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Abstract

Over the past two decades the role of private parties in the policing of environmental regulation has grown dramatically. In some cases the Environmental Protection Agency (EPA) has led the effort to involve private parties, either formally or informally. In other situations, private parties have provided the impetus for the new activities and the activities are, for the most part, conducted independently from EPA. Private policing can be beneficial from a public policy perspective, as long as the increased involvement of the private sector either decreases the overall costs of achieving a particular level of environmental performance or increases environmental performance in a cost-effective manner. However, private parties could also divert regulated entities away from regulatory objectives. This article explores the privatization of environmental enforcement, presenting examples of six private programs and activities and highlighting both the benefits and costs of these activities.

Some private activities do have a positive effect on environmental performance: EPA's self-policing policy has increased overall compliance while participation in the international environmental certification program ISO 14001 is correlated with an increase in both compliance and environmental performance more generally. However, studies of other private initiatives show that privatization can have a deleterious effect on the achievement of regulatory goals. For example, an analysis of private citizen suits finds that such suits decreases public enforcement rather than supplementing it. Additionally, we have no real understanding of the effect of many private policing initiatives either because no analyses have been conducted or because the existing studies do not focus on the effectiveness of such initiatives in achieving regulatory goals. Although the examples cited in this article are not necessarily representative of all private policing, the mixed evidence on the effectiveness of private sector participation in environmental regulation does suggest the need for careful evaluation of these initiatives.

The article concludes by making a case for a more deliberate approach to evaluating the role of the private sector in the enforcement of environmental regulation. I argue that before responding to continuing calls to further privatize environmental regulation and enforcement, we must first determine whether existing private participation is helping to achieve regulatory goals. Where it is not, we must modify the existing initiatives, and potentially the underlying regulations and enforcement mechanisms as well, to maximize their benefits. Only then should we look to expand the role of the private sector in the policing of environmental regulations.

Key Words: Privatization, Out-sourcing, Self-Policing
JEL Codes: L33,Q2

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I. Introduction

Environmental regulation is often seen as an adversarial system that pits regulated entities against a public regulatory agency. In this simplistic view, regulated entities must be forced by legal requirements and an aggressive enforcement regime to perform actions or conduct themselves in ways other than what they would choose in an unregulated situation. This conception also does not provide an active role for unregulated private parties: such parties are envisaged only as passive beneficiaries of the increased environmental quality that results from the regulation and/or victims of the increased costs imposed by the regulation. In reality, the relationship between regulated entities and the regulatory agency is much more complex, as is the role – often quite active – of unregulated private parties. Overall private parties – both regulated and unregulated – play a central role in both the implementation and enforcement of environmental regulation. During the past two decades this role has expanded significantly.¹ In some cases the Environmental Protection Agency (EPA) has led the effort to involve private parties, either formally or informally. In other situations, private parties have provided the impetus for the new activities and the activities are, for the most part, conducted independently from the EPA.

One of the primary motivations for the EPA to involve private parties in environmental enforcement has been a steadily declining level of enforcement resources.² Between 1994 and 2010, the EPA's enforcement budget fell from over \$630 million to less than \$560 million in real dollars and the EPA's Office of Compliance Assistance staffing fell from around 4,200 full-time equivalent employees to 3,400.³ However, budget pressures are not the only reason the private sector has taken a more prominent role in environmental enforcement and compliance. The EPA has also looked to the private sector to increase compliance among facilities where traditional

¹ One might loosely tie the increasing involvement of the private sector to the Clinton-Gore Administration which embraced the idea of reinventing government. See Marc Allen Eisner, *Governing the Environment: The Transformation of Environmental Regulation* 94 (Lynne Rienner Publishers 2007) [hereinafter Eisner, *Governing*] (noting that delegating more authority to regulated entities became a central tenant of the Reinventing Government movement of the Clinton administration).

² In addition to declining resources, the Office of Enforcement and Compliance Assistance (OECA) was often without a strong leader. See Eisner, *Governing* 115-116 (noting lack of experienced leaders during the Bush administration as well as dramatic reductions in the enforcement budget).

³ The budget data includes only federal expenditures. See Wayne B. Gray and Jay P. Shimshack, *The Effectiveness of Environmental Monitoring and Enforcement: A Review of the Empirical Evidence*, Review of Environmental Economics and Policy (forthcoming), Figure 1.

enforcement tools have not been successful.⁴ Additionally, in many situations the private sector can be more innovative than the EPA can be, in part because private entities can take a holistic approach to environmental performance – something that the EPA has a hard time accomplishing since our environmental laws, and thus the EPA’s regulatory programs, address environmental media such as water, air, and hazardous waste separately.

The classic arguments for privatization may also provide an important motivation. Support for privatization is generally based on the belief that the market can provide some public activities or services either at lower cost than the government can provide them or can that the market can provide a more beneficial alternative at the same cost as the publicly provided alternative.⁵ Conversely, if an activity can be conducted more cheaply by the government than by the private sector, or if the government can provide a higher quality good or service than the private sector, there is no public benefit from or justification for privatization. With respect to the implementation and enforcement of environmental regulation, private parties may be able to do some things more cost-effectively than the EPA. In particular, private organizations can generally make decisions more quickly and with less “red tape” than public agencies and often have better access to particular kinds of information than the government does.⁶

Of course, even if privatization is more efficient than public actions, including private entities in environmental enforcement may not ultimately be beneficial. For example, a common critique of private policing is that private activities can distort incentives for regulated entities in ways that are not consistent with the EPA’s regulatory goals. To the extent that regulatory goals are consistent with public interests, as they should be in theory, any deviation from them can decrease overall welfare.⁷ Thus the benefits from any private policing initiatives need to be

⁴ For example, the Root Cause Analysis Project is an analysis conducted jointly by the EPA and the Chemical Manufacturer's Association from 1996 to 1998. The project surveyed about two dozen chemical facilities that had been found to be in violation of environmental regulations to determine the “root causes” of noncompliance. The analysis found that many of the violations at these facilities were unintentional and the most frequently identified root cause of noncompliance was that the facility was unaware of the applicability of a regulation. Traditional deterrence-based enforcement methods such as random inspections and fines are not necessarily effective at increasing compliance. The analysis identified other potential methods to improve compliance including one’s that involve private actors such as the use of self-audits or third party audits. See U.S. EPA, Office of Enforcement and Compliance Assistance, *EPA/CMA Root Cause Analysis Pilot Project: An Industry Survey*, EPA-305-R99-001 (1999).

⁵ See John D. Donohue, *The Privatization Decision: Public Ends, Private Means* 57 (Basic Books, Inc. 1989) [hereinafter Donohue, *Privatization*] (noting that few people would be interested in privatization if it were not more efficient).

⁶ See Eisner, *Governing* 265 (noting that corporations have the best information regarding their production processes and technologies).

