

# What Drives Norm Success? Evidence from Anti-Fossil Fuel Campaigns

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## Abstract

Why do some international norms succeed, whereas others fail? We argue that norm campaigns are more likely to succeed when the actions they prescribe are framed as a solution to salient problems that potential adopters face, even if different from the problem that originally motivated norm entrepreneurs. For instance, the campaign to reduce environmentally harmful fossil fuel subsidies has been more effective when linked to fiscal stability, a common problem that policy makers face. Problem linkages can thus bolster the attractiveness of a proposed new norm and broaden the coalition of actors that support the norm. We probe the plausibility of this argument by studying two campaigns that aim to shift patterns of finance for fossil fuel production and consumption: subsidy reform and divestment. Subsidy reform encourages governments to reduce subsidies for products like gasoline; divestment encourages investors to sell or avoid equity stocks from fossil fuel industries. We look at the variation in the impact of these two campaigns over time and argue that they have achieved institutional acceptance and implementation chiefly when their advocates have been able to link environmental goals with other goals, usually economic ones.

Climate politics has long been dominated by a consequentialist framework, focusing on cost-benefit analysis and strategies like reciprocity, sanctions, and rewards. Yet, given the failures of that approach to generate effective climate governance, some call for a radically different approach, based on norms, ethics, and the moral dimension of the problem (e.g., Green 2018a; Milkoreit 2015; Mitchell and Carpenter 2019; Wapner 2014). Normative considerations underpin many of the recent supply-side climate policies or proposals that deal with emissions at source (Green 2018b; Piggot 2018). Advocates of this approach observe the apparent

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success of bans on land mines and nuclear weapons in the arena of international security and argue for a similar approach in environmental politics (see, e.g., Christoff and Eckersley 2013; Newell and Simms 2019). They favor outright bans on fossil fuel-related behavior and technologies, such as coal mining (Blondeel and Van de Graaf 2018) or internal combustion engines (Meckling and Nahm 2019), as opposed to a more technocratic, interest-based approach (e.g., carbon tax or renewable energy subsidies). This debate leaves unsettled the question, is a normative or interest-based approach most effective in producing desirable environmental outcomes?

In this article, we highlight a middle way that combines these two approaches using a key mechanism of norm success: problem linkages. Norm campaigns are more likely to succeed when the actions they prescribe can be framed as solving additional problems that are important to the *norm addressees* (i.e., those actors governed by a norm and expected to implement it), beyond the primary objective that originally motivated *norm entrepreneurs* (i.e., those actors interested in changing social norms). This is not the same as arguing that norms are merely “interests in disguise.” Instead, it is an acknowledgment of the power of norms to alter perceptions of appropriateness and interest and to broaden the coalition of actors that support an action.

We assess our argument in the context of two campaigns associated with energy politics, where anti-fossil fuel activism is on the rise (Cheon and Urpelainen 2018; Green 2018a; Neville et al. 2019). The first, fossil fuel subsidy reform (FFSR), calls on countries to reform or abolish subsidies for fossil fuels, such as the underpricing of gasoline in Iran or tax breaks for offshore oil drilling in the United Kingdom. The second, fossil fuel divestment (FFD), aims for the withdrawal of investment capital from fossil fuel stocks, bonds, or funds. Each has a mixed record of success. We look at the variation in their impact over time and argue that they have achieved institutional acceptance and implementation chiefly when their advocates have been able to link environmental goals with other goals, usually economic ones.

Problem linkages are essential to understanding this variation in outcomes. As we demonstrate below, the FFSR campaign has been linked successfully to one of the key problems that policy makers often face: macroeconomic and fiscal stability. Over time, the combined economic and environmental rationales for the FFSR campaign have proven more successful than the economic argument did alone. In the FFD case, it was the environmental rationale for divestment that came first, before the economic argument. The initial struggles for the divestment campaign were related to the scant evidence that FFD helps investors maximize return on investment, at least in the short term. Only more recently has a growing group of investors become convinced that FFD is a financially prudent risk management strategy, due to potential future threats to assets’ values.

Our goal is to conduct a plausibility probe of our theory using two illustrative and distinct case studies, not to compare them directly. We do so by tracing

the variation in our independent variables and dependent variables within each case over time. This allows for correspondence testing, showing that our variables do in fact covary. Our two selected cases meet Eckstein's (1975) criteria for a plausibility probe. First, they seem critical for the theory to hold, since they are broad and crosscutting enough to allow for problem linkages to emerge, and they lend themselves to both environmental and economic framings. Second, they have special characteristics that could be particularly illuminating for the theory. Both norms are part of an emerging set of anti-fossil fuel norms (Green 2018a), yet they are also compatible with neoliberal modes of action. Divestment, for example, has been described as a "neo-liberal mode of protest politics" since it "utilizes free market mechanisms as the principal apparatus for social change" (Mayes et al. 2017, 134; see also Soederberg 2009). We would thus expect the norms of FFSR and FFD to be diffused sooner than other anti-fossil fuel norms that fit less with the dominant norm of "liberal environmentalism" (Bernstein 2001), such as coal-mining moratoria (Blondeel and Van de Graaf 2018).

The next two sections develop our theory. In the fourth and fifth sections, we empirically assess the testable implications of our theory through two case studies. The conclusion discusses implications for the norm literature.

## What Is Norm Success?

The apparent *normative turn* in climate change studies and practice immediately prompts the questions, what does norm success mean, and under what conditions does it occur? This section and the next address those two questions, respectively.

International norms are "standards of appropriate behavior for actors with a given identity" (Finnemore and Sikkink 1998, 891). They define what actors ought and ought not to do—respect human rights, for instance, or ban chemical weapons. In our empirical cases, the behavioral prescriptions emanating from these campaigns are that actors should refrain from economically supporting fossil fuels. Contrary to binding laws and rules, it is often the case that "norms are obeyed not because they are enforced, but because they are seen as legitimate" (Florini 1996, 365). Norms spread because actors internalize them, but also because states and other actors seek legitimation, conformity, and esteem in the relevant social group with which they identify (Finnemore and Sikkink 1998, 903).

Early studies on international norms focused primarily on institutionalization as the yardstick for success. *Institutionalization* refers to the degree to which norms are reflected in international law and organizations (Bernstein 2001; Checkel 1998, 340; Finnemore and Sikkink 1998, 900). It reveals how many states feel constrained by a particular norm, which can help to situate a norm along the three stages of the norm's life cycle: emergence, cascade, and internalization (Finnemore and Sikkink 1998).

Recent research has pointed out, however, that the task of norm entrepreneurs does not end once a treaty is signed or a statement is issued. Norms can often only be agreed upon in international texts if they are vaguely formulated. This gives rise to situations where there are multiple interpretations of a norm. Even norms that have been agreed upon in international settings thus remain subject to continuous contestation (Sandholtz 2008). Alongside institutionalization, a parallel process of implementation must therefore take place (Green and Colgan 2013; Jinnah 2014). Implementation is described as “the steps necessary to introduce a new international norm’s precepts into formal legal and policy mechanisms” (Betts and Orchard 2014, 3), and “the subsequent use of these mechanisms” (Stimmer and Wisken 2019, 521).

