Today’s readings begin our third week, in which we consider broadly corporate externalities affecting the “triple bottom line” of people, profits, planet – a new way of understanding the metrics of business. We will be looking at various ideas to confront corporate externalities and the corporation’s unsustainable design.

Today’s readings look specifically at the corporation’s effect on “planet” – and specifically how environmental law deals with corporate law’s rule of limited liability, a design that conflicts with environmental law’s goal that polluters internalize the costs on the environment created by their activities.

The first reading from the student book (that you’ve already read) describes how the corporation is regarded a “person” for purposes of many regulatory schemes. In particular, you’ll want to notice how the corporate parent-subsidiary relationship is regarded when environmental risks are carried in the subsidiary, but the parent corporation holds the bulk of the business assets. Please try the Examples at the end of the chapter, and see if your answers match the Explanations.

The next reading is a US Supreme Court case from 1998, which resolves the question of parent corporation liability for a toxic waste site of a subsidiary. The case brings into sharp focus the Court’s view of how far the (federal) environmental laws reach to undo (state) corporate limited liability. Why should state law be viewed as superior to federal law – at least in this case?

Finally, you’ll read a summary of U.S. environmental regulation – which has been followed throughout the world and which focuses on business/corporate actors. After the summary, you’ll read an article by a thoughtful professor who argues that a private-public partnership should be forged so that business firms will undertake life-cycle analysis. For example, a company like Apple would be asked to investigate the sustainability of its product from design, to manufacture, to shipment, to marketing, to use, and finally to disposal. Such analysis – if viewed as a “public good” – could lead to profitable sustainability practices. Today most companies view environmental compliance as a profit-diminishing expense.

**Readings:**

- E&E 33 (Statutory Recognition of the Corporation)
- Wikipedia, Earth Day and Summary of US Environmental Laws
- Wagner, *Sustainability as Public Good* (2011)
CHAPTER 33

Statutory Recognition of Corporation

Modern regulation seeks to correct failures in private markets. The corporation, a private construct that allocates risks between insiders and outsiders, raises many regulatory issues. Is a loan to a corporation subject to usury laws when the same loan to an individual would be usurious? Can a business avoid hazardous waste liability by incorporating its environmental operations separately? This chapter considers the recognition of the corporation, particularly its personality and limited liability, under various regulatory schemes (§33.1). [It also considers bankruptcy law's nonrecognition of certain transactions by corporate insiders (§33.2) – not included in this reading.]

Statutory recognition of the corporation is sometimes confused with piercing the corporate veil (see Chapter 32). In piercing cases, courts decide whether to disregard corporate limited liability given outsiders’ expectations under state contract and tort law. In statutory cases, courts and administrative agencies must interpret the regulatory scheme (federal or state) to decide whether it recognizes corporate attributes arising from state corporate law, such as corporate personality or limited liability. Not surprisingly, courts often give less weight to corporate attributes in defining the regulatory reach.

§33.1 STATUTORY RECOGNITION OF CORPORATION

§33.1.1 Corporation as Separate Entity

Most modern regulatory schemes explicitly place the same regulatory burdens and benefits on corporations as any other person or entity. Recognition of corporate personality, however, becomes an issue when a constitutional provision, statute, or regulation refers to a “person” without specifying whether corporations are included. As we have seen, corporations are treated as constitutional persons for most economic purposes, but receive only limited recognition in matters involving individual civil rights (see §1.3).

Corporate personality also is relevant when an individual attempts to use a corporation to create transactions with a “separate entity” to obtain government benefits. For example, many regulatory schemes provide benefits to individuals employed by another person—such as unemployment compensation and retirement benefits. Although most schemes recognize the legal personality of the corporation, interpretive issues arise where a corporation is used to create relationships (and benefits or immunities) that otherwise do not exist. In these cases the argument is that the corporate entity and individual should be treated as one—sometimes confusingly referred to as reverse piercing. See Cargill, Inc. v. Hedge, 375 N.W.2d 477 (Minn. 1985) (extending state homestead exemption to corporation that owned family farm).

Statutory recognition of corporate personality depends on the statute. For example, can a one-person corporation be used to create an employment relationship, entitling the person to
government employment benefits? Different statutes produce different answers. In *Stark v. Flemming*, 283 F.2d 410 (9th Cir. 1960), an elderly woman otherwise not entitled to Social Security benefits set up a one-person corporation to hold real estate from which she derived rental income. To qualify her for Social Security benefits, the corporation “employed” her at a “salary” equal to the rental income. The court construed the Social Security law to respect the employment relationship, provided the salary was reasonable. Other courts, construing other statutes, have refused to respect similar uses of the corporate form. See *Baker v. Caravan Moving Corp.*, 561 F. Supp. 337 (N.D. Ill. 1983) (sham corporation cannot be used to escape obligations under the Employee Retirement Income Security Act).

§33.1.2 Corporate Limited Liability

In general, regulatory schemes respect corporate limited liability. For example, food and drug laws do not make individual shareholders liable to consumers for a corporation’s unsafe products, and government contract rules do not bind corporate executives when their corporation contracts with the government.

Nonetheless, courts often interpret statutory schemes as superseding corporate limited liability to serve the overriding purposes of the statute. Federal discrimination laws, for example, impose liability on the parent corporation for claims by employees of an insolvent subsidiary if the parent is linked to the subsidiary’s discriminatory policies. Federal intellectual property law makes officers and shareholders liable for the corporation’s trademark and patent infringements if they “actively assisted” in the infringement.

Limited liability in statutory cases is thus a matter of statutory interpretation. Courts are called on to balance corporate limited liability and the statutory liability policies, recognizing the special weight these legislative policies carry. (This is different from the usual piercing case in which courts generally heed the legislative directive that corporate limited liability should outweigh state tort and contract principles.) Courts in statutory cases have been less willing to use the traditional piercing factors. In fact, courts in these cases refer to such traditional piercing factors as undercapitalization, failure to follow formalities, and misrepresentation only half as often as they do in contract cases. See Robert B. Thompson, *Piercing the Corporate Veil: An Empirical Study*, 76 Cornell L. Rev. 1036 (1991) (looking at all piercing cases on Westlaw through 1985).

Superfund Cases

An important and interesting juxtaposition of limited liability and regulatory policy is the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)—the federal Superfund statute, which imposes liability on former and present “owners or operators” of hazardous waste sites. 42 U.S.C. §9607(a).