⁷ If regulation is misguided or if regulatory officials have been captured by special interests, it might be possible for a deviation from regulatory goals to actually increase overall welfare. However, throughout this paper, it is assumed implicitly that regulations are in the public interest.

weighed against the negative consequences of each initiative to determine whether the initiative is actually in the public interest.

This article provides an overview of the types of private sector environmental enforcement activities and initiatives that are currently taking place. These activities can be divided into three groups. The first group encompasses traditional public activities that have been formally outsourced to private entities. The second group covers private initiatives that are actively facilitated by the EPA but do not have an official mandate. The last group includes private initiatives that are largely independent of the EPA. For each group, I present examples of specific programs or activities, highlighting both the benefits and costs of these activities and the results of any empirical analyses that have been conducted.⁸ I then discuss more generally the overall effect of private participation in implementation and enforcement and conclude by making a case for a more deliberate approach to evaluating the role of the private sector in the enforcement of environmental regulation.

II. Formal Outsourcing from EPA to Private Entities

Enforcement of environmental regulation has been formally outsourced to private entities in two primary ways. First, Congress formally outsourced enforcement powers to private citizens by providing a private right action in all major environmental laws. Second, the EPA has formally outsourced some of its enforcement responsibilities to regulated entities themselves through its self-policing policy.

a. Citizen Suits

Environmental groups have used private suits to affect environmental policy since the 1960s.⁹ In the 1970's Congress formally provided a private right of action in both the Clean Water Act (CWA) and the Clean Air Act (CAA).¹⁰ Since then, all major environmental laws have also made provisions for citizen suits.¹¹ Congress's stated purpose for providing a private right of action was to complement public enforcement. Citizen suits were not intended as an alternative to public enforcement but rather a means by which public enforcement would be leveraged and

⁸ The examples chosen to illustrate each groups are admittedly subjective and were intended to illustrate the variety of roles the private sector is currently playing in environmental regulation. They were not intended to be fully representative of all of the activities being conducted.

⁹ See Jonathan Adler, *Environmentalism at the Crossroads: Green Activism in America* 42 (Capital Research Center, 1994).

¹⁰ The citizen suits provisions in the Clean Air Act (CAA) are at 42 U.S.C. 7604; the citizen suit provisions in the Clean Water Act (CWA) are at 33 U.S.C. 1365.

¹¹ In addition to the CAA and CWA, the following environmental laws also include citizen suit provisions: the Resource Conservation and Recovery Act (RCRA) 42 U.S.C. 6972; the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, 42 U.S.C. 9659; the Emergency Planning and Community Right-to-Know Act (EPCRA) 42 U.S.C. 11046; the Endangered Species Act (ESA) 16 U.S.C. 1540; and the Safe Drinking Water Act (SDWA) 42 U.S.C. 300j-8.

gaps in public enforcement filled.¹² Generally the statutes allow individuals to file private suits as long as EPA or state regulators are not “diligently prosecuting” the violator.¹³ Successful suits may result in fines that are paid to the U.S. Treasury, and/or consent decrees, as well as reimbursement of the plaintiff’s litigation expenses based on market rates.¹⁴

One of the most obvious benefits of citizen suits from a regulatory perspective is that they can supplement public enforcement efforts, increasing the level of deterrence associated with environmental violations since federal and state enforcement resources are limited and thus not all violations of environmental regulations are detected or prosecuted.¹⁵ A successful citizen suit can draw attention to a geographic area, type of violation, or even particular regulated entity that is not being adequately addressed by the public enforcement process, thereby filling gaps in the public enforcement. Of course, this additional enforcement comes at a cost to the private entities that bring the suits (although successful plaintiffs will recover litigation costs from the defendants). However, if a private plaintiff has access to better information about particular environmental problems or can more cheaply monitor potential polluters and bring suits against them than federal or state regulators, a private suits may be more cost-effective than public enforcement.¹⁶ Citizen suits may also help to overcome potential “agency capture” or political pressure on government officials to not fully enforce regulations at particular facilities.¹⁷

On the other hand, a potential downside of private suits is that they are not necessarily brought to advance the public interest as presumably public enforcement does. Critics charge that private suits generally advance the interests of one particular group, which may not be in line with

¹² See U.S. Senate, Committee on Public Works, *A Legislative History of the Clean Air Amendments of 1970* 214 (1974) (“Such suits can contribute to the effective enforcement of air pollution control measures.”) and *Gwaltney of Smithfield, LTD v. Chesapeake Bay Foundation, Inc.*, 484 U.S. 49, 62 (1987) (“the citizen suit is meant to supplement rather than to supplant governmental action”).

¹³ For example, the provision for citizen suits under RCRA prohibits suits where “the Administrator or State has commenced and is diligently prosecuting a civil or criminal action in a court of the United States or a State to require compliance with such permit, standard, regulation, condition, requirement, prohibition, or order.” (41 U.S.C. 6972(b)(1)(B)).

¹⁴ See Christian Langpap and Jay P. Shimshack, *Private Citizen Suits and Public Enforcement: Substitutes or Complements?* 59 *Journal of Environmental Economics and Management* 237 (2010) [hereinafter Langpap and Shimshack].

¹⁵ In 2009 regulators conducted compliance inspections at less than 2 percent of the 1 million entities subject to environmental regulations. Data on regulated facilities were compiled by author using the EPA’s Envirofacts Database. Inspection data from U.S. EPA, “Enforcement and Compliance Assistance Results: Numbers at a Glance Fiscal Year 2009,” available at <http://www.epa.gov/compliance/resources/reports/endofyear/eoy2009/2009numbers.html> [hereinafter EPA, *2009 Numbers*].

¹⁶ See Jonathan H. Adler, *Stand Or Deliver: Citizen Suits, Standing, And Environmental Protection*, 12 *Duke Environmental Law & Policy Forum* 44 (2001) [hereinafter Adler, *Stand*].

¹⁷ *Id.* at 48.

public interests.¹⁸ Additionally, some detractors assert that private suits are often brought to increase publicity for the plaintiff or for economic gains rather than to achieve an increase in environmental performance.¹⁹

Overall, citizen suits play a relatively minor role in environmental enforcement. For example, in 2009, EPA issued around 3,500 administrative compliance and penalty orders, 280 civil judicial referrals and just under 400 criminal cases.²⁰ In comparison on average about 50 private suits are filed annually.²¹ Most of the private suits brought over the last 20 years have been brought by local environmental groups or local chapters of large organizations, such as Baykeepers or Riverkeepers.²²

While much has been written about the role of private suits in environmental enforcement and several papers have presented data on the number and type of suits, there has been relatively little empirical analysis of the overall effect of private suits on enforcement. One exception is a recent paper by two economists, Christian Langpap and Jay Shimshack.²³ This paper presents an econometric analysis of the effect of private suits against municipal wastewater treatment facilities on regulatory inspections and enforcement at such facilities.²⁴ The analysis shows that private suits tend to act as a substitute for public enforcement rather than the complement that

¹⁸ Adler, *Stand* 58 “the priorities of environmental litigation outfits and individual citizen-suit plaintiffs will not always align with the public’s interest in greater environmental protection.”

