

## **Beyond Compliance: Uncovering Organizational Aspects of Award-Winning Environmental Performance**

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### **ABSTRACT**

*Effective design and management of environmental regulations requires an understanding of the factors that lead organizations to comply with the environmental rules they face. The regulatory and organizational behavior literatures suggest that firms' motivation for rule compliance emerges from the instrumental, social, or norm-based consequences of complying that the organization perceives. In addition to motives, operational aspects of compliance including organizations' capacities, knowledge, and technological assets, should also be considered. Understanding the environmental compliance behavior of top performing firms allows regulators to strategically plan their compliance interventions, and also showcases best practices for other regulated firms to emulate. Interviews were conducted with facility managers at environmental award-winning facilities in the U.S. state of South Carolina to identify motivational and operational aspects of compliance among top-performers. The findings suggest these organizations' relations with their communities, customers, and production chains have the greatest influence on their environmental performance. Social pressures for regulatory compliance similar to these also appear in the Southeast Asian context, where "enforcement gaps" are more prevalent. Irrespective of place, environmentally excellent firms set the pace for new regulatory regimes, and can assist both regulators and poorer performers alike.*

**Keywords:** *Organizational behavior, regulatory behavior, environmental regulations, compliance, USA, Southeast Asia*

## INTRODUCTION

There is little doubt that environmental regulatory agencies expect that the rules they make – like those pertaining to air quality, water quality, or hazardous waste – will be followed. Experience shows, however, that regulatory compliance can be uneven; while some regulated organizations do comply with the rules to which they are subject, others do not. Explanations for actors' compliance and noncompliance with rules and regulations have been offered by researchers in many fields, including economics, law, psychology, sociology and others (e.g. Balch, 1980; Becker, 1968; DiMento, 1989; Stigler, 1970; Tyler, 1990). Their findings suggest that the underlying motives and values to which a regulated entity ascribes play an important role in compliance. These works also discuss the effects of the information, knowledge, and resource-related capabilities that regulated entities possess on compliance outcomes (Burby & Paterson, 1993; Sutinen & Kuperan, 1999; Winter & May, 2001). Still other research suggests that environmental compliance can depend on monitoring and enforcement efforts of regulatory authorities on regulated entities (e.g. Glicksman & Earnhart, 2007; Gray & Shimshack, 2011; Shimshack & Ward, 2005; Stafford, 2011). The effects of the nature and structure of the rules themselves has also been examined (Bardach & Kagan, 1982; Herricks & Schaeffer, 1985).

For designers and implementers of environmental regulations in the United States, understanding the factors that contribute to compliance behavior among the regulated community is an important concern. At a practical level, such an understanding enables regulatory agencies to discern the most appropriate targets for environmental monitoring and enforcement interventions. Some firms that are subject to environmental regulations exceed minimum requirements and go beyond compliance, setting the standard as “clean,” “green,” or “environmental friendly” leaders. Other regulated firms, however, struggle just to meet the minimum requirements of environmental laws, and still others willfully violate them. “Targeting” is the practice of focusing regulatory attention on those firms most likely to be in violation (Helland, 1998). By targeting, regulators can better prioritize their efforts, utilizing agency resources more effectively (Andreen, 2007) and concentrating on the segments of the regulated community where their interventions can achieve the greatest benefit. Insights into the regulated firm's attitude toward compliance and the factors

influencing its compliance behavior therefore help environmental regulators decompose their jurisdictions into groups of organizations requiring more oversight, and groups requiring less. Pressed, as they are, for superior results, while at the same time being stretched by dwindling resources, environmental regulators in the U.S. today likely appreciate the ability to parse their workloads in this way.

This paper is concerned with the environmental compliance behavior of those organizations requiring less oversight – the top-performing regulated firms and facilities. What drives a top environmental-performing facility to go beyond mere compliance with regulations to achieve environmental excellence? Environmental regulators, for reasons discussed just above, would like to know. So would other firms that face environmental regulations, especially those that struggle with environmental compliance issues. A clearer understanding of the compliance posture of environmentally excellent firms allows these characteristics to be spotlighted by regulatory organizations, and emulated by regulated ones.