Since the statute’s enactment in 1980, federal courts have taken different tacks in their attempt to reconcile state-based corporate separateness and federal environmental policy. For cases involving parent corporations with wholly-owned subsidiaries that owned or operated waste sites, the Supreme Court resolved more than a decade of conflicting lower court views. *United States v. Bestfoods*, 524 U.S. 51 (1998). According to the Court, the parent corporation can be liable under CERCLA as follows:
• **No “owner” liability.** CERCLA does not abrogate the “ingrained” principle of corporate law that a parent corporation is a separate entity distinct from its subsidiaries. This means that a parent corporation, regardless of its degree of involvement in the subsidiary or its disposal activities, does not legally own the subsidiary’s property and cannot be liable as an “owner.”

• **Direct “operator” liability.** The parent corporation can be deemed an “operator” if it directs, manages, or conducts the affairs of a “facility”—that is, the subsidiary’s hazardous waste site. If, for example, an executive of the parent (who is not also an official of the subsidiary) actively participates in and controls the subsidiary’s environmental programs, the parent can become liable as an “operator.”

• **Derivative piercing liability.** Even if the parent corporation does not incur “owner” or “operator” liability, it can be charged with “derivative CERCLA liability” when the subsidiary incurs CERCLA liability and the corporate veil may be pierced. The Court described piercing as a “fundamental principle of corporate law” that arises when the corporate form “would otherwise be misused to accomplish certain wrongful purposes” on the shareholders’ behalf. The Court left open whether piercing factors would be borrowed from state law or would be a matter of federal common law.

The Supreme Court’s approach rejects a view adopted by some circuits that CERCLA liability can arise if the parent held the power to control the subsidiary’s disposal activities, even though it did not exercise the power. According to *Bestfoods*, control by the parent of the subsidiary’s business is not in itself sufficient to create “operator” liability. Moreover, the Court’s recognition of direct “operator” liability rejects the view that parent liability under CERCLA can arise only under traditional piercing rules.

In cases involving CERCLA liability of *individuals*, some lower courts have refused to look to traditional veil-piercing criteria—such as active participation and lack of corporate formalities—and have imposed liability on individual officers who “could have prevented” the hazardous discharge. The *Bestfoods* approach, however, raises doubts about this approach and suggests that direct individual liability under CERCLA, like corporate liability, depends on identifying actual managerial actions taken by the individual related to the company’s hazardous waste activities. According to *Bestfoods*, CERCLA does not impose vicarious liability by virtue of corporate position.

Even though *direct* CERCLA liability requires showing more than corporate control, lower courts have used traditional piercing analysis to impose *derivative* CERCLA liability - that is, piercing liability on individuals for an insolvent corporation’s CERCLA obligations. See *Carter-Jones Lumber Co. v. LTV Steel Co.*, 237 F.3d 745 (6th Cir. 2001) (applying Ohio piercing principles to uphold individual owner’s liability for corporation’s CERCLA cleanup obligations, when his control was “complete” and he caused the corporation to commit an illegal act).
Chapter 13 – Corporate Environmental Liability

A. Environmental Liability of Corporate Actors

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) § 107 (42 U.S.C. § 9607)

(a) (2) Covered persons; scope; recoverable costs and damages

Any person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of ... shall be liable for ... all costs of removal or remedial action incurred by the United States Government or a State.

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or “Superfund” statute) imposes liability for the costs of cleaning up the toxic waste sites on “owners” and “operators” of facilities that dump hazardous chemicals. It was adopted in 1980 in response to the serious environmental and health risks posed by industrial pollution.

The term “person” is defined in CERCLA to include corporations and other business organizations. But the phrase “owner or operator” is defined only by tautology, however, as “any person owning or operating” a facility. This circularity is confusing, and the language generates more questions than it answers. For example, a significant question under the statute, given that many of the companies that actually own and operate these facilities go bankrupt or are sold before charges are brought, has been whether parent corporations can be liable for the clean-up costs.

Normal rules of limited liability – which allow the separation of assets and risks within corporate groups – would say no. That is, corporate parents can place risks in separately-incorporated subsidiaries without incurring liability, except when exceptional circumstances call for piercing the corporate veil. But over the first two decades of Superfund enforcement, federal courts often interpreted the “owner” and “operator” categories expansively to impose liability on parent corporations for the dumping activities of their subsidiaries.

United States v. Bestfoods involved a suit brought by the federal government for the costs of cleaning up industrial waste generated by a chemical plant in Muskegon, Michigan. The plant had begun dumping hazardous chemicals in 1957. The company that owned the plant then was sold in 1965 to CPC International, Inc., the
original defendant in the case. CPC operated the business as a wholly-owned subsidiary, keeping many of the original managers who performed duties for both corporations. The dumping continued under CPC’s ownership until 1972, when the subsidiary was sold to another company, which eventually went bankrupt.

In 1981, the Environmental Protection Agency began to clean up the site, with a remedial plan costing tens of millions of dollars. To recover some of that money, the United States filed an action under § 107 against CPC and others. The District Court held a trial on liability and held that CPC, as the parent corporation of the subsidiary engaged in the hazardous dumping, had “owned or operated” the facility under the statute.

A divided panel of the Sixth Circuit reversed, concluding that a parent corporation can be held liable as an operator “only when the requirements necessary to pierce the corporate veil under state law are met.” Applying Michigan veil-piercing law, the Court of Appeals decided that CPC was not liable for controlling the actions of its subsidiary, since the parent and subsidiary maintained separate personalities and the parent did not use the corporate form to perpetrate fraud or subvert justice.

The issue before the Supreme Court was whether under CERCLA a parent corporation that actively participated in, and exercised control over, the operations of a subsidiary may, without more, be held liable as an “operator” of a polluting facility owned or operated by the subsidiary. The Supreme Court answered no, unless the corporate veil may be pierced. The Court held that a corporate parent that actively participated in, and exercised control over, the operations of the facility itself may be held directly liable in its own right as an “operator” of the facility.

In other words, in United States v. Bestfoods, the Supreme Court rejected the more expansive approaches to defining “owner” and “operator” used by some lower courts. It held that “owner” or “operator” liability under CERCLA should conform to corporate law norms of limited liability. As you read the case, notice the pervasive presence of corporate law in this area of environmental regulation.

**United States v. Bestfoods**

*524 U.S. 51 (1998)*

Justice Souter delivered the opinion of the Court.