¹⁹ Private groups may profit from successful suits because they can recover litigation costs based on market rates, not the actual litigation costs incurred by the group. See Kristi M. Smith, *Who's Suing Whom?: A Comparison of Government and Citizen Suit Environmental Enforcement Actions Brought Under EPA-Administered Statutes, 1995-2000*, 29 *Columbia Journal of Environmental Law* 359 (2004) [hereinafter Smith, *Who's Suing*], Adler, *Stand* 50.

²⁰ Enforcement action data from EPA, *2009 Numbers*.

²¹ Annual estimate calculated by author using data from Smith, *Who's Suing* (citing 287 suits over 6 years, or just under 50 a year). This estimate is generally consistent with an Environmental Law Institute study cited by Smith in n.41 (347 suits over about six and a half years, just over 50 a year).

²² Langpap and Shimshack, 237; Adler, *Stand* 51.

²³ See Langpap and Shimshack.

²⁴ The study uses data on citizen suits against municipal wastewater treatment facilities to analyze the effect of such suits on federal and state National Pollution Discharge Elimination System (NPDES) inspections and enforcement actions at all major municipal wastewater treatment facilities. Because the majority, if not all, private suits filed against wastewater treatment facilities are for water violations, the study focuses on NPDES inspection and enforcement activities. The citizen suit data is used to estimate a predicted probability of the likelihood of a citizen suit at each facility based on a number of explanatory variables including the facility’s characteristics and the location of the facility. The predicted probability of a suit is then used as an explanatory variable in the inspection and enforcement action regressions. To disentangle the causal impacts of private enforcement on public enforcement and control for potential endogeneity the authors use measures of district court judicial temperament and caseloads as instrumental variables.

Congress intended.²⁵ If citizen suits were a complement to public enforcement, such suits would, by highlighting areas that public enforcement is neglecting, increase the likelihood of public enforcement. Langpap and Shimshack find the opposite, that is where there is a high likelihood of a private suit, regulators are less like to bring a public enforcement action. Thus citizen suits do not serve to bring public attention to particular entities or areas, but rather take the place of public enforcement. This finding amplifies the potential concerns about private suits. To the extent that private suits take the place of public enforcement in certain sectors or geographic areas, the ability for private objectives to supplant public objectives is magnified.

b. EPA's Audit Policy

The second example of formal outsourcing is the EPA's self-policing policy, known informally as the Audit Policy, established in 1995.²⁶ The Audit Policy allows regulated entities to self-audit and then disclose any violations that they discover to regulators in exchange for significantly reduced penalties on those violations. To receive the reduced penalties, the violations must be discovered as a result of a self-audit (not a government initiated or mandated inspection) and must be corrected or remediated in a timely manner.²⁷ In addition to reducing penalties, the EPA has stated that when entities self-police, formal EPA investigations and enforcement actions may be unnecessary, suggesting that facilities may also receive lower levels of enforcement following a self-disclosure.²⁸

Appropriately designed self-policing policies can be very beneficial: they can increase the number of violations that are remediated as well as accelerate the timing of remediation.²⁹ Moreover, enforcement resources can be redirected from self-policers to other regulated entities, increasing overall deterrence with the same level of enforcement resources. However, poorly designed self-policing policies can undermine deterrence by decreasing the cost of violating

²⁵ More specifically, Langpap and Shimshack, find that private enforcement of municipal wastewater treatment facilities complements public monitoring but substitutes for public enforcement. Overall, their findings suggest that "direct deterrence effects are significantly weakened by the net crowding out of public enforcement." (at 236).

²⁶ See U.S. EPA, *Incentives for Self-Policing: Discovery, Disclosure, Correction, and Prevention of Violations – Final Policy Statement*, 60 Fed. Reg. 66706 (December 22, 1995). Minor revisions to the policy were issued through U.S. EPA, *Incentives for Self-Policing: Discovery, Disclosure, Correction, and Prevention of Violations – Final Policy Statement*, 65 Fed. Reg. 19618 (April 11, 2000) [hereinafter *Audit Policy*].

²⁷ There are a number of additional conditions the disclosure must meet to be eligible for a penalty reduction. These conditions are discussed more fully in Sarah L. Stafford, *Outsourcing Enforcement: Principles to Guide Self-Policing Regimes*, 32 *Cardozo L. Rev.* (forthcoming 2011) [hereinafter Stafford, *Outsourcing Enforcement*].

²⁸ See <http://www.epa.gov/compliance/incentives/auditing/index.html>, last accessed September 21, 2010.

²⁹ For a more detailed explanation and discussion of the potential benefits and costs of self-policing policies, see generally Stafford, *Outsourcing Enforcement* and Sarah L. Stafford, *Self-Policing in a Targeted Enforcement Regime*, 74 *Southern Economic Journal* 934 (2008) [hereinafter Stafford, *Self-Policing*].

environmental regulations and thus ultimately decreasing the overall level of compliance. Additionally, some policies may also allow facilities to strategically self-police in order to circumvent formal public enforcement.³⁰

While the opportunity to self-police is available to most of the 1 million entities regulated by EPA, only 1,200 facilities self-disclosed in 2009, or less than 1/10th of a percent.³¹ In comparison, of the approximately 20,000 facilities that were formally inspected by the EPA, over 4,000 – or 20 percent – had violations that warranted some form of enforcement.³² Of course, the EPA targets its inspections to those facilities that it believes are most likely to be in violation, so one would expect a higher percentage of inspected entities to be in violation than regulated entities in general. Additionally, a particular violation can only be disclosed once under the Audit Policy, so perhaps the total number of disclosures over the life of the Audit Policy provides a more meaningful estimate of the relative importance of the Audit Policy. Since 1999, EPA has received over 15,000 voluntary disclosures.³³

Although opponents of the Audit Policy argued that it would have a detrimental effect on the environment because it protects polluters from punishment and decreases the incentives for entities to comply with regulations, empirical analyses of the policy have not found any such effect. On the contrary, the studies suggest that the Audit Policy has had a positive impact on both compliance and environmental performance. My own study of the effect of the Audit Policy on compliance with hazardous waste regulations found no evidence that overall compliance decreased as a result of the Audit Policy.³⁴ Moreover, I found that state self-policing policies

³⁰ If regulators decrease enforcement efforts at regulated entities that self-police, entities could use self-disclosures as “red herrings,” notifying regulators of small violations while concealing more significant violations (see generally Alexander S. P. Pfaff and Chris William Sanchirico, *Big Field, Small Potatoes: An Empirical Assessment of EPA’s Self-Audit Policy*, 23 *Journal of Policy Analysis and Management* 415 (2004). Additionally, if regulators decrease future enforcement as a reward for a self-disclosed violation, entities may also decrease investments in compliance in the future (see generally, Stafford, *Self-Policing*).