Consequently, we propose a two-tiered standard of norm success. First, *norm institutionalization* refers to the degree to which a norm is discursively embraced and accepted by the relevant norm addressees. Evidence of discursive acceptance can be found in treaties and conventions, agreements, rules, and standards established by international organizations, resolutions, communiqués, and declarations (Bernstein 2001, 30). The norm addressees for the FFSR case are national governments and international organizations. The norm addressees for FFD are both public and private (institutional) investors. For both cases, we compare the declaratory support at the international political level such as within the G7 and G20, the United Nations (UN), and other relevant international organizations. For FFD, we also looked for evidence of support among other public and private actors, including universities, churches, charity organizations, and—most notably—large institutional investors.

Second, *norm implementation* refers to the degree to which a norm induces behavioral change among norm addressees. Since both cases aim to direct financial flows away from fossil fuels, evidence of changed behavior can be inferred from the overall level of subsidies and investment in the oil, gas, and coal industries. For FFSR, we look at shifts in the total value of fossil fuel subsidies. For FFD, we examine the value of capital and loans that have become off-limits for the fossil fuel industry in the wake of the divestment campaign and whether this has influenced the industry’s cost of doing business.

## Theoretical Logic of Norm Success

In this section, we develop the concept of *problem linkages* as a critical factor for norm success. A voluminous scholarship on norm emergence now considers persuasion as the centrally important mechanism by which political actors develop “shared understandings.” “Normative claims,” Finnemore (1996, 141) asserts, “become powerful and prevail by being persuasive.” The most persuasive norm entrepreneurs are those able to “frame” normative ideas in such a way that they “resonate” with relevant audiences.

The question, then, is, why are some frames more persuasive than others? The extant literature provides only a partial answer, despite pointing to a myriad

of factors. They include the characteristics of the candidate norm, the prominence and status of its supporters, and the usefulness of the norm to states seeking enhanced legitimacy (Finnemore and Sikkink 1998). Norms that fit with pre-existing cultural values (Adler-Nissen 2014; Checkel 1998) or with the dominant ideas and structures in society are also more likely to gain a foothold (Busby 2010, 55; Kelley 2008; Okereke 2008). We add another explanation for the persuasiveness of certain norms over others: the way an idea relates to the key problems of the day that decision makers face.

As indicated above, we argue that norm campaigns are more likely to succeed when the actions they prescribe can be used to solve additional problems that are of immediate importance to the norm addressees, beyond the “good cause” that originally motivated norm entrepreneurs. This can be achieved through a deliberate framing strategy geared at establishing problem linkages between the proposed norm and the salient problems that norm addressees face. Linkages can occur at the discursive level when a norm is formulated and codified in treaties and agreements, as well as at the policy-implementing level, whereby norms are presented as solutions to the acute problems of the day.

When a norm is linked to other problems, norm addressees who have only weak or no initial support for the nominal goal of the norm might decide to support it, if they see it as a tool for achieving what these norm addressees consider to be their primary short-term concerns. These salient problems will often be related to the material interests of norm addressees. For example, we show below that fiscal considerations were a key factor explaining the diffusion of the FFSR norm. Yet, they can also relate to normative considerations. The Jubilee 2000 campaign, for instance, which advocated debt relief for the poorest countries, gained more supporters through its linkage with religious symbolism, coupled with the timing of the new millennium (Busby 2010).

These considerations lead to a formal hypothesis:

H: Norm campaigns are more likely to succeed when the actions they prescribe can be framed as a solution to salient problems that norm addressees face, even if these are different from the problem that originally motivated norm entrepreneurs.

To some extent, our concept of problem linkages is similar to the idea of issue linkages used by Keohane and Nye (1977), Krasner (1983), and others who study international regimes and bargaining. *Issue linkage* is the idea that one problem can be solved by linking it to a second problem, so that a solution to the first problem that favors one actor more than another is offset by a solution to the second problem that favors the other actor. In this way, each actor gets something that it wants, that is, the resolution of a mutual problem on its preferred terms. Our concept of problem linkage is different, however, in that it does not focus on situations of bargaining where actors negotiate and make explicit deals on the basis of their interests. Instead, we refer to social processes of

communication, framing, and socialization that shape the beliefs, perceptions, and preferences of actors.

The logic of our hypothesis also bears resemblance to the idea of *cobenefits*, a term often used in policy circles to denote a “win-win” strategy to address two or more goals simultaneously with a single policy measure. However, contrary to issue linkages, the concept of cobenefits does not have a clear definition or theoretical connotation (Mayrhofer and Gupta 2016).

In fact, we see problem linkages as operating through two subpathways, which we label the Baptists-and-bootleggers pathway and the cobenefits pathway.<sup>1</sup> These differ based on how much actors share the goals of other actors advocating for a particular policy. At one extreme, problem linkage operates by broadening the political coalition in support of a policy by joining together actors who do not share each other’s goals at all. This is the Baptists-and-bootleggers pathway, named after the legendary coalition of actors that supported alcohol prohibition in the United States (Yandle 1983). At the other extreme, however, problem linkage operates by persuading actors that value more than one policy goal. For instance, an investor who wants financial profits and to “do good” might be persuaded to avoid investing in fossil fuels because of the combination of two rationales (financial risk plus avoiding greenhouse gas emissions), whereas she might be unpersuaded if only one of those rationales existed. Observational studies like the one in this article cannot evaluate how much each pathway contributes to behavioral change (or if only one does all the causal work). Nonetheless, we can distinguish between these two pathways conceptually. We assume that both are at play in the real world.

Problem linkages broaden the coalition of actors that support the norm, but if actors are persuaded by utility-based calculations rather than legitimacy-based calculations, is there really a norm at work? The incidence of purely moral-based action is hard to prove or disprove, since it requires taking a look into decision makers’ heads. In fact, we can only have indirect evidence of norms. Because norms by definition embody a shared moral assessment, “norms prompt justifications for action and leave an extensive trail of communication among actors that we can study” (Finnemore and Sikkink 1998, 892).

Seen from this perspective, both of our cases clearly qualify as a norm. As we demonstrate below, there is a shared moral assessment not to subsidize fossil fuels because they are socially regressive and cause damage to the environment, so there is an emerging FFSR norm. The possibility that some states reform subsidies only for instrumental reasons does not change the fact that there is a shared moral assessment to eliminate these subsidies, nor does the fact that many states still subsidize fossil fuels. In the case of FFD, we clearly see that even actors that do not comply with the emerging norm (actors that do not divest) feel compelled to justify why they keep investing in fossil fuels.

1. We thank an anonymous reviewer for helping us clarify this point.

If not for the norm, there would be no need to mention, explain, or justify investments in fossil fuels at all.

We document in the following two sections an extensive trail of communication about both FFSR and FFD. We examine the extent to which successful norm institutionalization and implementation are determined by problem linkage. We conduct two case studies, examining the variation on the dependent and independent variables over time.

## Case Study: Fossil Fuel Subsidy Reform (FFSR)

### *First Period: 1980 to Mid-1990s*

The FFSR norm has a long history. It was first articulated in the 1980s by a number of NGOs and international organizations (Kosmo 1987; World Bank 1982), in tandem with the rise of neoliberal ideology and the so-called Washington Consensus. Deregulation of energy prices had been part of the International Monetary Fund (IMF) and World Bank conditionality programs since the 1980s. As a result of these programs, some countries in Central and Eastern Europe, Africa, and Asia partially or completely deregulated their fuel prices in the 1980s and 1990s (Steenblik 2009, 188). The 1996 fuel price reform in the Philippines, for example, and the move to market prices for electricity in Armenia between 1995 and 1999 were part of conditionality programs by the IMF (Clements et al. 2013).