It is a general principle of corporate law deeply “ingrained in our economic and legal systems” that a parent corporation (so-called because of control through ownership of another corporation’s stock) is not liable for the acts of its subsidiaries. Thus it is hornbook law that “the exercise of the ‘control’ which stock ownership gives to the stockholders will not create liability beyond the assets of the subsidiary. That ‘control’ includes the election of directors, the making of by-laws and the doing of all other acts incident to the legal status of stockholders. Nor will a duplication of some or all of the directors or executive officers be fatal.” Although this respect for corporate distinctions when the subsidiary is a polluter has been severely criticized in the literature, nothing in CERCLA purports to reject this bedrock principle, and against this venerable common-law backdrop, the congressional silence is audible.

But there is an equally fundamental principle of corporate law, applicable to the parent-subsidiary relationship as well as generally, that the corporate veil may be pierced and the shareholder held liable for the
corporation’s conduct when, inter alia, the corporate form would otherwise be misused to accomplish certain wrongful purposes, most notably fraud, on the shareholder’s behalf. Nothing in CERCLA purports to rewrite this well-settled rule, either. CERCLA is thus like many another congressional enactment in giving no indication that “the entire corpus of state corporation law is to be replaced simply because a plaintiff’s cause of action is based upon a federal statute,” and the failure of the statute to speak to a matter as fundamental as the liability implications of corporate ownership demands application of the rule that “in order to abrogate a common-law principle, the statute must speak directly to the question addressed by the common law.” The Court of Appeals was accordingly correct in holding that when (but only when) the corporate veil may be pierced, may a parent corporation be charged with derivative CERCLA liability for its subsidiary’s actions.10

10 Some courts and commentators have suggested that this indirect, veil-piercing approach can subject a parent corporation to liability only as an owner, and not as an operator. We think it is otherwise, however. If a subsidiary that operates, but does not own, a facility is so pervasively controlled by its parent for a sufficiently improper purpose to warrant veil piercing, the parent may be held derivatively liable for the subsidiary’s acts as an operator.

If the Act rested liability entirely on ownership of a polluting facility, this opinion might end here; but CERCLA liability may turn on operation as well as ownership, and nothing in the statute’s terms bars a parent corporation from direct liability for its own actions in operating a facility owned by its subsidiary. The fact that a corporate subsidiary happens to own a polluting facility operated by its parent does nothing to displace the rule that the parent “corporation is itself responsible for the wrongs committed by its agents in the course of its business,” and whereas the rules of veil piercing limit derivative liability for the actions of another corporation, CERCLA’s “operator” provision is concerned primarily with direct liability for one’s own actions. It is this direct liability that is properly seen as being at issue here.

Under the plain language of the statute, any person who operates a polluting facility is directly liable for the costs of cleaning up the pollution. This is so regardless of whether that person is the facility’s owner, the owner’s parent corporation, or even a saboteur who sneaks into the facility at night to discharge its poisons out of malice. If any such act of operating a corporate subsidiary’s facility is done on behalf of a parent corporation, the existence of the parent-subsidiary relationship under state corporate law is simply irrelevant to the issue of direct liability.

This much is easy to say: the difficulty comes in defining actions sufficient to constitute direct parental “operation.” Here of course we may again rue the uselessness of CERCLA’s definition of a facility’s “operator” as “any person operating” the facility. In the organizational sense, the word ordinarily means “to conduct the affairs of; manage: operate a business.” So, under CERCLA, an operator must manage, direct, or conduct operations specifically related to pollution, that is, operations having to do with the leakage or disposal of hazardous waste, or decisions about compliance with environmental regulations.

With this understanding, we think that the appeals court erred in limiting direct liability under the statute to a parent’s sole operation, so as to eliminate any possible finding that CPC is liable as an operator on the facts of this case. ___________

By emphasizing that “CPC is directly liable under section 107(a)(2) as an operator because CPC actively participated in and exerted significant control over the subsidiary’s business and decision-making,” the District Court applied the “actual control” test of whether the parent “actually operated the business of its subsidiary,” as several Circuits have employed it.
The well-taken objection to the actual control test, however, is its fusion of direct and indirect liability; the test is administered by asking a question about the relationship between the two corporations (an issue going to indirect liability) instead of a question about the parent’s interaction with the subsidiary’s facility (the source of any direct liability). If, however, direct liability for the parent’s operation of the facility is to be kept distinct from derivative liability for the subsidiary’s own operation, the focus of the enquiry must necessarily be different under the two tests. “The question is not whether the parent operates the subsidiary, but rather whether it operates the facility, and that operation is evidenced by participation in the activities of the facility, not the subsidiary.” The analysis should rest on the relationship between CPC and the Muskegon facility itself.

In addition to (and perhaps as a reflection of) the erroneous focus on the relationship between CPC and the subsidiary, even those findings of the District Court that might be taken to speak to the extent of CPC’s activity at the facility itself are flawed, for the District Court wrongly assumed that the actions of the joint officers and directors are necessarily attributable to CPC.

In imposing direct liability, the District Court failed to recognize that “it is entirely appropriate for directors of a parent corporation to serve as directors of its subsidiary, and that fact alone may not serve to expose the parent corporation to liability for its subsidiary’s acts.”

This recognition that the corporate personalities remain distinct has its corollary in the “well established principle [of corporate law] that directors and officers holding positions with a parent and its subsidiary can and do ‘change hats’ to represent the two corporations separately, despite their common ownership.” It cannot be enough to establish liability here that dual officers and directors made policy decisions and supervised activities at the facility. The Government would have to show that, despite the general presumption to the contrary, the officers and directors were acting in their capacities as CPC officers and directors, and not as subsidiary officers and directors, when they committed those acts.

In sum, the District Court’s focus on the relationship between parent and subsidiary (rather than parent and facility) treated CERCLA as though it displaced or fundamentally altered common-law standards of limited liability. Indeed, if common corporate personnel acting at management and directorial levels were enough to support a finding of a parent corporation’s direct operator liability under CERCLA, then the resort to veil piercing to establish indirect, derivative liability for the subsidiary’s violations would be academic. There would in essence be a relaxed, CERCLA-specific rule of derivative liability that would banish traditional standards and expectations from the law of CERCLA liability. But, such a rule does not arise from congressional silence, and CERCLA’s silence is dispositive.