³¹ See supra note 14 for number of regulated entities and see EPA, *2009 Numbers* for number of self-disclosures.

³² See supra note 14.

³³ Calculations by author using data from *FY 2002 Enforcement and Compliance Trends*, *FY 2005 Enforcement and Compliance Trends*, and *FY 2009 Enforcement and Compliance Annual Results*, all prepared by the U.S. EPA and available at <http://www.epa.gov/oecaerth/data/results/annual/index.html>. Data on disclosures prior to 1998 are not available.

³⁴ See Sarah L. Stafford, *Does Self-Policing Help the Environment? EPA’s Audit Policy and Hazardous Waste Compliance*, 6 *Vermont Journal of Environmental Law* (2005) [hereinafter Stafford, *Does Self-Policing Help*]. The analysis uses data on detected hazardous waste violations and EPA enforcement actions to determine statistically if there has been an underlying change in the compliance behavior of regulated entities. The results show that the federal Audit Policy has had no measurable effect on compliance behavior.

modeled on the audit decreased the probability of violation.³⁵ Michael Toffel and Jodi Short examine the effect of the Audit Policy on firm compliance with CAA regulations, rather than hazardous waste regulations, and find that self-disclosers have lower levels of abnormal releases and higher compliance rates in the five years following their disclosure.³⁶ Taken together, these studies indicate that the EPA's Audit Policy increases compliance and performance, or at a minimum, does not decrease it. Given that overall environmental enforcement resources decreased over the time frame of these analyses,³⁷ there is thus reasonable evidence that the efficiency of the EPA's enforcement program has increased under the Audit Policy.

However, two studies of the Audit Policy – the Toffel and Short paper discussed above and a second study that I conducted – have found that self-policers are rewarded with a lower probability of enforcement following a disclosure.³⁸ This finding suggests the potential for some entities to strategically self-police in order to reduce future enforcement. If entities then exploit these “enforcement holidays” by reducing future compliance, long-term compliance may not necessarily increase under the Audit Policy.

III. Private Initiatives Actively Facilitated by EPA

In addition to formally outsourcing some activities to private entities, the EPA also actively facilitates a number of private initiatives that help it to implement and enforce environmental regulations. This category includes what is arguably the most influential role that private parties play in environmental regulation – the ability of consumers and investors to punish or reward companies for their environmental performance.

a. Information Programs to Facilitate Enforcement by the Market

³⁵ In addition to the federal Audit Policy, a number of states have passed their own self-policing policies as well as immunity and privilege legislation for environmental audits. The state policies are discussed in more detail in Sarah L. Stafford, *State Adoption of Environmental Audit Initiatives*, 24 *Contemporary Economic Policy* 172 (2006). The study also finds that state audit privilege legislation decreases the probability of a violation while state legislation that provides complete penalty immunity for self-disclosed violations increases the probability of a violation.

³⁶ Michael W. Toffel and Jodi L. Short, *Coming Clean and Cleaning Up: Is Voluntary Self-Reporting a Signal of Effective Self-Policing?*, Harvard Business School Working Paper, 08-098 (2010) available at <http://www.hbs.edu/research/facpubs/workingpapers/papers0708.html#wp08-098> (last accessed October 1, 2010) [hereinafter Toffel and Short]. The analysis uses data on self-disclosures, self-reported abnormal releases of toxic chemicals to the environment and compliance status to conduct an econometric analysis of the effect of self-disclosures on the number of abnormal releases and compliance status in the years following a disclosure.

³⁷ See *supra* n.3.

³⁸ See Toffel and Short, 29-30 and Sarah L. Stafford, *Should You Turn Yourself In? The Consequences of Environmental Self-Policing*, 26 *Journal of Policy Analysis and Management* 318 (2007).

In principle, consumers that care about the environment should favor products and manufacturers that are environmentally protective.³⁹ Similarly, investors who care about the environment may also make investment decisions based on environmental performance.⁴⁰ More generally, all investors should care about the potential liability associated with poor environmental performance and, in industries where customers care about the environment, investors may push for an increase in environmental performance to gain a competitive advantage.

The term “social market” has been used to describe markets where consumption and investment decisions depend not only on preferences over price, quality, and product features, but also on preferences concerning the environmental or other social consequences of production.⁴¹ For social markets to function well, market participants such as consumers and investors must have relevant information on all of the companies in the market.⁴² More specifically, for consumers and investors to be able to effect changes in corporate environmental practices by punishing and rewarding companies for their environmental performance, they must first have information on that performance.

The EPA has developed a number of information programs designed to provide consumers and investors with relevant information about the environmental performance of regulated facilities. Probably the most well-known disclosure program is the Toxics Release Inventory (TRI) database.⁴³ The TRI requires regulated entities to disclose the type and level of toxic chemicals that the entity uses and releases to various environmental media (air, water, land).⁴⁴ Thus it

³⁹ Many authors have written extensively about the ability of consumers and investors to exert significant influence on environmental performance. See P. N. Grabosky, *Green Markets: Environmental Regulation by the Private Sector*, 16 *Law and Policy* 419 (1994) and David W. Case, *The Law and Economics of Environmental Information as Regulation*, 31 *Environmental Law Reporter* 10773 (2001) [hereinafter Case, *Environmental Information*] for reviews of this literature.

⁴⁰ According to the Social Investment Forum – a trade association for professionals, firms, institutions and organizations engaged in socially responsible and sustainable investing – socially responsible investing currently encompasses an estimated \$3 trillion in the U.S. investment market (out of a total of \$25 trillion). See Social Investment Forum, *Report on Socially Responsible Investing Trends in the United States* (November 2010) available at www.socialinvest.org.

⁴¹ See Archon Fung, *Making Social Markets: Dispersed Governance and Corporate Accountability* in John D. Donohue and Joseph S. Nye, Eds. *Market-Based Governance: Supply Side, Demand Side, Upside, and Downside* 146 (Brookings Institution Press 2002) [hereinafter Fung, *Social Markets*].

⁴² I focus on consumers and investors, although obviously other parties such as landlords, lenders, and potential buyers of firms can also take advantage of these information programs. See Michael P. Vandenbergh, *The Private Life of Public Law*, 105 *Columbia Law Review* 2029 (2005) [hereinafter Vandenbergh, *Private Life*] at 2045-2059.

⁴³ Case, *Environmental Information* 10775.