In this first period, the rationale for phasing out energy subsidies was entirely based on their macroeconomic, fiscal, and public revenue effects. The environmental externalities of fossil fuel subsidies were not a major driver of the push for FFSR. A 1987 World Resources Institute study covered the macro- and microeconomic effects of subsidies at length, while only cursorily mentioning their environmental effects (Kosmo 1987). Climate change had yet to become a major issue on the global political agenda. In terms of our dependent variable, the FFSR norm was only weakly institutionalized and rarely implemented.

The environmental rationale for FFSR was first articulated in the early 1990s. In 1992, a World Bank study for the first time connected the issue to climate change and calculated the potential carbon dioxide emission reductions from subsidy removals (Larsen and Shah 1992). The report caught the attention of the G7 environment ministers, who discussed it in 1994, yet the issue was not mentioned again in the final communiqué of the G7 leaders' meeting in Naples later that year (G7 1994a, 1994b), and the issue slid again from the global agenda. In terms of our hypothesis, the issue of FFSR could not be framed as a solution to a salient problem that policy makers faced: the G7 countries did not face any pressing fiscal issues in the mid-1990s, and the issue of FFSR had been linked to climate change only in a single World Bank study.

### *Second Period: Late 1990s to Today*

The second period, beginning in the late 1990s, marks the start of a transnational advocacy campaign to reform fossil fuel subsidies. NGOs, such as the Earth Council, Greenpeace, the International Institute for Sustainable Development, and the Worldwatch Institute, publicized the issue of “perverse subsidies”—that is, environmentally harmful subsidies—across different sectors, including fossil fuels (see, e.g., Myers and Kent 1998). It led Ronald Steenblik (1998, 1), an official of the Organisation for Economic Co-operation and Development (OECD), to observe in 1998 that

the issue has been picked up by virtually every major national and international environmental NGO and made an integral element of their programmes of work. Subsidy reform, once the lonely pursuit of finance ministries and trade economists, has become a *cause célèbre* of the green movement.

At the level of international organizations, the issue was also picked up again and clearly rooted in the environmental frame. The 1999 edition of the *World Energy Outlook* by the International Energy Agency (IEA), for example, put the spotlight back on the issue of energy subsidies.<sup>2</sup> The issue was cast no longer solely in macroeconomic terms but also in climate terms. The preface of the report, for example, mentioned that FFSR has gains “in terms of energy savings, lower carbon dioxide emissions, improved economic efficiency and reduced burdens on government budgets” (International Energy Agency [IEA] 1999, 3). Henceforth, the environmental case for subsidy reform came more and more to the fore. The OECD, for instance, published several reports on “environmentally-harmful subsidies” after 2003 (Organisation for Economic Co-operation and Development 2003, 2005, 2007).

In 2005, the International Institute for Sustainable Development launched the Global Subsidies Initiative (GSI), the first NGO dedicated to the issue of subsidy reform (Lemphers et al. 2018). The group of NGOs decrying subsidies on environmental grounds continued to grow in number (Van de Graaf and Blondeel 2018). Efforts to eliminate fossil fuel subsidies gathered momentum in 2009 when the G20 leaders pledged to phase out fossil fuel subsidies at their Pittsburgh summit. The Obama administration held the presidency of the G20 and, in the wake of the global financial crisis, wanted to “creatively link climate change to the financial and fiscal issues at the G20 agenda’s core” (Kirton and Kokotsis 2015, 229). In contrast to 1994, when the G7 leaders neglected the issue, FFSR now provided a solution to salient problems that world leaders faced: how to implement budget cuts in the wake of the Great Recession. For the Obama administration, it was also a way to demonstrate leadership on climate change in the run-up to the UN Copenhagen climate conference in 2009.

2. On the role of the IEA in global energy governance, see Colgan et al. 2011; Colgan and Van de Graaf 2015; Van de Graaf and Colgan 2016.

The norm has since been endorsed at other summits and institutions, including at the Asia-Pacific Economic Cooperation summit and in the UN Sustainable Development Goals. The issue continues to be pushed for by a string of international organizations (notably the IMF, World Bank, OECD, and IEA), NGOs (notably the GSI, the Overseas Development Institute, and Oil Change International), and a club of more than thirty supporting states that call themselves the Friends of Fossil Fuel Subsidy Reform (Lemphers et al. 2018, Rive 2018; Van de Graaf and van Asselt 2017). In short, the FFSR norm has been very successfully institutionalized in this second period, especially since 2009.

In terms of implementation, the norm has been moderately successful. More than forty countries have initiated fossil fuel subsidy reforms in recent years, and particularly since 2014 (Van de Graaf and Blondeel 2018). In a sample study of 153 countries, Ross et al. (2017) quantified that between 2003 and 2015, gasoline taxes rose in 83 countries.<sup>3</sup> The IEA has calculated that without national reforms undertaken since 2009, the value of fossil fuel consumption subsidies would have been 24 percent higher in 2014, putting the level of these subsidies at US\$ 610 billion instead of US\$ 493 billion (IEA 2015, 96–97). In 2017, global consumption subsidies dropped further and amounted to US\$ 302 billion, partly due to lower oil prices but also because of reform efforts (IEA 2018).

Problem linkage has helped this moderate wave of implementation since 2014. To illustrate problem linkage in action, we focus on the GSI, the leading NGO in this issue area, and examine its country-specific programs and projects. We selected the eight countries where the GSI is currently working and that figure prominently on its website: Bangladesh, Canada, China, Egypt, India, Indonesia, Nigeria, and Turkey (International Institute for Sustainable Development 2018). Table 1 highlights the proclaimed objectives of the GSI's work on fossil fuel subsidies in each of the respective countries. It shows that the GSI has espoused different frames for FFSR, with most emphasizing the key domestic policy priorities of the norm addressees (e.g., fiscal balance, social development, energy access). Analyses of energy pricing reforms around the world show that fiscal balance was indeed a key driver for reforms and provided a means to ease public expenditure pressures (Rentschler and Bazilian 2017).

Still, there are limits to how easily FFSR can be implemented, even when norm addressees—that is, state governments—discursively agree with the norm. In some countries, consumption subsidies are part of the “social contract” between governments and the population (Moerenhout et al. 2017). In other cases, reform measures may get bogged down over popular protests, opposition of interest groups, or the credibility of the institutions entrusted with implementing reforms (Inchauste and Victor 2017; Kyle 2018). Reform efforts have led to unrest in at least nineteen countries since 2006 (Ross et al. 2017).

3. Fossil fuel taxes are an inverse proxy measure for subsidies (Ross et al. 2017). For the IMF, tax subsidies occur when taxes levied on fossil fuel products are below their efficient level (Clements et al. 2013).