In our inquiry into the meaning Congress presumably had in mind when it used the verb “to operate,” we recognized that the statute obviously meant something more than mere mechanical activation of pumps and valves, and must be read to contemplate “operation” as including the exercise of direction over the facility’s activities. The Court of Appeals recognized this by indicating that a parent can be held directly liable when the parent operates the facility in the stead of its subsidiary or alongside the subsidiary in some sort of a joint venture. We anticipated a further possibility above, however, when we observed that a dual officer or director might depart so far from the norms of parental influence exercised through dual officeholding as to serve the parent, even when ostensibly acting on behalf of the subsidiary in operating the facility. Yet another possibility, suggested by the facts of this case, is that an agent of the parent with no hat to wear but the parent’s hat might manage or direct activities at the facility.
Identifying such an occurrence calls for line-drawing yet again, since the acts of direct operation that give rise to parental liability must necessarily be distinguished from the interference that stems from the normal relationship between parent and subsidiary. Again norms of corporate behavior (undisturbed by any CERCLA provision) are crucial reference points. “Activities that involve the facility but which are consistent with the parent’s investor status, such as monitoring of the subsidiary’s performance, supervision of the subsidiary’s finance and capital budget decisions, and articulation of general policies and procedures, should not give rise to direct liability.” The critical question is whether, in degree and detail, actions directed to the facility by an agent of the parent alone are eccentric under accepted norms of parental oversight of a subsidiary’s facility.

There is, in fact, some evidence that CPC engaged in just this type and degree of activity at the Muskegon plant. The District Court’s opinion speaks of an agent of CPC alone who played a conspicuous part in dealing with the toxic risks emanating from the operation of the plant. Williams worked only for CPC; he was not an employee, officer, or director of Ott II, and thus, his actions were of necessity taken only on behalf of CPC. The District Court found that “CPC became directly involved in environmental and regulatory matters through the work of ... Williams, CPC’s governmental and environmental affairs director. Williams ... became heavily involved in environmental issues at Ott II.” He “actively participated in and exerted control over a variety of Ott II environmental matters,” and he “issued directives regarding Ott II’s responses to regulatory inquiries.”

We think that these findings are enough to raise an issue of CPC’s operation of the facility through Williams’s actions, though we would draw no ultimate conclusion from these findings at this point.

Points for Discussion

1. “Owner or operator” liability.

The issue under CERCLA’s liability provision is whether a corporation is the owner or operator of a polluting facility. Since the purpose of the statute is to identify responsible persons so they can pay for remediation, doesn’t it make sense to say that any corporation that conducts its for-profit operations through a subsidiary, and controls the subsidiary’s board and its operations, should be deemed both the owner and operator of the subsidiary’s facilities? If the purpose of the statute is remediation, why should taxpayers foot the bill to clean up toxic waste sites, rather than the business entities that profited from and had the power to prevent the pollution?

Why did the Supreme Court decide that in the normal parent-subsidiary situation, the parent corporation was neither the owner nor the operator of the polluting facilities?

2. Derivative vs. direct liability.

The Supreme Court identified two types of CERCLA liability for parent corporations whose subsidiaries owned or operated a polluting facility. The Court held that derivative liability could arise only under traditional veil-piercing standards – that is, the parent would assume the liability of the subsidiary when the corporate form had been “misused to accomplish certain wrongful purposes.” The Court held that direct liability could arise when the parent “operates the facility, evidenced by participation in the activities of the facility” – noting that “norms of corporate behavior are crucial reference points.”

Given that both derivative and direct liability require a showing of abnormal corporate behavior, what’s the difference between the two standards?
3. **Deference to corporate norms.**

In articulating the standards for parent liability under CERCLA, the Court refers to corporate limited liability as a “bedrock principle,” though without mentioning that it arises under state law. Why this oversight? Why should state limited liability norms govern a federal regulatory regime, whose purpose is to have parties pay for clean-up costs of toxic waste sites for which they were responsible? Isn’t federal law supreme?

In short, aren’t national environmental policies more important than state-based capital formation?

4. **Rewarding laxity?**

Notice that the Court’s standards for parent liability under CERCLA are more solicitous of corporations that put their environmentally-sensitive operations in a wholly-owned subsidiary and then make no effort to oversee the subsidiary’s handling of toxic chemicals, compared to corporations that seek to manage and direct the subsidiary’s environmental practices. Does this make sense?

5. **Whose corporate norms?**

The Court left open whether “norms of corporate behavior” would be borrowed from state law or would be a matter of federal common law. If a matter of state law, should they come from the state of incorporation? Does it make sense for a state (or even a foreign country) with lax piercing norms to set the standards for environmental liability that apply to another state where the toxic dumping occurred?

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**Food for Thought**

Does corporate environmental friendliness pay? One study looked at whether companies reaped financial benefits by engaging in positive, voluntary environmental action. The study found that some environmental initiatives, such as philanthropic gifts, resulted in higher share value, but others, such as voluntary emissions reductions, resulted in lower share value. Sometimes it seems no good deed goes unpunished.
Earth Day is an annual day on which events are held worldwide to demonstrate support for environmental protection. Earth Day is observed each April 22. The first Earth Day was Wednesday, April 22, 1970 in New York City.

Here is a list of the major US environmental laws that trace their origins to Earth Day:

The **National Environmental Policy Act (NEPA - 1970)**

is a United States environmental law that established a U.S. national policy promoting the enhancement of the environment and also established the President's Council on Environmental Quality (CEQ). As one of the most emulated statutes in the world, NEPA has been called the modern-day equivalent of an “environmental Magna Carta”.

NEPA’s most significant effect was to set up procedural requirements for all federal government agencies to prepare environmental assessments (EAs) and environmental impact statements (EISs). EAs and EISs contain statements of the environmental effects of proposed federal agency actions. NEPA’s procedural requirements apply to all federal agencies in the executive branch. NEPA does not apply to the President, to Congress, or to the federal courts.

The **Clean Air Act (CAA – 1970)**

is a United States federal law designed to control air pollution on a national level. It requires the Environmental Protection Agency (EPA) to develop and enforce regulations to protect the public from airborne contaminants known to be hazardous to human health. The 1963 version of the legislation established a research program, expanded in 1967. Major amendments to the law, requiring regulatory controls for air pollution, passed in 1970, 1977 and 1990.

The 1970 amendments greatly expanded the federal mandate, requiring comprehensive federal and state regulations for both stationary (industrial) pollution sources and mobile sources. It also significantly expanded federal enforcement.

The 1990 amendments addressed acid rain, ozone depletion and toxic air pollution, established a national permits program for stationary sources, and increased enforcement authority. The amendments also established new auto gasoline reformulation requirements, set Reid vapor pressure (RVP) standards to control evaporative emissions from gasoline, and mandated new gasoline formulations sold from May to September in many states.