⁴⁴ The TRI is considered a form of “informational regulation” as specific entities are required to disclose information on their operations and performance. See Case, *Environmental Information* 10775 for a definition of informational regulation and 40 CFR 372 for the TRI reporting

provides information on the environmental impact of various companies. Programs like the TRI do require additional reporting by regulated entities, and thus increase costs for regulated entities, although those entities are clearly the low-cost-providers of such information.⁴⁵ Another information source that the EPA has developed is the Enforcement and Compliance History Online or ECHO database which provides information on the compliance history of regulated entities.⁴⁶ Since the ECHO database is essentially an interface for data already collected and maintained by the EPA for other purposes, the only additional costs of this program are those associated with developing and maintaining the ECHO system. Both the TRI and ECHO databases are easily accessible on-line for direct use by consumers and investors and for use by third parties such as news organizations, non-profits like the Environmental Defense Fund, and investment groups such as the Investor Responsibility Research Center.⁴⁷

Harnessing the power of the market to provide additional pressure on regulated entities to improve their environmental compliance has the potential to be very cost-effective. In addition to the potential for information programs to positively affect environmental performance, consumers and investors can also gain personally because they are able to make investment and consumption decisions more in line with their personal preferences without having to spend significant resources to collect the necessary data to make informed decisions. However, the literature on social markets identifies a number of potential concerns that can arise in them. One principle critique is that consumers and investors are acting based on their own interests, not the general public interest.⁴⁸ For example, consumers might be more concerned with releases of pollution into air than releases into water, even though water pollution may be more harmful to the environment overall than air pollution.⁴⁹ Thus private parties may alter the priorities of firms

requirements. See also <http://www.epa.gov/tri/> (last accessed December 6, 2010) for a full description of the TRI program and database.

⁴⁵ That is, it would be much more expensive for consumers and investors to obtain such information independently.

⁴⁶ ECHO does not require regulated entities to disclose additional information, but rather is a tool developed by EPA to make EPA's information more accessible to the public. See <http://www.epa-echo.gov/echo/> (last accessed December 6, 2010) for a full description of the ECHO database.

⁴⁷ The Environmental Defense Fund developed a "Scorecard" to rate companies' environmental performances using TRI data. This scorecard has since been transferred to an independent NGO, the Green Media Toolshed and is available online at <http://www.scorecard.org> (last accessed December 6, 2010). The Investor Responsibility Research Center used TRI data in compiling its Corporate Environmental Profiles, see Nicholas A. Ashford and Charles C. Caldart, *Environmental Law, Policy, and Economics: Reclaiming the Environmental Agenda* 790 (The MIT Press 2008).

⁴⁸ See Fung, *Social Markets* 163. Of course, if agency priorities are not consistent with the public interest, social markets provide a direct way for the public to influence behavior (see Vandenberg, *Private Life* 2034), although as stated in *supra* n.7, for the purposes of this article I assume that regulations are consistent with the public interest.

⁴⁹ See Mark A. Cohen, *Information as a Policy Instrument in Protecting the Environment: What Have We Learned?* 31 *Environmental Law Reporter* 10425 (April 2001) at 10430-10431 (stating

in a way that is not consistent with public priorities. Of course, in theory the EPA can respond to the shift in incentives by changing its own behavior to balance out the incentives from private parties. To make such adjustments the EPA would need to assess the impact of consumer and investor pressure on environmental behavior and then modify either the underlying regulations or the public enforcement strategy.

A second concern about social markets is that only certain private parties can participate in them. In particular, individuals must have sufficient resources to be either investors or discriminating consumers and thus have an effect on the environmental behavior of entities in these markets.⁵⁰ Moreover, regulated entities will not be uniformly affected by these pressures. Reputation-sensitive firms, firms that produce final consumer goods, and publicly traded firms will be subject to more pressure than firms that produce intermediate goods or are privately held.⁵¹ In theory, these concerns could also be addressed by evaluating the effects of social markets on environmental performance and adjusting regulation or enforcement to balance those effects.

A number of economic studies have shown that investors respond to the information provided by these programs.⁵² There are also a number of studies that provide indirect evidence that some consumers respond to the environmental performance of firms.⁵³ However, to date there aren't any reliable estimates of the number of consumers and investors who make consumption and investment decisions based on environmental preferences, or what those preferences are and how they line up with regulatory goals. Additionally there is only indirect evidence that regulated entities' environmental decisions are affected by these social markets.⁵⁴ Thus there is very little understanding of exactly how social markets and EPA's facilitation of them through its information programs are affecting environmental performance overall. Additionally, there does

that the public may be misinformed about the risks of various pollutants and media attention might have more to do with which firms reduce emissions than any social cost-benefit analysis).

⁵⁰ Additionally, "future generations" are unlikely to be fully represented by current investors and consumers.

⁵¹ See Fung, *Social Markets* 164-165. Although as noted in Vandenbergh, *Private Life* 2059-2060, this may be changing as intermediate producers are increasingly held to certain standards by other producers.

⁵² See Case, *Environmental Information* and Sarah L. Stafford, *Can Consumers Enforce Environmental Regulations? The Role of the Market in Hazardous Waste Compliance*, 31 *Journal of Regulatory Economics* 83 (2007) [hereinafter Stafford, *Can Consumers Enforce*] for an overview of these studies.

⁵³ See Stafford, *Can Consumers Enforce* for an overview of these studies.

⁵⁴ For example a study by Shameek Konar and Mark A. Cohen, *Information as Regulation: The Effect of Community Right-to-Know Law on Toxic Emissions*, 32 *Journal of Environmental Economics and Management* 109 (1997) finds that firms with the largest stock price decreases following the release of environmental information respond with the largest decreases in future pollution. A study by Shakeb Afsah, Benoit Laplante, and David Wheeler, *Regulation in the Information Age: Indonesian Public Information Program for Environmental Management*, (World Bank, Development Research Group 1997) finds that the creation of a public disclosure program in Indonesia caused firms in the program to improve their environmental performance.

not appear to be any process for adjusting regulatory objectives based on the presence of social markets.

b. Compliance Assistance by Private Entities

The EPA has also facilitated the participation of private entities in providing compliance assistance to regulated entities. Compliance assistance currently plays an important part in the EPA's overall enforcement and compliance assurance strategy.⁵⁵ The general goal of compliance assistance programs is to increase environmental performance by inducing more efficient implementation of regulatory requirements.⁵⁶

The EPA began offering formal compliance assistance after its enforcement functions were reorganized in 1994 to create a single Office of Enforcement and Compliance Assurance.⁵⁷ From the beginning, the EPA's compliance assistance strategy included partnerships with industry,⁵⁸ but the private role in compliance assistance increased significantly in 1999 when the EPA formally adopted a "wholesaler" approach to compliance assistance whereby it would develop compliance assistance tools and materials and then work with a states, localities and private providers (including NGOs, trade associations, and consultants) to deliver the assistance directly to the regulated community.⁵⁹

This approach to compliance assistance separates those activities for which the EPA likely to be is the least cost-provider from those where private entities may be able to more cost effectively provide such services. Thus given the EPA's intimate knowledge of the regulations and the manner in which compliance with those regulations is monitored and enforced, it continues to develop guidance and compliance assistance tools. The EPA then provides these tools as well as compliance assistance training to private providers who in turn provide the actual compliance assistance to facilities.⁶⁰ In addition to the presumption that private providers may be able to offer the actual compliance services at a lower cost than the government, some regulated entities are more willing to seek compliance assistance from independent parties than from regulators.⁶¹

⁵⁵ U.S. EPA, *2006-2001 EPA Strategic Plan: Charting Our Course* (September 30, 2006) at 128, "Effective compliance assistance and strong, consistent enforcement are critical to achieving the human health and environmental benefits expected from our environmental laws."