**Table 1**

GSI Country Programs: Objectives

	<i>(Macro-)economic Impact</i>		<i>Social Development Impact</i>		<i>Environmental Impact</i>	
	<i>Reduce overall public expenditure</i>	<i>Level playing field for clean energy</i>	<i>Equity and social development</i>	<i>Gender sensitivity of FFSR</i>	<i>Clean energy access and use for poor households</i>	<i>Environmental hazards of FFS</i>
Bangladesh	x		x	x	x	
Canada		x	x			x
China		x	x			x
Egypt	x		x			
India	x		x		x	x
Indonesia	x	x	x		x	x
Nigeria	x		x	x	x	
Turkey	x		x		x	

*Note.* Data based on Rentschler and Bazilian (2017, 898).

Without adequate measures for mitigating these effects, and without comprehensive consultation and communication, reforms are likely to face significant resistance.

Thus fossil fuel subsidies remain widespread, and it remains to be seen to what extent the current reform efforts will be sustained. Still, overall, there is evidence of moderate implementation of the FFSR norm. Moreover, there is evidence that policy makers' perceptions of their interests have changed sufficiently to make the norm durable. For instance, in 2017, higher oil prices led to a partial rebound in the total value of oil and gas subsidies. The 15 percent rise in subsidies was, however, considerably less than the 25 percent rise in oil prices (IEA 2018, 111).

## Case Study: Fossil Fuel Divestment (FFD)

*First Period: 2011–2014*

The FFD campaign began in 2011, when students at Swarthmore College urged their college to divest from coal stocks (Grady-Benson and Sarathy 2016). Inspired by the campaign for divestment from apartheid South Africa in the 1980s, they chose divestment as a strategy "because they believed it would ignite a debate and force the college to take a moral stand on the issue" (Apfel 2015,

915). By spring 2012, the campaign had spread to approximately fifty campuses (Ayling and Gunningham 2017).

In June 2012, US environmentalist Bill McKibben published a piece on the issue in *Rolling Stone* magazine, laying out not only the moral case for divestment but also a financial case. He drew on a report by Carbon Tracker Initiative (CTI) that had been published in November 2011 (Carbon Tracker Initiative [CTI] 2011). It was the first report to fashion climate change as a financial risk for investors, pioneering concepts such as the “carbon bubble” and “stranded assets.”<sup>4</sup>

Initially, the primary goal of the norm entrepreneurs was to delegitimize investments in the fossil fuel sector because “if it is wrong to wreck the climate, it is wrong to profit from this wreckage” (McKibben 2013; see also Bratman et al. 2016). This morality frame targeted particular types of mission-driven entities, notably churches and universities, because they are considered to be more susceptible to such nonfinancial arguments. Environmental campaigners also used the language of “stranded assets” and “carbon bubbles,” but it took some time before financial actors with pre-existing credibility—such as central banks—began to share this language. This type of norm addressee is primarily concerned with profit maximization and risk management. Consequently, these conventional investors are keen to avoid future losses in the value of their assets, and they are more likely to consider FFD if it can help solve this potential problem. Framing strategies geared at establishing problem linkages will thus be more convincing when they relate to the *financial risks* associated with climate change.

At the end of this period, from 2014 onward, the movement started recording some early successes (Ayling and Gunningham 2017). The philanthropic Rockefeller Brothers Fund, an organization with strong historical ties to the oil industry, announced that it would cut its financial ties with the fossil fuel industry (Rockefeller Brothers Fund 2014). Some of the world’s largest index providers also started issuing, in 2014, “fossil-free” stock market indices (FTSE) (Russell 2014; MSCI 2014; S&P Global 2018). The Norwegian Government Pension Fund Global (GPFG), the world’s largest sovereign wealth fund, also started removing companies involved in coal mining, coal-fired power generation, and oil sands operations from its portfolio (Stortinget 2014–2015), though it continued to be heavily invested in other parts of the fossil fuel industry. In addition, Shell and Exxon both published reports in 2014 at the request of investors—but they stated that they did not believe their assets would become stranded (Ayling and Gunningham 2017).

The dominant theme in this first period, however, was initial resistance to FFD. The experiences of Harvard, Stanford, and Brown Universities reflect the initial failure to link divestment to other salient problems, even for mission-driven institutions. All three institutions publicly rejected FFD (Healy and Debski 2016).

4. Stranded assets are fossil fuel supply and generation resources that become uneconomic prior to the expected end of their economic life. Such overvalued assets could generate a carbon bubble (CTI 2011).

The Harvard board considered the endowment an economic resource and not an instrument to impel social or political change (Faust 2013). After a five-year student-led campaign, in April 2017, Harvard did announce a pause for new investments in oil, coal, and gas but not divest of existing holdings. Brown University remained unconvinced that the social harm inflicted by the fossil fuel industry outweighs its social and economic benefits (Paxson 2013). And although Stanford University decided in 2014 to divest from coal, it rejected a request to divest its entire endowment from the fossil fuel industry altogether in 2016 on similar grounds as Brown (Stanford Board of Trustees 2016).

More broadly, investors continued to be hesitant about divestment. Asset managers have a fiduciary duty that legally requires them to seek the best returns for their clients, irrespective of nonfinancial concerns (Center for International Environment Law 2016). Overall, in this period, the FFD campaign did not (yet) succeed in linking their moral motivations to the primary concerns of most mission-driven institutions, let alone those of more conventional financial actors. In terms of our dependent variable, the norm was only weakly institutionalized and hardly implemented at the time.

### *Second Period: 2015 to Today*

In the second period, starting around 2015, the FFD norm gained more success. One pivotal moment came with Bank of England governor Mark Carney's 2015 landmark speech on climate change and financial stability. As early as 2014, Carney had been warning that not all fossil fuel reserves could be burned and that investors ought to consider long-term impacts of their decisions. Importantly, in his 2015 speech, Carney asserted that investors were at risk of significant exposure to stranded assets and that frameworks to disclose and manage these climate-related risks were to be developed.

Carney's 2015 speech strengthened the financial frame for FFD, as it linked traditional financial concepts of risk management, portfolio diversification, and stranded assets to climate change for an audience of investors, insurers, and central bankers. In doing so, it broadened the coalition of actors that supported the norm by driving home the point that the financial case for divestment was strong enough on itself. Consistent with these ideas, the G20 finance ministers asked the Financial Stability Board, which Carney chaired at the time, to consider how the financial sector could take account of the risks climate change poses to our financial system.<sup>5</sup> Large financial institutions soon followed suit. Actors such as HSBC, Goldman Sachs, and Citigroup have since issued reports on how to manage climate-related financial risks, both with regard to their own fossil fuel investments and to assets managed for third parties (Sachs 2015; Goldman Sachs 2018; HSBC 2015).

5. [www.g20.utoronto.ca/2015/150417-finance.html](http://www.g20.utoronto.ca/2015/150417-finance.html), last accessed September 6, 2019.