The Clean Air Act was the first major environmental law in the United States to include a provision for citizen suits. Numerous state and local governments have enacted similar legislation, either implementing federal programs or filling in locally important gaps in federal programs.
The **Clean Water Act (CWA - 1972)** is

the primary federal law in the United States governing water pollution. Passed in 1972, the act established the goals of eliminating releases of high amounts of toxic substances into water, eliminating additional water pollution by 1985, and ensuring that surface waters would meet standards necessary for human sports and recreation by 1983.

The principal body of law in effect is based on the Federal Water Pollution Control Amendments of 1972 and was significantly expanded from the Federal Water Pollution Control Amendments of 1948. Major amendments were enacted in the Clean Water Act of 1977 and the Water Quality Act of 1987.


The **Safe Drinking Water Act (SDWA - 1974)** is

the principal federal law in the United States intended to ensure safe drinking water for the public. Pursuant to the act, the Environmental Protection Agency (EPA) is required to set standards for drinking water quality and oversee all states, localities, and water suppliers who implement these standards.

SDWA applies to every public water system in the United States. There are currently more than 150,000 public water systems providing water to almost all Americans at some time in their lives. These water systems must be analyzed by third-party analytical laboratories. The Act does not cover private wells.

The SDWA does not apply to bottled water. Bottled water is regulated by the Food and Drug Administration (FDA) under the Federal Food, Drug, and Cosmetic Act.

The **Resource Conservation and Recovery Act (RCRA - 1976)** is

the principal federal law in the United States governing the disposal of solid waste and hazardous waste.

The most notable provisions of the RCRA statute are included in Subtitle C, which directs EPA to establish controls on the management of hazardous wastes from their point of generation, through their transportation and treatment, storage and/or disposal. Because RCRA requires controls on hazardous waste generators (i.e., sites that generate hazardous waste in the first place), transporters, and treatment, storage and disposal facilities (i.e., facilities that ultimately treat/dispose of or recycle the hazardous waste), the overall regulatory framework has become known as the "cradle to grave" system. The program exacts stringent recordkeeping and reporting requirements on generators, transporters, and operators of treatment, storage and disposal facilities handling hazardous waste.
The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA also known as "Superfund" – 1980) is aimed at remediating abandoned hazardous waste sites, by establishing legal liability, as well as a trust fund for cleanup activities. In general CERCLA applies to contaminated sites, while RCRA's focus is on controlling the ongoing generation and management of particular waste streams. RCRA, like CERCLA, has provisions to require cleanup of contaminated sites that occurred in the past.

In 1984 Congress expanded the scope of RCRA with the enactment of Hazardous and Solid Waste Amendments (HSWA). The amendments strengthened the law by covering small quantity generators of hazardous waste and establishing requirements for hazardous waste incinerators, and the closing of substandard landfills.

In 1986, SARA addressed cleanup of leaking underground storage tanks (USTs) and waste storage facilities. The amendments established a trust fund to pay for the cleanup of leaking USTs where responsible parties cannot be identified.

The Land Disposal Program Flexibility Act (LPDFA – 1996) is meant to allow some flexibility in the procedures for land disposal of certain wastes. For example, a waste is not subject to land disposal restrictions if it is sent to an industrial wastewater treatment facility, a municipal sewage treatment plant, or is treated in a "zero discharge" facility.

The Energy Policy Act (EPA - 2005) is an attempt to combat growing energy problems, by changing US energy policy to provide tax incentives and loan guarantees for energy production of various types.

The EPA increases the amount of biofuel (usually ethanol) that must be mixed with gasoline sold in the United States to 4 billion US gallons (15,000,000 m³) by 2006, 6.1 billion US gallons (23,000,000 m³) by 2009 and 7.5 billion US gallons (28,000,000 m³) by 2012; two years later, the Energy Independence and Security Act of 2007 extended the target to 36 billion US gallons (140,000,000 m³) by 2022.

The EPA exempts fluids used in the natural gas extraction process of “hydraulic fracturing” from protections under the Clean Air Act, Clean Water Act, Safe Drinking Water Act, and CERCLA. It also exempts companies drilling for natural gas from disclosing the chemicals involved in fracking operations that would normally be required under federal clean water laws. These exemptions, commonly known as the "Halliburton loophole," refer to former Halliburton CEO Dick Cheney who was reportedly instrumental in the law’s passage.
IMAGINING CORPORATE SUSTAINABILITY AS A PUBLIC GOOD
RATHER THAN A CORPORATE BAD

Wendy E. Wagner
47 Wake Forest L. Rev. 561 (2011)

Introduction

Corporations have been criticized for their environmental misdeeds for over a century, so it is not surprising that many view corporate approaches to sustainability with skepticism. Reports of green-washing and other forms of misleading advertising by a handful of corporations only serve to reinforce this negative perception.

Based on this evidence of poor corporate behavior, a number of analysts have concluded that sustainability should be regulated in the same way as other industrial polluting activities. Just as laws require corporations to disclose information on their polluting activities because these activities are wrongs to society, so the thinking goes, corporations should be required to engage in an internal accounting of their unsustainable practices. Specifically, corporations should be required to assess the sustainability of their operations in standardized disclosures and take their resulting, publicly-administered medicine, whether it involves being shamed in the marketplace or subjected to greater regulatory control with respect to resource use or disposal practices.

Addressing corporate sustainability by putting the onus on corporations to assess the sustainability of their operations may get the solution exactly backwards, at least at this early stage in advancing sustainability. Rather than view the lack of sustainability efforts as another corporate bad that individual corporations should be required to redress, corporate sustainability should be treated instead as a public good that becomes the government's responsibility. Information about an industrial sector's sustainability profile--for example, a life cycle analysis of a typical facility--has clear public good qualities associated with it. This type of assessment allows for cross comparisons between competitors, identifies areas for possible synergies among producing companies, and highlights areas that may ultimately deserve further regulatory oversight. Equally important, if sustainability analyses concerning various production processes and services are produced in the first instance by publicly funded, third-party experts rather than extracted from private actors, the resulting reports are more likely to be reliable, complete, and accessible to a wide-range of stakeholders who can use them in public-benefitting ways.