⁵⁶ See generally <http://www.epa.gov/compliance/assistance/index.html>, last accessed December 7, 2010.

⁵⁷ U.S. EPA Press Release, *EPA Administrator Details Design of Reorganized Enforcement Office* (October 13, 1993) and U.S. EPA, *FY 1995 Enforcement and Compliance Assurance Accomplishments Report* (July 1996) at 5-19.

⁵⁸ U.S. EPA, *FY 1995 Enforcement and Compliance Assurance Accomplishments Report* (July 1996) at 5-19.

⁵⁹ U.S. EPA, *Innovative Approaches to Enforcement and Compliance Assurance: Action Plan for Innovation* (September 1999) at 4.

⁶⁰ The EPA also continues to provide some compliance assistance directly to regulated entities through its regional offices, as do many state environmental agencies.

⁶¹ Of course, if private providers can provide compliance assistance at a lower "social" cost (i.e. a lower total cost to society overall) than the government can that does not necessarily imply that

Of course, one potential downside to this outsourcing is that private providers may emphasize different things than regulators would emphasize. For example, private providers may focus on helping regulated entities pass compliance inspections rather than on achieving full compliance with the regulations.

There is no formal estimate of the number of private compliance assistance providers. However, one can get a sense of potential number of private providers by examining EPA data on compliance assistance “contacts.” In 2007 the EPA had over 50,000 contacts with compliance assistance providers (not including contacts with compliance assistance personnel employed directly by regulated entities).⁶² While individual providers could have had multiple contacts (i.e., gone to multiple workshops or participated in multiple on-line training programs) this figure does suggest that the number of private entities that are actively involved in helping regulated entities implement environmental compliance programs is not insignificant. However, to date there has been no formal assessment on the effect of the EPA’s “wholesaler” approach to compliance assistance on overall compliance, nor has there been any formal evaluation of the effectiveness of the EPA’s overall compliance assistance program.⁶³

IV. Informal Privatization Independent of EPA

The final category private activities are those that have been initiated by private entities and are largely independent of the EPA.⁶⁴ There are many such initiatives, although most are specific to a particular industry or geographic area and thus are not well known or publicized.⁶⁵ Others are

regulated entities that seek such assistance will pay less than if they obtain the assistance from public sources. Thus moving to the wholesale model of compliance assistance could be more efficient, but could also shift costs from the regulatory agency to regulated entities. However, some private providers are non-profit entities and many states continue to provide compliance assistance for small businesses or contract with third parties (such as universities) to provide compliance assistance for free or at a reduced cost to small businesses. See, for example the Kansas State University Pollution Prevention Institute and Small Business Environmental Assistance Program (<http://www.sbeap.org/index.php>, last accessed on December 7, 2010).

⁶² Data provided to author by Karen Koslow, Acting Director of the Compliance Assistance and Sector Program Division of the EPA’s Office of Compliance, September 2009.

⁶³ The EPA does track the number of entities “reached” through its compliance assistance programs and compiles feedback from entities receiving assistance as to whether that assistance is useful, but there has been no larger assessment of the compliance assistance program. See Dr. Shelley Metzenbaum, *Compliance And Deterrence Research Project: Measuring Compliance Assistance Outcomes*, State Of Science And Practice White Paper (December 6, 2007) available at <http://www.epa.gov/compliance/resources/reports/compliance/research/>, (last accessed December 7,2010) at 6.

⁶⁴ Vandenberg, *Private Life 2030-2031* identifies such agreements as private second order regulatory agreements (“The agreements are private in that the parties to the agreements are nongovernmental entities. They are second-order in that they are entered into in response to the existence or absence of first-order government regulatory requirements.”).

⁶⁵ See Vandenberg, *Private Life 2064-2065* for a discussion of “good neighbor agreements” which fall into this category.

on a larger scale and have received a reasonable amount of attention. This paper presents two relatively well-known examples, the international ISO 14001 certification program, and the U.S. Responsible Care program.

a. ISO 14001

Probably the best-known and farthest-reaching private initiative that affects environmental performance is the ISO 14001 certification program. ISO 14001 is a set of voluntary environmental management standards established by the International Organization for Standards, an international non-governmental organization.⁶⁶ The ISO 14001 certification program essentially works as a labeling system, conveying information to potential investors and consumers about the environmental standards to which certified companies adhere.

While the information provided by ISO 14001 certification may be used in similar ways as the information provided by the EPA's TRI and ECHO databases, there are several key differences between ISO 14001 and the EPA's initiatives. First, ISO 14001 certification is voluntary while the EPA provides TRI data for all firms within a specified set industries (generally manufacturing industries) and ECHO information for all regulated entities.⁶⁷ Second, the ISO 14001 standards were developed primarily by companies, although there was also input from government agencies and advocacy groups from a number of different countries.⁶⁸ Finally the ISO 14001 standards are not like most U.S. environmental regulations – they do not specify maximum pollution levels or dictate particular equipment that must be installed, but rather enumerate environmental management standards to which firms must adhere to earn certification. The standards include compliance with all local environmental regulations as well as continuous improvement in environmental management, and thus require firms to focus on their overall environmental impacts and to think system-wide about how to improve their environmental performance – something that U.S. media-based regulatory programs do not do. The program also requires that a third party certify that the entity meets all the standards.⁶⁹ Since ISO 14001 standards are not tied to any particular regulatory goals other than requiring compliance with local regulations, certified firms may choose to focus on areas for improvement that are different from the areas on which the EPA would like firms to focus.

The EPA has never formally supported the ISO 14001 program. Although the EPA does “encourage the use of recognized environmental management frameworks, such as the ISO 14001 Standard,” it has not integrated the idea of environmental management systems directly

⁶⁶ See Eisner, *Governing* for a general description of the ISO 14001 certification program.

⁶⁷ TRI reporting requirements are based on industry classification, number of employees (entities with less than 10 employees are exempt from reporting), and type and amount of chemicals used and released (see 40 CFR 372.22-28). ECHO includes all regulated entities subject to the following environmental statutes: the CAA Stationary Source Program, the CWA National Pollutant Discharge Elimination System, and the RCRA (see http://www.epa-echo.gov/echo/about_site.html, last accessed December 8, 2010).