Ahead of the 2017 G20 meeting in Hamburg, Germany, a group of 390 institutional investors with more than US\$ 22 trillion in assets demanded continued support for the 2015 Paris Agreement, stating that “as long-term institutional investors, we believe that the mitigation of climate change is essential for the safeguarding of our investments.”<sup>6</sup> They reiterated their call for action at the twenty-fourth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP24) in 2018 and noted that they are “increasingly incorporating climate change scenarios and climate risk management strategies into their investment processes and engaging with high-emitting companies.”<sup>7</sup>

Governments and international organizations have begun to recognize the issue too. Large financial institutions, including multilateral development banks, export credit agencies, national development agencies, and private financial institutions, have divested from thermal coal in particular (Institute for Energy Economics and Financial Analysis 2019). In 2017, the World Bank further decided to halt investments in upstream oil and gas activities from 2019 onward (World Bank 2017), thereby greatly expanding an earlier decision to reduce investments in coal plants. Moreover, at COP24, other major development banks, including the Asian Infrastructure Investment Bank, pledged to make their investments compatible with the goals of the Paris Agreement (World Bank 2018).

The Norwegian pension fund GPFG is an instructive example of how the financial frame plays a pivotal role in FFD norm adoption. In November 2017, the Norwegian Central Bank, which manages the GPFG, advised the fund to sell its oil and gas stocks.<sup>8</sup> The advice was based exclusively on financial arguments, consistent with Carney’s themes. In March 2019, the government announced plans to phase out oil and gas exploration and production companies from the portfolio of the country’s sovereign wealth fund. The official press release mentioned that this decision was informed by a wish “to reduce the aggregate oil price risk in the Norwegian economy.”<sup>9</sup> After all, the country is exposed to oil prices both as a producer and as an investor. The decision affects roughly 150 companies, but that represents just a modest 1.2 percent of the GPFG’s total equity holdings. Another important caveat is that the fund still appears to be

6. <https://globalinvestorcoalition.org/wp-content/uploads/2017/07/3-July-423pm-UK-time-Global-Investor-Letter-to-G20-Governments.pdf>, last accessed September 6, 2019.
7. [https://theinvestoragenda.org/wp-content/uploads/2018/06/GISGCC-FINAL-for-G7-with-signatories\\_update-4-June.pdf](https://theinvestoragenda.org/wp-content/uploads/2018/06/GISGCC-FINAL-for-G7-with-signatories_update-4-June.pdf), last accessed September 6, 2019.
8. [www.nbim.no/en/the-fund/news-list/2017/norges-bank-recommends-the-removal-of-oil-stocks-from-the-benchmark-index-of-the-government-pension-fund-global-gpfg/](http://www.nbim.no/en/the-fund/news-list/2017/norges-bank-recommends-the-removal-of-oil-stocks-from-the-benchmark-index-of-the-government-pension-fund-global-gpfg/), last accessed September 6, 2019. Admittedly, in August 2018, a government commission recommended *against* such divestment, also on financial grounds. [www.regjeringen.no/en/whatsnew/Ministries/fin/press-releases/2018/energiaksjer-i-statens-pensjonsfond-utland/the-government-pension-fund-global-should-still-be-invested-in-energy-stocks/id2609203/](http://www.regjeringen.no/en/whatsnew/Ministries/fin/press-releases/2018/energiaksjer-i-statens-pensjonsfond-utland/the-government-pension-fund-global-should-still-be-invested-in-energy-stocks/id2609203/), last accessed September 6, 2019.
9. [www.regjeringen.no/en/aktuelt/excludes-exploration-and-production-companies-from-the-government-pension-fund-global/id2631707/](http://www.regjeringen.no/en/aktuelt/excludes-exploration-and-production-companies-from-the-government-pension-fund-global/id2631707/), last accessed September 6, 2019.

allowed to invest in oil and gas companies if they have activities in renewable energy, such as Shell and BP.<sup>10</sup>

Another notable FFD decision that highlights the importance of linking moral concerns with financial arguments is that of New York City's US\$ 193 billion pension funds. In January 2018, the city announced its intention to begin the process of divesting large parts of its funds from fossil fuel reserve owners by 2022. FFD came to the spotlight of local campaigners in the wake of Hurricane Sandy, which hit New York City in 2012 (ICLEI 2018, 9). Climate concerns were thus the initial driver for action. Campaigners urged the city to double down on its climate efforts, starting with coal divestment, because the pension funds' exposure to coal was less than to oil and gas and because the economic outlook for coal was stark (ICLEI 2018, 9). Mayor Bill de Blasio supported the call for coal divestment in 2015. De Blasio's 2018 divestment announcement married climate change concerns with financial ones (NYC 2018). Hence what started as a morally inspired campaign around climate change got an economic rationale attached to it and resulted in a divestment decision.

The divestment movement itself now claims that more than one thousand divestments have been announced since 2012, and the divesters include, among others, half of UK educational institutions; insurance giants like Axa and Allianz; cities like Stockholm, Berlin, and Copenhagen; the government of Ireland; and a number of faith-based organizations. Gofossilfree.org (2013) estimated as of May 2019 the approximate value of the 1,056 institutions divesting at US\$ 8.77 trillion. This figure should be put into perspective, however, since few of those assets were ever in the fossil fuels sector initially. Moreover, compliance is uncertain and monitoring is difficult. Even if some funds are being divested on the equity markets, those same funds can subsequently flow back to the fossil fuel sector in the form of loans, debt, or underwriting. So far, in short, there is no systematic evidence that the divestment campaign has raised the cost of doing business for the fossil fuel industry, that is, the cost of raising capital and pursuing new projects (Hansen and Pollin 2018).

Overall, the linkages that FFD advocates have attempted to establish have persuaded only a minority of investors to date. There is little if any evidence that fossil-free investments perform better, in terms of return on investment, than conventional (nondivested) investments (Trinks et al. 2018). This explains why predominantly faith-based organizations, philanthropic foundations, (local, regional, and national) governments, NGOs, and educational institutions represent almost 85 percent of all institutional divestment commitments on the Gofossilfree.org website. Ultimately, the finance argument rests on the prediction of *future* returns, risks, and possible stranding of assets, which are uncertain.

10. [www.theguardian.com/world/2019/mar/08/norways-1tn-wealth-fund-to-divest-from-oil-and-gas-exploration](http://www.theguardian.com/world/2019/mar/08/norways-1tn-wealth-fund-to-divest-from-oil-and-gas-exploration), last accessed September 6, 2019.

After the Carney speech, however, the FFD campaign began to sway some actors that were not susceptible to the purely moral argument. While FFD advocates have discussed climate financial risk since the beginning of the campaign, it was really only after key economic actors with pre-existing credibility, like Mark Carney, began to speak out about the risk that investors took this risk seriously. Without this financial frame, the coalition of actors supporting the norm probably would have only consisted of the campaigners, students, philanthropies, and faith-based organizations. For our dependent variable of norm success, this means that institutionalization and implementation of the norm are growing, outside the initial group of mission-driven institutions.

## Conclusions

Why do some international norms get institutionalized and spur actors to alter their behavior, whereas others remain rhetorical aspirations? The question has profound importance for norm entrepreneurs seeking to make progressive change in the world. Campaigns against famines, tobacco, slavery, species extinction, and various forms of pollution have, historically, depended on norm entrepreneurs successfully turning ideas into action.

In this article, we theorized the importance of problem linkages in explaining the success of norm institutionalization and implementation. We suggest that such linkages are a means to align the motivations and objectives of norm entrepreneurs with other problems that norm addressees are concerned with. Doing so broadens the coalition of actors that support the norm. Not only do norms have to “fit” with the existing normative environment but a deliberate and active process of linkage to problems outside the entrepreneurs’ initial priorities is often required to achieve higher degrees of success.