The argument for treating corporate sustainability as a public good, rather than as a corporate bad, has four Parts. First, there is need for much greater information on the sustainability of corporate practices. At present, there appears to be little dispute that rigorous sustainability assessments of major corporate production processes are a valuable tool for
directing change, and that life cycle analyses excel in providing this kind of comprehensive assessment. Second, these life cycle assessments nevertheless face numerous informational and related obstacles that impede their usefulness when produced by corporations. Third, there is an argument that sustainability life cycle analyses, at least at this early stage, are better viewed as public goods that should be conducted by a neutral third party and subsidized by the public, rather than treated as an extension of pollution disclosures that are the sole responsibility of the firm. Finally, specific suggestions exist for how corporate sustainability assessments might be prepared by public experts and financed through a collective tax on corporations.

I. Informed Sustainability

There are multiple avenues for advancing corporate sustainability, but a key component to all of these methods is greater information about corporate practices. Individual corporate decisions about production processes, when amalgamated, yield a global market of goods and services which may be badly inefficient from an ecological point of view. Yet, until the relevant information is gathered and synthesized, the overall impact of corporate practices and the areas for the most promising gains with regard to sustainability are obscured.

A. The State of Information on Corporate Sustainability

Top commentators on corporate sustainability agree that information is not just an important ingredient, but it is also essential to establishing a meaningful sustainability program. At the most basic level, rigorous information on corporate sustainability informs the market—not simply downstream consumers, but also insurers, investors, corporate partners, and others who ultimately keep the corporation in business. Rigorous information on corporate sustainability informs internal practices as well: Enhanced corporate self-assessment is touted as one of the primary virtues of mandating information disclosures. Corporate sustainability information also identifies corporate practices that are most likely to benefit from greater regulatory oversight or market intervention.

Yet current regulatory programs provide only limited information on corporate sustainability. The Right-to-Know Act in the United States requires annual disclosures of corporate use and disposal of large amounts of hazardous substances. The resulting Toxic Release Inventory (“TRI”) disclosures provide useful information about corporate sustainability with regard to handling and disposal of hazardous substances, but these load estimates offer little insight into meaningful opportunities for a facility to reduce natural resource use, to minimize pollution, or to otherwise decrease a facility's ecological footprint.

The Global Reporting Initiative (“GRI”), established by the United Nations Environment Programme (“UNEP”) and the Coalition for Environmentally Responsible Economies (“CERES”), provides a more robust measure of a corporation's ecological footprint because it measures not only outputs, but natural resource use as well. The GRI offers external parties, like
investors and customers, an even stronger basis for evaluating a corporation's commitment to and progress toward sustainability as compared with the TRI disclosures. GRI reporting is voluntary, however. Thus, while a number of Fortune 500 companies have conducted self-audits over the last fifteen years, participation in GRI still remains the exception rather than the rule.

GRI and TRI provide useful barometers to measure corporate sustainability, but because both are exclusively input and output focused, they miss opportunities to focus corporations on the ways that production operations can be altered to provide significant sustainability advances. GRI and TRI also allow firms to be self-referencing in benchmarking their progress, a focus that neglects to reward ecologically-innovative business practices.

B. The Unparalleled Virtues of Life Cycle Analysis

Although life cycle analysis is more information-intensive, it offers a substantially improved measure of corporate sustainability relative to the input and output measures embodied in the GRI and TRI reports. Life cycle analysis begins at the “cradle,” where raw materials are produced, and follows that production process through transport and manufacturing to the ultimate disposal, often by the consumer. The goal of this analysis is to identify materials and burdens at each stage of the production process that are not recycled in a closed loop,paralleling natural processes. Such a holistic view of the process allows for a greater range of options for minimizing a facility’s ecological footprint, including redesigning the process entirely. By focusing on the design of production processes, rather than simply the end-of-the-pipe or output adjustments, much greater environmental gains, as well as cost-savings, are possible.

To the extent that there is proof in the pudding, life cycle analyses boast of concrete victories. A life cycle approach helped Tropicana learn that it was not the transportation of its juice, but the agricultural inputs that led to its larger-than-necessary carbon footprint. As a result, Tropicana focused its primary efforts on reducing fertilizer use rather than dedicating the same resources to increasing the energy efficiency of its vehicles. In a life cycle analysis of coal-fired power plants, Department of Energy (“DOE”) consultants compared cleaner coal-fired plants with older plants. This analysis not only quantitatively identified the additional environmental burdens associated with the older plants, but pinpointed those costs to specific features within the life cycle. This analysis also identified design changes that might improve the environmental performance of the older coal-fired systems.

From a regulatory standpoint, life cycle analysis can also pinpoint occasions when adverse environmental impacts are simply shifted within a production process—for example, how end-of-the-pipe controls may reduce one source of pollution only to move the problem elsewhere in the production process where it might be more difficult to address. A life cycle assessment of offshore drilling waste disposal, for example, revealed how strict prohibitions on the discharge of cuttings extracted with certain drilling fluids may have precluded opportunities to identify ways to convert the resulting hazardous waste (disposed in hazardous waste landfills) into a useful
product. This internal recycling would have ultimately done much more to limit waste, production costs, and environmental risk than flat prohibitions on the generation of the waste.

II. Impediments to Corporate Self-Assessments of Sustainability

A great deal of the information needed to conduct facility-specific or even industry-wide life cycle assessments lies in the hands of the companies. And, for a variety of reasons, these firms often lack the incentives to collect, analyze, or even share this basic information in a complete or comprehensive way. Much like environmental audits, and even basic TRI and GRI disclosures, corporations may be wary of conducting these assessments and, if they are required, may resist conducting them in a rigorous or comprehensive way.

A. Reliability of Data

A life cycle assessment requires a great deal of data about a large range of inputs (including water usage and various chemicals) and outputs (including pollutant streams and discharges) at each stage of the production process, from natural resource extraction to disposal.

Over time, additional regulatory innovations have helped increase the reliability of some self-produced information from regulated parties. For example, to gather accurate information about the pollutant emissions emanating from large utility stacks, Congress required that continuous monitors be installed on the stacks, and the EPA promulgated supplemental rules that penalize facilities when their continuous monitors break down. Unfortunately, most of the tools developed to collect more reliable information from regulated parties are only useful in a narrow set of circumstances that do not extend to the data-intensive needs of sustainability life cycle assessments.

Compared with GRI, life cycle assessments allow for even more error and bias in extracting basic internal data since there is much greater discretion for the corporation in identifying the types of data to collect, selecting the units of analysis (both in time and scale), and assembling the requisite information from company operations.