⁶⁸ Eisner, *Governing* 164.

⁶⁹ Eisner, *Governing* 165-167.

into regulations or provided any incentives for regulated entities to become certified.⁷⁰ Perhaps as a result, ISO 14001 has not been as widely adopted in the U.S. as in other developed countries. In 2004, around 4,800 U.S. firms had been certified, representing only about 5 percent of total certifications world wide and a very small percentage of the over 1 million regulated entities in the U.S.⁷¹ However, studies have shown that ISO 14001 certification does improve a firm's compliance with environmental regulations as well as environmental performance more generally. For example, two studies by Matthew Potoski and Aseem Prakash find that ISO 14001 certification has a positive effect on regulated entities' environmental performance, even after controlling for self-selection into the ISO 14001 program: the first study finds that certified entities spend less time out of compliance with CAA regulations than non-certified entities while the second finds that certified entities have larger reductions in emissions of toxic chemicals than non-certified firms.⁷²

b. Responsible Care

Perhaps the most well-known example of a U.S. industry-lead initiative is the Responsible Care Program introduced by the Chemical Manufacturer's Association in 1988 partly in response to the Bhopal disaster.⁷³ All members of the Chemical Manufacturer's Association, renamed the American Chemistry Council (ACC) in 2000, must commit to operating under the Responsible Care principles. These principles are designed to promote continual improvement in environmental, health, and safety performance as chemical companies. Members are also asked to establish at least one concrete goal in these areas and make performance improvements

⁷⁰ See U.S. EPA, *United States Environmental Protection Agency Position Statement on Environmental Management Systems (EMSs)* (September 13, 2005). EPA's website confirms that this policy statement is still in force, stating that "EPA wishes to make clear that it has no intention of mandating the use of EMSs in rules and permits" (<http://www.epa.gov/ems/position/index.htm>, last accessed December 8, 2010).

⁷¹ Eisner, *Governing* 167.

⁷² See Matthew Potoski and Aseem Prakash, *Green Clubs and Voluntary Governance: ISO 14001 and Firms' Regulatory Compliance*, 49 *American Journal of Political Science* Volume 235 (2005) for a description of the first study and Matthew Potoski and Aseem Prakash, *Covenants with Weak Swords: ISO 14001 and Facilities' Environmental Performance*, 24 *Journal of Policy Analysis and Management* 745 (2005) for a description of the second. In any study of the effect of ISO 14001 certification, it is important to control for the fact that regulated entities voluntarily decide whether to become certified. If there are particular factors or firm characteristics that both influence joining ISO 14001 and affect environmental performance, any analysis that does not control for those factors might attribute a particular change in performance to ISO 14001 certification when it is in fact due to the underlying factor. Both of the Potoski and Prakash studies control for the fact that firms voluntarily self-select ISO 14001 certification using a two-step treatment effects model.

⁷³ There is an international Responsible Care program which determines the "fundamental features" of the program, but Responsible Care is implemented by national trade associations in various countries, and thus each countries' program is different (see generally <http://www.responsiblecare.org>, last accessed December 9, 2010). For a general description of the U.S. program, see Eisner, *Governing* 161-162.

towards the realization of that goal. While the program is mandatory for all trade association members, until 2002 there was no requirement that an outside party certify compliance with program requirements.⁷⁴

The potential benefits of the Responsible Care program are similar to those of the ISO 14001 program: in theory, the standards require firms to think system wide about how they could improve their environmental performance. However, the Responsible Care standards are not tied to any regulatory goals, and unlike ISO 14001 they do not mandate compliance with EPA regulations. Thus the potential concern that private standards programs may distort regulated entities' incentives away from public regulatory objectives is more pronounced for Responsible Care than it is for ISO 14001. Of course, any distortion in incentives away from public regulatory goals could, in theory, be balanced by a change in public implementation or enforcement activities, although to do so would require a more detailed evaluation of the effect of the program on environmental performance than has been conducted for either program.

Similar to its stance on ISO 14001, the EPA does not formally recognize the Responsible Care program in its regulations and had not provided any significant incentives for regulated entities to participate in it.⁷⁵ Over 220 chemical companies participate in Responsible Care.⁷⁶ While there are over 1500 chemical companies in the U.S., most of the largest are ACC members so that although less than one-fifth of chemical companies participate, most of the chemical production in the U.S. does come from companies who are participants. A study of the effectiveness of the Responsible Care program by Andrew King and Michael Lennox in 2000 (prior to the requirement for outside verification) found that participants did not significantly change their level of toxic emissions relative to other non-participating chemical companies.⁷⁷

⁷⁴ See http://www.americanchemistry.com/s_responsiblecare/doc.asp?CID=1298&DID=5086, last accessed December 9, 2010.

⁷⁵ The EPA did sign a Memorandum of Understanding with the ACC stating that for the purposes of its now defunct National Environmental Performance Track program (an EPA-led environmental certification program) it would accept Responsible Care certification in lieu of additional third party certification that regulated entities have an environmental management system in place (*Memorandum of Understanding between EPA and ACC* signed by Brian Mannix, Associate Administrator of Policy, Economics, and Innovation, U.S. EPA on March 27, 2007 and Carol Henry, Vice President, Industry Performance Programs, ACC on March 12, 2007).

⁷⁶ According to the ACC website, http://www.americanchemistry.com/s_responsiblecare/doc.asp?CID=1298&DID=5086, last accessed December 15, 2010.

⁷⁷ See Andrew King and Michael Lennox, *Industry Self-regulation without Sanctions: the Chemical Industry's Responsible Care Program*, 43 *Academy of Management Journal* 698 (2000). The analysis examines industry emissions before and after the program for both ACC members and non-members and finds no evidence that the program had a positive effect on its members relative to non-members. The study does not explicitly control for the decision to participation in Responsible Care, since it is a mandatory requirement of membership in the ACC (although ACC membership is itself voluntary).

No studies of the Responsible Care program have been conducted since the ACC imposed the requirement for third-party certification.

V. Evaluating the Role of the Private Sector in the Enforcement of Environmental Regulations

To assess whether the expanded role of private parties in the enforcement of environmental regulations is beneficial from a public policy perspective, we need to determine if the increased involvement of the private sector in these areas has either decreased the overall costs of achieving a particular level of environmental performance or has increased environmental performance in a cost-effective manner. In theory, all of the private activities and initiatives described in this article – as well as the many others not mentioned – have tremendous potential to increase the efficiency of environmental enforcement. On the other hand, there is also the very real possibility that the involvement of private parties will shift incentives for regulated entities in a way that is not consistent with regulatory objectives. Assuming that regulatory objectives have been set to maximum overall welfare, such a shift would not be in the public interest.⁷⁸ Given the potential for private participation in the implementation and enforcement of environmental regulations to divert regulated entities' performance away from regulatory objectives, we need to take a proactive approach to evaluating the effect of private participation to ensure that is helping to achieve regulatory goals more efficiently, not distorting those goals.