This insight is relevant for a current debate among scholars and activists about the best approach to producing desirable environmental policy. Scholars have contrasted an interest-based approach with a more normative approach (Mitchell and Carpenter 2019). We highlight a middle way: using problem linkages to combine these two approaches. Together, they tend to have greater potential to effect policy change than either one does alone.

We applied our framework of problem linkages to energy politics, specifically to two campaigns aimed at curbing fossil fuel subsidies and investment. In the case of FFSR, the economic rationale was developed first. The issue took on a moral dimension in the late 1990s, when NGOs began to champion the cause of FFSR on environmental and equity grounds. We found that this problem linkage broadened the appeal of the norm and helped to institutionalize it at the global level. Even though the macroeconomic and fiscal benefits of reform are crucial to explain the diffusion of the FFSR norm, the ancillary climate benefits also play a key role. They are a primary motivation for norm entrepreneurs that push for subsidy reform, including the GSI and the Friends of FFSR.

In the case of FFD, the environmental and moral frame came first, as articulated in particular by Bill McKibben and his 350.org campaign. While it had some success with faith-based organizations and philanthropic organizations, the divestment norm began to have a broader appeal when moral arguments were linked to financial ones, thanks to economic actors like Mark Carney. This led the norm to be adopted by actors not morally committed to the cause of divestment, such as the Norwegian sovereign wealth fund, thus broadening the coalition of actors supporting the norm.

We believe problem linkages can help explain the success of a wide range of norm campaigns. For instance, efforts to increase foreign aid are often more successful when they can be linked to donors' strategic interests (Bermeo 2018). An example is the use of surplus crops (which would otherwise generate no revenue for farmers) as aid to poor countries (Diven 2001). The concept of problem linkages also sheds light on the success of the NGO campaign for low-cost access to HIV/AIDS drugs, where a moral agenda was linked to instrumental objectives of both generic pharmaceutical companies (which wanted market share) and developing countries (which faced fiscal strain) (Sell and Prakash 2004). Overall, problem linkages offer a useful lens for considering political and policy change.

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## References

- Adler-Nissen, Rebecca. 2014. Stigma Management in International Relations: Transgressive Identities, Norms and Order in International Society. *International Organization* 68 (1): 143–176.
- Apfel, Daniel C. 2015. Exploring Divestment as a Strategy for Change: An Evaluation of the History, Success, and Challenges of Fossil Fuel Divestment. *Social Research* 82 (4): 913–937.
- Ayling, Julie, and Neil Gunningham. 2017. Non-state Governance and Climate Policy: The Fossil Fuel Divestment Movement. *Climate Policy* 17 (2): 131–149.
- Bermeo, Sarah. 2018. *Targeted Development: Industrialized Country Strategy in a Globalizing World*. Oxford: Oxford University Press.
- Bernstein, Steven. 2001. *The Compromise of Liberal Environmentalism*. New York: Columbia University Press.
- Betts, Alexander, and Phil Orchard. 2014. *Implementation and World Politics: How International Norms Change Practice*. Oxford: Oxford University Press.
- Blondeel, Mathieu, and Thijs Van de Graaf. 2018. Toward a Global Coal Mining Moratorium? A Comparative Analysis of Coal Mining Policies in the USA, China, India and Australia. *Climatic Change* 150 (1–2): 89–101.
- Bratman, Eve, Kate Brunette, Deirdre C. Shelly, and Simon Nicholson. 2016. Justice Is the Goal: Divestment as Climate Change Resistance. *Journal of Environmental Studies and Sciences* 6 (4): 677–690.
- Busby, Josh. 2010. *Moral Movements and Foreign Policy*. Cambridge: Cambridge University Press.
- Carney, Mark. 2015. *Breaking the Tragedy of the Horizon: Climate Change and Financial Stability*. London: Bank of England.
- Center for International Environment Law. 2016. Trillion Dollar Transformation: Fiduciary Duty, Divestment, and Fossil Fuels in an Era of Climate Risk. Available online at: <http://www.ciel.org/wp-content/uploads/2016/12/Trillion-Dollar-Transformation-CIEL.pdf>, last accessed September 6, 2019.
- Checkel, Jeffrey. 1998. The Constructive Turn in International Relations Theory. *World Politics* 50 (2): 324–348.
- Cheon, Andrew, and Johannes Urpelainen. 2018. *Activism and the Fossil Fuel Industry*. Abingdon: Routledge.
- Christoff, Peter, and Robyn Eckersley. 2013. A Coal Non-proliferation Treaty? Paper presented to the Beyond Coal workshop, Cosmopolitan Civil Societies Research Centre, University of Technology Sydney, Australia, December 16–17.
- Colgan, Jeff D., Robert O. Keohane, and Thijs Van de Graaf. 2012. “Punctuated Equilibrium in the Energy Regime Complex.” *The Review of International Organizations* 7(2): 117–143.
- Colgan, Jeff D., and Thijs Van de Graaf. 2015. “Mechanisms of Informal Governance: Evidence from the IEA.” *Journal of International Relations and Development* 18: 455–81.

- Sachs, Jeffrey. 2015. *Energy Darwinism II: Why a Low Carbon Future Doesn't Have to Cost the Earth*. Available at <https://www.privatebank.citibank.com/home/fresh-insight/gps-energy-darwinism.html>. Last accessed September 22, 2019.
- Clements, Benedict, David Coady, Stefania Fabrizio, Sanjeev Gupta, Trevor Alleyne, and Carlo Sdravovich. 2013. *Energy Subsidy Reform: Lessons and Implications*. Washington, DC: IMF.
- CTI. 2011. *Unburnable Carbon: Are the World's Financial Markets Carrying a Carbon Bubble?* London: CTI.
- Diven, Polly J. 2001. The Domestic Determinants of US Food Aid Policy. *Food Policy* 26 (5): 455–474.
- Eckstein, Harry. 1975. Case Studies and Theory in Political Science. In *Handbook of Political Science*, edited by Fred Greenstein and Nelson Polsby, 79–138. Reading, UK: Addison-Wesley.
- Faust, Drew. 2013. Fossil Fuel Divestment Statement. Available online at: [www.harvard.edu/president/news/2013/fossil-fuel-divestment-statement](http://www.harvard.edu/president/news/2013/fossil-fuel-divestment-statement), last accessed September 6, 2019.
- Finnemore, Martha. 1996. *National Interests in International Security*. Ithaca, NY: Cornell University Press.
- Finnemore, Martha, and Kathryn Sikkink. 1998. International Norm Dynamics and Political Change. *International Organization* 52 (4): 887–917.
- Florini, Ann. 1996. The Evolution of International Norms. *International Studies Quarterly* 40 (3): 363–389.
- FTSE Russell. 2014. Tackling the Fossil Fuel Risk. Online available at: [www.ftserussell.com/blog/tackling-fossil-fuel-risk](http://www.ftserussell.com/blog/tackling-fossil-fuel-risk), last accessed September 6, 2019.
- G7. 1994a. Chairman's Notes on Informal Meeting of the G7 Environment Ministers. Available online at: [www.g8.utoronto.ca/environment/1994florence/index.html](http://www.g8.utoronto.ca/environment/1994florence/index.html), last accessed September 6, 2019.
- G7. 1994b. G7 Naples Summit Communiqué. Available online at: [www.g8.utoronto.ca/summit/1994naples/communique/index.html](http://www.g8.utoronto.ca/summit/1994naples/communique/index.html), last accessed September 6, 2019.
- Gofossilfree.org. 2013. Do the Math: Fossil Fuel Investments Add Up to Climate Chaos. Available online at: <https://gofossilfree.org/do-the-math-fossil-fuel-investments-add-up-to-climate-chaos/>, last accessed September 6, 2019.
- Goldman Sachs. 2018. *Re-imagining Big Oils: How Energy Companies Can Successfully Adapt to Climate Change*. New York: Goldman Sachs.
- Grady-Benson, Jessica, and Brinda Sarathy. 2016. Fossil Fuel Divestment in US Higher Education: Student-Led Organising for Climate Justice. *Local Environment: The International Journal of Justice and Sustainability* 21 (6): 661–681.
- Green, Fergus. 2018a. Anti-Fossil Fuel Norms. *Climatic Change* 150 (1–2): 103–116.
- Green, Fergus. 2018b. The Logic of Fossil Fuel Bans. *Nature Climate Change* 8: 449–451.
- Green, Jessica F., and Jeff D. Colgan. 2013. Protecting Sovereignty, Protecting the Planet: State Delegation to International Organizations and Private Actors in Environmental Politics. *Governance* 26 (3): 473–497.
- Hansen, Tyler, and Robert Pollin. 2018. *Economics and Climate Justice Activism: Assessing the Fossil Fuel Divestment Movement*. Amherst: Political Economy Research Institute, University of Massachusetts Amherst.
- Healy, Noel, and Jessica Debski. 2016. Fossil Fuel Divestment: Implications for the Future of Sustainability Discourse and Action Within Higher Education. *Local Environment: The International Journal of Justice and Sustainability* 22 (6): 699–724.