B. Disinterested Methods

Beyond problems with ensuring the reliability of the input data, the methods for conducting a life cycle analysis also afford the analyst considerable discretion in how to conduct the assessment. This too presents problems when the company conducting the assessment has a stake in the outcome. For example, there are numerous discretionary points that arise in framing the scope of a life cycle assessment, developing the methods, and interpreting the data. When a company is conducting its own LCA, this remaining methodological discretion raises a risk that it might select the most beneficial assumptions in conducting its assessment and ignore others that might cast the company in a less positive light.
The development of rigorous methods for other types of open-ended assessments, like risk assessments, have posed similar challenges to environmental regulators. For example, there is evidence of sponsor-bias in manufacturers' assessments of the chronic hazards of their products and waste streams. In the biomedical literature, this systemic bias has been dubbed “the Funding Effect” since privately sponsored research is more likely to produce results favorable to the sponsor than research that is financed by disinterested parties, like the federal government. Even more standardized sustainability disclosures, like GRI, have suffered from some of these challenges, since they too provide wiggle room for firms that prefer to highlight successes and downplay failures in applying the GRI indicators.

Unless regulators have substantial resources to scrutinize the models used for self-assessments, significant discretion in a company's life cycle assessment will remain.

**C. Comprehensibility**

A critical, third feature of a robust life cycle assessment is its comprehensibility to a wide range of users. Because multiple stakeholders will use the assessments, it is important that the assessments be understandable to those outside the life cycle assessment field.

When left to the discretion of an interested party who produces the report, the comprehensibility of life cycle assessments can be controlled or even manipulated. If a corporation conducts a life cycle analysis that reveals embarrassing information, for example, it enjoys considerable discretion to obscure the negative findings by writing the analysis in as technical a way as possible or obfuscating the most incriminating revelations.

GRI reporting would seem immune from this comprehensibility problem given its emphasis on comparable, input and output calculations in generic tables. Yet even GRI reports can be “cluttered with information of little apparent use to readers, while missing out on the big picture risks and opportunities.”

**III. Corporate Sustainability as a Public Good**

Extracting reliable life cycle analyses from corporations is fraught with difficulty, but one simple move can help avoid this impasse: sustainability analysis can be reconceived as a public good rather than a responsibility that should be shouldered by corporations. Reconceptualizing life cycle assessments as public information helps sidestep the impediments to collecting reliable and comprehensible information identified in the prior section. It also manages to produce considerably more relevant, accurate, and hopefully path-breaking types of analyses and recommendations in forms that would not occur if individual firms, who have a clear stake in the findings, were the primary source of this information.
Admittedly, a reconceptualization of sustainability assessments as public goods is at odds with conventional wisdom. In most national and international circles, sustainability reporting is understood to be a natural extension of pollution reporting that discloses negative externalities and other bads that a corporation extracts from society. Yet this conception seems to be based more on analogies to TRI reporting and other corporate disclosures than on a thorough analysis of the unique features of sustainability assessments. Such a close analysis reveals a number of ways that life cycle assessments fall closer to the public good side of environmental information than to regulating corporate bads.

There are at least four features of industrial life cycle analyses that are more closely associated with public goods, at least at this early stage in improving corporate sustainability. First, and perhaps most important, it is not clear what a life cycle analysis will reveal for any given industrial sector, and thus a life cycle analysis may not identify the excessive use of natural resources or polluting activities (i.e., negative externalities) in need of intervention.

Second, and along these same lines, conducting life cycle analyses and developing innovative solutions for more sustainable approaches in the future constitutes a type of intellectual property or public good for which a firm is unlikely to be able to capture its investment. Because the methods for LCA are constantly evolving, one corporation's bright idea for how to conduct a life cycle analysis or capture sustainability gains through facility-based innovations may quickly become a good that its competitors can copy. Without patents, copyrights, or other ways to convert these intellectual discoveries into property, sustainability innovations can be co-opted by competitors without compensating the originator of the idea. Firms could even copy and embellish on another facility's life cycle assessment and enjoy reputational gains without doing the initial work associated with conducting the basic assessment.

Ironically, at the same time that first-mover firms who conduct LCAs and identify ways to improve the sustainability of their operations may be providing competitors with a ready template for copying their green advancements, they may also be providing a playbook for competitors to capitalize on their weaknesses. If the life cycle analysis reveals inefficient or excessive waste in a manufacturing system, for example, then this internal self-evaluation can be used against the company before it has had an opportunity to make improvements.

Third, just as the benefits of LCA are broadly dispersed toward public goods, the costs are concentrated on individual firms and can be quite high. Unlike other types of disclosures, like TRI or even Security Exchange Commission (“SEC”) disclosures, life cycle assessments can consume considerable resources. Data collection can be extremely costly and applying the models or methods of LCA requires expertise. From the firm's perspective, then, conducting this detailed, introspective sustainability analysis is not a simple or inexpensive exercise.
Utilizing the outputs of LCA also requires an organizational structure that can act on the results, a feature that adds still more costs to the LCA process. Some firms, and perhaps many, lack the internal management structures that allow for the internal cross-fertilization that LCA demands. In one case study, for example, Toyota Motor Sales lacked the internal capacity to conduct the assessment and contracted with UCLA to develop a model for its system. Ultimately, Toyota enjoyed considerable environmental and cost savings by eliminating a particular packaging feature of its process; yet without this investment, the areas for improvement would not have been brought to light.

Last but not least, the large-scale costs associated with developing methods, models, and databases and viewing the problem more synoptically, rather than at an individual level, all favor a public good approach to life cycle analysis. Publicly produced assessments can identify areas for cross-fertilization and better allow for the diffusion of information as compared with private assessments, which might not only lack this broader perspective, but might deliberately avoid sharing internal information since it could undermine a firm's competitive edge.

IV. Reform

Expert, neutral assessments of a manufacturing process are critical ingredients to a rigorous life cycle assessment and help pave the way to the development of sustainable innovations in processes, technologies, and even product lines. Yet it seems naïve to expect corporations will conduct these types of expensive analyses voluntarily, particularly when their own innovations can be easily co-opted by competitors. Even if LCA was mandatory for corporations, the unavoidable discretion afforded to the analyst makes it difficult to ensure that the resulting assessments are reliable and comprehensible. The proposed reform below requires that a public entity should conduct these assessments and describes how this might be done.