This article briefly discusses the results a several studies of particular private initiatives. In some cases the studies demonstrate that private participation is having a positive effect on environmental performance: analyses of EPA's self-policing policy find that it has increased overall compliance while analyses of the ISO 14001 program show that certification is correlated with an increase in both compliance and environmental performance more generally. Other studies, such as that of the Responsible Care program, cannot find any statistically significant effect on environmental performance or suggest that there may actually be a deleterious effect on the achievement of regulatory goals, such as the study of private suits which finds that private suits decreases public enforcement rather than supplementing it. Although the studies surveyed in this article are not a representative sample, their mixed findings with respect to the effectiveness of private sector participation do suggest the need for careful evaluation of each one of these initiatives. Unfortunately, for many programs there is no real understanding of their effect, either because no analysis has been conducted – as is the case with the privatization of compliance assistance – or because the existing studies only tell us part of the story – as is the case with the analyses social markets where there is evidence that investors and consumers use the information provided by the EPA, but there is little information on how that ultimately affects facility behavior.

⁷⁸ As noted in several places throughout this article, if regulatory objectives are not consistent with society's preferences, of course, such a shift could bring regulated entities' behavior more in line with society's preferences. However, since this article is not about defining appropriate regulatory objectives, for the sake of argument, I assume that regulatory objectives are consistent with overall welfare. See *supra* n.7.

Obviously additional empirical analyses of private initiatives would help us gain a better understanding of the effect of these programs on the overall achievement of regulatory goals. However additional individual studies of particular programs are unlikely to be sufficient. First, the types of studies that have been conducted don't really tell us what we want to know – that is, whether this expansion of the role of private entities in the enforcement of environmental regulations is helping to achieve regulatory goals more efficiently. The existing studies often provide evidence of improvement in compliance rates or levels of toxic emissions, but they don't measure how close we are to meeting regulatory goals – in part because the regulatory goals themselves have not been explicitly identified and in part because most studies look at intermediate measures such as compliance, not ultimate measures of environmental quality. Unfortunately its not an easy task to develop the types of ultimate measures that would tell us what we want to know. For some time, EPA has been working to develop a robust set of environmental indicators that will provide better information on the actual state of the environment and how it is changing over time, and hopefully such data will be available in the near future.⁷⁹

Even with good data on environmental quality, to determine whether private initiatives are more efficient than public implementation and enforcement of environmental regulation we also need to get some sense of the relative costs of private and public approaches. In many situations, it is assumed that private entities will be more cost-effective than the government. However, that is unlikely to be the case for all private initiatives, particular since the costs of private initiatives could be less tangible or obvious than the costs of public efforts. Unfortunately, costs are almost never included in analyses of private (or even for the most part, public) initiatives. For example, none of the studies described in this article made any attempt to compare the cost of private activities to the public alternative.

Since it is unlikely that all private initiatives help to achieve regulatory goals more efficiently than public efforts, there needs to be a formal evaluation process to determine which programs are beneficial and which – in their current form – are not. There also needs to be some mechanism to modify or eliminate programs that fall into the latter category. Without such a feedback mechanism, additional studies aren't going to make much of a difference.⁸⁰

Finally, even if studies of particular programs did measure the effect on environmental quality and did include a comparative analysis of costs, they might still not be able to give us a full picture of the overall effect of expanded private participation because we need to understand the effect of these initiatives in the aggregate, not only at the individual level. First, many of these programs overlap. For example, U.S. chemical producers can choose both to be members of Responsible Care and to earn ISO 14001 certification: moreover, the ACC has developed a

⁷⁹ See Daniel C. Esty, *Environmental Protection in the Information Age*, 79 NYU Law Review 157 (2004) [hereinafter Esty, *Environmental Protection*].

⁸⁰ See Esty, *Environmental Protection* 165 “A recognition that policies and programs must be evaluated regularly and rigorously - and resources redeployed where good results are not being achieved - has been long absent from the environmental domain.”

“Responsible Care Management System” that meets the requirements of both programs.⁸¹ Second, private initiatives may reinforce each other. For example, regulated entities that receive compliance assistance often undergo environmental audits: entities may choose to self-police any violations discovered in the course of that audit, particularly if they are fully informed about the Audit Policy as part of the compliance assistance they receive. Alternatively, private initiatives may work against each other. For example, the potential for private citizens to pursue suits against regulated entities may discourage some entities from conducting a self-audit as the audit would generate a paper trail that could be used against the entity in a private suit.⁸² Any examination of a single private initiative in isolation that does not account for the potential interactions between programs is likely to produce biased results.⁸³ As difficult as it would be to design a larger study, we need to be examining the aggregate effects of this expansion of private roles.

Given all of the potential benefits that can come from private participation in environmental enforcement, there are currently – and will continue be – calls to expand the role of the private sector.⁸⁴ But as discussed in this article, not all private sector initiatives will ultimately be beneficial to society. Thus, before continuing to look for additional ways to increase private participation in the implementation and enforcement of environmental regulations, we need to first spend the time and effort to develop processes to assess the effect of existing private participation. Once we better understand the effect of various private initiatives on the achievement of regulatory goals, we need determine how to best modify existing private initiatives, and potentially the underlying regulations and enforcement mechanisms as well, to maximize their benefits. Only then should we look to expand the role of the private sector in the enforcement of environmental regulations.

⁸¹ See http://www.americanchemistry.com/s_responsiblecare/doc.asp?CID=1298&DID=5086, last accessed December 15, 2010.

⁸² The Audit Policy does not grant privilege to audit documents, although the EPA does state that its policy is to not routinely request such documents (see, *Audit Policy* Section II.C.4). Neither attorney-client privilege, attorney work-product privilege or the self-evaluative privilege protect the factual material disclosed in an environmental audit report. For such material to be privileged a state must pass legislation specifically granting such privilege. See generally Eric W. Orts and Paula C. Murray, *Environmental Disclosure And Evidentiary Privilege*, 1 University of Illinois law Review (1997) at Section IV.C discussing the common law treatment of environmental auditing and at Section III.A discussing state audit privilege legislation.

⁸³ Not only are the results likely to be biased, given the possibility for programs to both enhance and interfere with each other we would not necessarily know the direction of that bias.

⁸⁴ For example, in a December 10, 2010 editorial Russ Harding of the Makinac Center calls for governmental officials to “perform only core regulatory functions — specifically, making final permit and enforcement decisions, rather than conducting routine administrative tasks that can be performed by the private sector”, see *Michigan Can Give Businesses A Boost With Environmental Regulatory Reform*, The Oakland Press (December 10, 2010).