engaged in the project process, the development train has already left the station."); Caine & Krogman, *supra* note 171, at 84–87.

[184] *See* O'Faircheallaigh, *supra* note 152, at 233.

[185] *See id.* at 232; Emilie Cameron & Tyler Levitan, *Impact and Benefit Agreements and the Neoliberalization of Resource Governance and Indigenous-State Relations in Northern Canada*, 93 STUD. POL. ECON. 25, 34–37 (2014).

[186] *See* Caine & Krogman, *supra* note 171, at 84, 88.

[187] *See* O'Faircheallaigh, *supra* note 152, at 230.

[188] *See* SOSA & KEENAN, *supra* note 173, at 9; Caine & Krogman, *supra* note 171, at 88.

[189] *See* Cameron & Levitan, *supra* note 185, at 35–37.

[190] *See* Kasperson, *supra* note 10, at 136.

benefit sharing.[191] In practice, however, these negotiations have not always generated outcomes that are equitable or satisfactory to local communities. As in Canadian IBA negotiations, project developers often enter into bargaining with advantages in political power, sophistication, and knowledge.[192] Moreover, the limited ability to predict and measure the adverse effects of such facilities complicates any assessment of tradeoffs. Indeed, the prospect of compensation sometimes fans local opposition, particularly when the suggested compensation does not address perceived risks.[193]

Research indicates that local communities' willingness to accept mitigation, compensation, or other measures in connection with the siting of hazardous waste facilities depends on the extent to which such measures directly address underlying concerns.[194] An offer of economic benefits is more likely to be acceptable if it addresses residents' concerns regarding health effects or economic equity—for example, through property value guarantees, promises to pay medical expenses, or reimbursement for new public facilities.[195] However, if a facility does not meet a minimum threshold of perceived safety, affected communities tend to flatly refuse offers of compensation.[196] Offers of monetary compensation after safety measures have been promised or taken are viewed with particular suspicion. Such offers may reduce a community's willingness to accept an undesirable project because they suggest that safety measures are inadequate[197] or because they conflict with a societal norm that "the environment should not be traded for money."[198]

CONCLUSION

The outcomes of benefit sharing negotiations largely reflect the relative bargaining power of communities and industry.[199] Local communities may have various sources of leverage that enhance their bargaining pow-

[191] *See id.*

[192] *See* Caine & Krogman, *supra* note 171, at 77–78.

[193] *See* Kasperson, *supra* note 10, at 137.

[194] *See* Hank Jenkins-Smith & Howard Kunreuther, *Mitigation and Benefits Measures as Policy Tools for Siting Potentially Hazardous Facilities: Determinants of Effectiveness and Appropriateness*, 21 RISK ANALYSIS 371 (2001); *see also* Gregory et al., *supra* note 17, at 674 ("The best siting strategy is shown to be one which offers incentives that offset each stakeholder's perceived losses . . . .").

[195] *See* Jenkins-Smith & Kunreuther, *supra* note 194, at 380.

[196] *See id.* at 371, 381 ("It may not be a matter of providing *enough* benefits, but of providing *enough commensurable* benefits, given the nature of the expected risk.").

[197] *See id.* at 380.

[198] Edmundo Claro, *Exchange Relationships and the Environment: The Acceptability of Compensation in the Siting of Waste Disposal Facilities*, 16 ENVTL. VALUES 187, 190–92 (2007).

[199] *See* O'Faircheallaigh, *supra* note 152, at 231.

er. However, bargaining power depends not only on applicable law but also on other factors, including a community's location, resources, cohesion, history in dealing with development, and alternative development options.[200] Even where benefit sharing negotiations are mandated—as in the IBA context or some hazardous waste siting decisions—developers often enjoy significant advantages in the negotiation process. The disparity in bargaining power between local communities and developers is exacerbated by a lack of transparency surrounding benefit sharing agreements.[201] To counter such disparity, further measures may be necessary. These might take the form of publicly funded legal assistance to local communities, requirements for transparency regarding the content or negotiation of agreements, or incorporation of benefit sharing negotiations into broader planning processes. Ultimately, benefit sharing should be evaluated not only in terms of the benefits that directly flow from a specific agreement, but also in terms of the processes leading to the development of an agreement, the resulting relationships between stakeholders, and the effects of an agreement on broader community interests, including current and future generations.

[200] *See* Benjamin E. Apple, Note, *Mapping Fracking: An Analysis of Law, Power, and Regional Distribution in the United States*, 38 HARV. ENVTL. L. REV. 217, 233 (2014); O'Faircheallaigh, *supra* note 152, at 231.

[201] *See* Baker, *supra* note 182, at 700–01.