A. Step 1: Public Life Cycle Assessments

Since life cycle assessments come closer to being public goods than the straightforward disclosure of negative externalities, a disinterested public organization is the most appropriate entity to produce life cycle assessments. The resulting LCAs would be based on an average firm within a particular industrial sector, much as is currently done by the EPA in setting technology-based air and water pollution standards under the Clean Water and Clean Air Acts. If this generic assessment reveals reasonable areas for improvements, then consumers, investors, shareholders, and even regulators may begin to demand sustainability progress from firms.

Under this public good view of sustainability assessments, life cycle assessments would be done by respected experts who are completely independent of the companies, but have access to internal corporate information. Ideally, much of the analysis would be done cooperatively with firms since the goal is to identify areas for improvement and possibly cost savings. To the extent that the life cycle analysts face opposition from some firms, information extraction tools--like
EPA’s authority to request information under its various statutory mandates—would be needed to secure internal records or to ensure that the voluntarily provided records are complete. Indeed, because it has legal authority to access private records, the EPA is perhaps best situated to conduct these life cycle assessments, or it could subcontract the work to a respected nonprofit body like CERES. The resulting, industrial-sector life cycle assessments would ideally be peer reviewed and subjected to comments from the affected industry, although the expert assessor group would have complete independence in how to respond to comments. Much like technology-based standards, the life cycle analyses would also be updated at regular intervals or could be subject to more informal updating processes (for example, the expert assessor could post a website that invited comments on revisions over time).

Publicly-prepared life cycle assessments would operate much like penalty defaults: using the worst case assessment as a baseline, corporations would be able to distinguish their processes or boast of accomplishments that go well beyond the laggard facilities in their sector. The corporations can then use this positive comparison in the market to gain a competitive edge with insurers, investors, and the public at large. Unlike a full-blown life cycle analysis, however, this distinguishing effort would limit the opportunities for worrisome discretion since the firm would be forced to compare specific industrial processes against a centralized, detailed model. Nevertheless, a process for validating a corporation's claims in making these positive distinctions should also be established to provide added reliability to the firm's efforts to compare its processes against the publicly produced sustainability assessments.

Ultimately, a more reliable process for benchmarking and validating a corporation's sustainability claims could go a long way towards improving available, environmental information in the current marketplace. One of the difficulties that front-mover firms currently face is the challenge of distinguishing themselves in the marketplace in ways that can be trusted by outsiders. As one leading sustainability consultant notes, “[i]ronically, green marketing has become one of the greatest threats to the success and scale of corporate sustainability practices. Ubiquitous (and often unsubstantiated) green claims have created a green-washed, eco-cluttered and eco-saturated marketplace.” The public assessments suggested here should help limit the ability of facilities to exaggerate or “green-wash,” since they offer specific baselines against which a firm's boasting can be more readily compared.

There are a variety of other, supplemental LCA tools that could be developed by a centralized expert analyst body to reduce the costs to firms of conducting their own facility-based assessments. For example, a web-based model for a facility-specific LCA could be developed with user-friendly interfaces that allow corporations to insert a few parameters and then run the model. Guides and other learning materials, including workshops and symposia, might also be provided to help firms use the generic, industry-specific LCA for their facility as a springboard to improving sustainability processes. The EPA has already made progress in preparing these types of guidelines, but further outreach and education is needed since “[m]any
companies [in the United States] do not see how life-cycle thinking can be applied to their specific operations—or even the benefits of doing so.”

**B. Step 2: Regulatory Incentives to Do Better**

In order to produce meaningful incentives for firms to take sustainability seriously, the life cycle assessment could also be used as a baseline for imposing additional regulatory controls that encourage or even require specific sustainability improvements from corporations. Firms might be “commanded” to reach certain sustainability goals in ways that parallel something like the technology-based standards of the Clean Water and Clean Air Acts. For example, all firms would be required to reach some mid- or best-available level of sustainability within their industrial sector, likely required through legislation.

Alternatively, all firms in a given industrial sector could be charged a sustainability tax based on the total resource use and waste production of the reasonable worst-case life cycle for their industrial sector (perhaps further adjusted by the size or production volume of the facility). Facilities that provide validated accounts of how they accomplish sustainability gains above this baseline could then earn tax credits. Companies that go further and actually pioneer innovations in sustainable technologies or operations might not only enjoy even greater tax credits, but also reputational benefits—for example, being officially certified by the EPA, or another nonprofit, as a corporate leader in sustainable innovation.

It is ultimately possible that some sustainable innovations will be valued as intellectual property due to the high research costs involved in developing the product. At the same time, however, it is counterproductive to reward innovation in sustainable practices with patents that then allow firms to charge others a licensing fee in order to become more sustainable themselves. Since innovations in sustainability should be shared with the larger community, barriers to the diffusion of sustainable innovation due to patents and other forms of corporate intellectual property need to be monitored closely.

**C. Information as a Public Good**

Traditionally, information disclosures have been used to force firms to disclose their negative externalities; yet this narrow view of information disclosures may be foreclosing opportunities for advances in corporate sustainability. Indeed, a “public good” dimension to environmental information may be a perspective that has been lacking in the design of environmental programs more generally. In drug regulation there appears to be a shift occurring that depends more substantially on the Food and Drug Administration to collect and analyze all publicly available information, including adverse effects reports, and use that information to supplement the research submitted by drug manufacturers. Even historically, the first, often noncontroversial, step toward enacting pollution standards began with an agency like EPA that identifies what the better pollution control technologies could accomplish within various
industrial sectors. In these programs, firms were expected to meet publicly established targets but were not required to conduct their own research and development to discover what these targets should be.

This analysis of the public good features of sustainability may only be a start in identifying ways in which reframing some intractable information problems as public goods begins to break up the information logjam that has stalled progress in environmental law. Developing a strong base of public information builds on the expert capabilities of the administrative state and approaches particularly intractable information-based challenges in a more collaborative way. Once information is developed on these environmental practices, complementary political, economic, and related market forces can use the information as a springboard to encourage greater sustainability and related gains in the future.

Conclusion

The United States still “does not have a sustainability strategy.” The most promising proposals in the current economically and politically fragile climate are those that can be accomplished without political warfare and that build on progress in incremental ways. The proposal here-- to assign to regulators or neutral third-party institutions the task of developing facility-specific life cycle analyses--seems to be a modest first step in this long march towards corporate sustainability. This information-generation approach also develops a partnership with business that is in line with larger goals for enhancing corporate social responsibility in ways that go beyond what specific legal requirements can accomplish standing alone. By producing large amounts of fresh and relevant information about corporate sustainability, consumers, investors, and other actors will be better able to compare and evaluate the sustainability of corporations and, if necessary, demand change.