- HSBC. 2015. *Stranded Assets: What Next?* London: HSBC Global Research.
- ICLEI. 2018. *New York City Moves to Divest Pension Funds from Billions of Dollars in Fossil Fuel Reserves*. Denver, CO: ICLEI.
- Inchauste, Gabriele, and David G. Victor. 2017. *The Political Economy of Energy Subsidy Reform*. Washington, DC: World Bank.
- Institute For Energy Economics and Financial Analysis. 2019. Over 100 Global Financial Institutions Are Exiting Coal, with More to Come. Available online at: [http://ieefa.org/wp-content/uploads/2019/02/IEEFA-Report\\_100-and-counting\\_Coal-Exit\\_Feb-2019.pdf](http://ieefa.org/wp-content/uploads/2019/02/IEEFA-Report_100-and-counting_Coal-Exit_Feb-2019.pdf), last accessed September 6, 2019.
- International Energy Agency. 1999. *World Energy Outlook—Looking at Energy Subsidies: Getting the Prices Right*. Paris: International Energy Agency.
- International Energy Agency. 2015. *World Energy Outlook 2015*. Paris: International Energy Agency.
- International Energy Agency. 2018. *World Energy Outlook 2018*. Paris: International Energy Agency.
- International Institute for Sustainable Development. 2018. Where We Work. Available online at: [www.iisd.org/gsi/where-we-work](http://www.iisd.org/gsi/where-we-work), last accessed September 6, 2019.
- Jinnah, Sikina. 2014. *Post-treaty Politics: Secretariat Influence in Global Environmental Governance*. Cambridge, MA: MIT Press.
- Kelley, Judith. 2008. Assessing the Complex Evolution of Norms: The Rise of International Election Monitoring. *International Organization* 62 (2): 221–255.
- Keohane, Robert O., and Joseph S. Nye. 1977. *Power and Independence*. Boston: Little, Brown.
- Kirton, John J., and Ella Kokotsis. 2015. *The Global Governance of Climate Change: G7, G20, and UN Leadership*. Farnham, UK: Ashgate.
- Kosmo, Mark. 1987. *Money to Burn? The High Cost of Energy Subsidies*. Washington, DC: World Resources Institute.
- Krasner, Stephen. 1983. *International Regimes*. Ithaca, NY: Cornell University Press.
- Kyle, Jordan. 2018. Local Corruption and Popular Support for Fuel Subsidy Reform in Indonesia. *Comparative Political Studies* 51 (11): 1472–1503.
- Larsen, Bjorn, and Anwar Shah. 1992. *World Fossil Fuel Subsidies and Global Carbon Emissions*. Washington, DC: World Bank Group.
- Lemphers, Nathan, Steven Bernstein, and Matthew Hoffmann. 2018. The Global Subsidies Initiative. In *The Politics of Fossil Fuel Subsidies and Their Reform*, edited by Jakob Skovgaard and Harro van Asselt, 173–190. Cambridge: Cambridge University Press.
- Mayes, Robyn, Carol Richards, and Michael Woods. 2017. (Re)assembling Neoliberal Logics in the Service of Climate Justice: Fuzziness and Perverse Consequences in the Fossil Fuel Divestment Assemblage. In *Assembling Neoliberalism: Expertise, Practices, Subjects*, edited by Vaughan Higgins and Wendy Larner, 131–149. New York: Palgrave.
- Mayrhofer, J. P., and J. Gupta. 2016. The Science and Politics of Co-benefits in Climate Policy. *Environmental Science and Policy* 57: 22–30.
- McKibben, Bill. 2013. The Case for Fossil-Fuel Divestment. Rolling Stone. Available online at: [www.rollingstone.com/politics/politics-news/the-case-for-fossil-fuel-divestment-100243/](http://www.rollingstone.com/politics/politics-news/the-case-for-fossil-fuel-divestment-100243/), last accessed September 6, 2019.
- Meckling, J., and J. Nahm. 2019. The Politics of Technology Bans: Industrial Policy Competition and Green Goals for the Auto Industry. *Energy Policy* 126: 470–479.

- Milkoreit, Manjana. 2015. Hot Deontology and Cold Consequentialism—An Empirical Exploration of Ethical Reasoning Among Climate Change Negotiators. *Climatic Change* 130 (3): 397–409.
- Mitchell, Ronald B., and Charli Carpenter. 2019. Norms for the Earth: Changing the Climate on “Climate Change.” *Journal of Global Security Studies*. Advance online publication. <https://doi.org/10.1093/jogss/ogz006>.
- Moerenhout, Tom, Nikos Vezanis, and Chris Westling. 2017. *Navigating Political Hurricanes in the MENA Region: Energy Pricing Reform in a Context of Changing Social Contracts*. New York: Columbia Center in Global Energy Policy.
- MSCI. 2014. MSCI Launches Global FossilFuels Exclusion Indexes. Available online at: [www.msci.com/documents/10199/5c51a233-cfad-4cb1-9fbe-bb3b4f6b8472](http://www.msci.com/documents/10199/5c51a233-cfad-4cb1-9fbe-bb3b4f6b8472), last accessed September 6, 2019.
- Myers, Norman, and Jennifer Kent. 1998. *Perverse Subsidies: Tax \$s Undercutting Our Economies and Environments Alike*. Winnipeg, Canada: International Institute for Sustainable Development.
- Neville, Kate J., Jackie Cook, Jennifer Baka, Karen Bakker, and Erika S. Weinthal. 2019. Can Shareholder Advocacy Shape Energy Governance? The Case of the US Antifracking Movement. *Review of International Political Economy* 26 (1): 104–133.
- Newell, Peter, and Andrew Simms. 2019. Towards a Fossil Fuel Non-proliferation Treaty. *Climate Policy*. Advance online publication. <https://doi.org/10.1080/14693062.2019.1636759>.
- NYC. 2018. Climate Action: Mayor, Comptroller, Trustees Announce First-in-the-Nation Goal to Divest from Fossil Fuels. Available online at: [www1.nyc.gov/office-of-the-mayor/news/022-18/climate-action-mayor-comptroller-trustees-first-in-the-nation-goal-divest-from/#/0](http://www1.nyc.gov/office-of-the-mayor/news/022-18/climate-action-mayor-comptroller-trustees-first-in-the-nation-goal-divest-from/#/0), last accessed September 6, 2019.
- Okereke, Chukwumerije. 2008. Equity Norms in Global Environmental Governance. *Global Environmental Politics* 8 (3): 25–50.
- Organisation for Economic Co-operation and Development. 2003. *Environmentally Harmful Subsidies: Policy Issues and Challenges*. Paris: OECD Publishing.
- Organisation for Economic Co-operation and Development. 2005. *Environmentally Harmful Subsidies: Challenges for Reform*. Paris: OECD Publishing.
- Organisation for Economic Co-operation and Development. 2007. *Subsidy Reform and Sustainable Development: Political Economy Aspects*. Paris: OECD Publishing.
- Paxson, Christina. 2013. Coal Divestment Update. Available online at: [www.brown.edu/about/administration/president/statements/20131027-coal-divestment](http://www.brown.edu/about/administration/president/statements/20131027-coal-divestment), last accessed September 6, 2019.
- Piggot, Georgia. 2018. The Influence of Social Movements on Policies That Constrain Fossil Fuel Supply. *Climate Policy* 18 (7): 942–954.
- Rentschler, Jun, and Morgan D. Bazilian. 2017. Reforming Fossil Fuel Subsidies: Drivers, Barriers and the State of Progress. *Climate Policy* 17 (7): 891–914.
- Rive, Vernon. 2018. Anatomy of an International Norm Entrepreneur: The Friends of Fossil Fuel Subsidy Reform. In *The Politics of Fossil Fuel Subsidies and Their Reform*, edited by Jakob Skovgaard and Harro van Asselt, 156–172. Cambridge: Cambridge University Press.
- Rockefeller Brothers Fund. 2014. *Fund Announces Plans to Divest from Fossil Fuels*. Available online at: [www.rbf.org/news/fund-announces-plans-divest-fossil-fuels](http://www.rbf.org/news/fund-announces-plans-divest-fossil-fuels), last accessed September 6, 2019.

- Ross, Michael L., Chad Hazlett, and Paasha Mahdavi. 2017. Global Progress and Backsliding on Gasoline Taxes and Subsidies. *Nature Energy* 2: Article 16201.
- S&P Global. 2018. *S&P Global 1200 Fossil Fuel Free Index Series: Methodology*. New York: S&P Global.
- Sandholtz, Wayne. 2008. Dynamics of International Norm Change: Rules Against Wartime Plunder. *European Journal of International Relations* 14 (1): 101–131.
- Sell, Susan K., and Aseem Prakash. 2004. Using Ideas Strategically: The Contest Between Business and NGO Networks in Intellectual Property Rights. *International Studies Quarterly* 48 (1): 143–175.
- Soederberg, Susanne. 2009. The Marketisation of Social Justice: The Case of the Sudan Divestment Campaign. *New Political Economy* 14 (2): 211–229.
- Stanford Board of Trustees. 2016. *Stanford and Climate Change: A Statement of the Board of Trustees*. Available online at: <https://news.stanford.edu/2016/04/25/stanford-climate-change-statement-board-trustees/>, last accessed September 6, 2019.
- Steenblik, Ronald. 1998. Subsidy Reform: Doing More to Help the Environment by Spending Less on Activities That Harm It. Paper presented at a workshop on Doing More with Less, IUCN's 50th Anniversary, Fontainebleau, France, November. Available online at: [www.cbd.int/financial/fiscalenviron/g-subsidy-iucn.pdf](http://www.cbd.int/financial/fiscalenviron/g-subsidy-iucn.pdf), last accessed September 6, 2019.
- Steenblik, Ronald. 2009. Subsidies in the Traditional Energy Sector. In *Global Challenges at the Intersection of Trade, Energy, and the Environment*, edited by Joost Pauwelyn, 183–192. Geneva, Switzerland: Centre for Trade and Economic Integration.
- Stimmer, Anetta, and Lea Wisken. 2019. The Dynamics of Dissent: When Actions Are Louder Than Words. *International Affairs* 95 (3): 515–533.
- Stortinget. 2014–2015. *The Storting has made the unanimous decision to pull the Government Pension Fund Global (GPF) out of coal*. Available online at: <https://www.stortinget.no/en/In-English/About-the-Storting/News-archive/Front-page-news/2014-2015/hj9/>, last accessed September 11, 2019.
- Trinks, Arjan, Bert Scholtens, Machiel Mulder, and Lammertjan Dam. 2018. Fossil Fuel Divestment and Portfolio Performance. *Ecological Economics* 146: 740–748.
- Van de Graaf, Thijs, and Mathieu Blondeel. 2018. Fossil Fuel Subsidies Reform: An International Norm Perspective. In *The Politics of Fossil Fuel Subsidies and Their Reform*, edited by Jakob Skovgaard and Harro van Asselt. Cambridge: Cambridge University Press.
- Van de Graaf, Thijs, and Jeff Colgan. 2016. Global Energy Governance: A Review and Research Agenda. *Palgrave Communications* 2 (15047): 1–12.
- Van de Graaf, Thijs, and Harro van Asselt. 2017. Introduction to the Special Issue: Energy Subsidies at the Intersection of Climate, Energy, and Trade Governance. *International Environmental Agreements* 17 (3): 313–326.
- Wapner, Paul. 2014. Ethical Enhancement in an Age of Climate Change. *Ethics and International Affairs* 28 (3): 325–334.
- World Bank. 1982. *The Joint UNDP/World Bank Energy Sector Assessment Programme and Energy Sector Management Programme*. Washington, DC: World Bank Group.
- World Bank. 2017. World Bank Group Announcements at One Planet Summit. Available online at: [www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit](http://www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit), last accessed September 6, 2019.

World Bank. 2018. Multilateral Development Banks Announced a Joint Framework for Aligning Their Activities with the Goals of the Paris Agreement. Available online at: [www.worldbank.org/en/news/press-release/2018/12/03/multilateral-development-banks-mdbs-announced-a-joint-framework-for-aligning-their-activities-with-the-goals-of-the-paris-agreement](http://www.worldbank.org/en/news/press-release/2018/12/03/multilateral-development-banks-mdbs-announced-a-joint-framework-for-aligning-their-activities-with-the-goals-of-the-paris-agreement), last accessed September 6, 2019.

Yandle, Bruce. 1983. Bootleggers and Baptists—The Education of a Regulatory Economist. *Regulation* 7: 12.