To investigate factors contributing to top performers' environmental performance, this study interviewed environmental compliance managers from six award-winning facilities in the U.S. state of South Carolina. Operations at these facilities are subject to a variety of federal and state environmental regulations and standards. Yet these top-performing facilities have consistently exceeded the minimum standards contained in regulations, earning them recognition and awards by state government, as well as membership in the South Carolina Environmental Excellence Program (SCEEP), a select environmental leadership initiative. Aspects of award-winning compliance behavior revealed in these interviews are further elucidated when juxtaposed with the findings of regulatory compliance theory, discussed in the next section, as well as with situations outside the United States, discussed at the end of the paper.

## LITERATURE REVIEW

As conceptualized in the scholarly literature, a regulated entity's compliance with government regulations revolves around two characteristics – its *willingness* to comply with the regulations to which it is subject, and its *ability* to comply with those regulations (Burby & Paterson, 1993; DiMento, 1989; May & Wood, 2003;

Nielsen & Parker, 2012; Winter & May, 2001). These characteristics are referred to here as the “motivational aspects of compliance” and the “operational aspects of compliance.” The remainder of this section elaborates the research findings into these aspects of organizational compliance behavior.

At a basic level, for compliance to occur, the regulated entity must be willing to submit to the requirements of regulations. Willingness to comply is motivated by *instrumental*, *social*, or *normative* consequences that the regulated entity perceives will be forthcoming from compliance. *Instrumental* motivations for regulatory compliance are also referred to as “calculated,” “economic,” or “utilitarian” motivations (Burby & Paterson, 1993; Nielsen & Parker, 2012; Winter & May, 2001). Instrumental motivation involves an economic calculus in which the regulated entity weighs the benefits of complying with regulations against the costs of doing so (Becker, 1968; Stigler, 1970). The main benefits of compliance that the regulated firm identifies are the avoidance of fines or other forms of penalties. The costs of compliance are the expenditures on materials, technology, activities, and anything else needed to bring the firm into conformity with applicable rules (Burby & Paterson, 1993). Therefore, a firm responding to instrumental motivations would be willing to comply with regulations when they value avoiding the penalties associated with noncompliance more than they value the resources sacrificed for the sake of compliance.

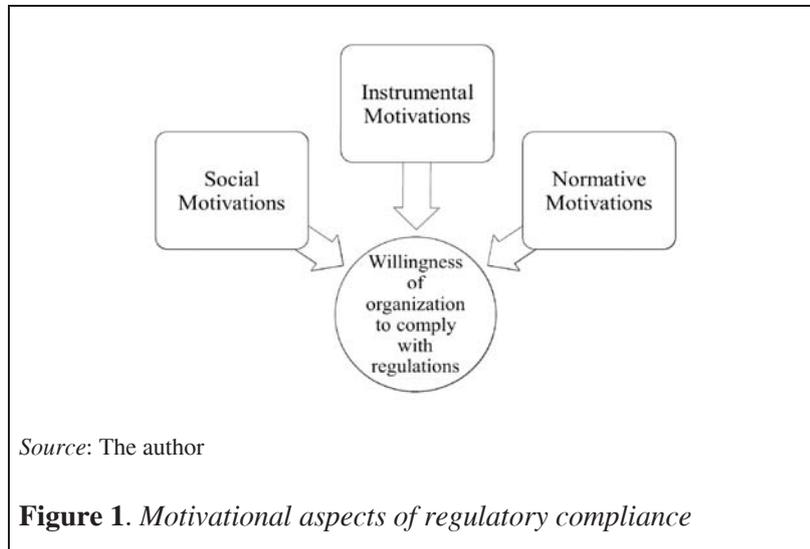
In addition to this cost-benefit calculation, the instrumentally-motivated organization also judges the likelihood of noncompliance being detected by the enforcement agency. Robust detection capabilities on the part of the regulatory agency, or at least the perception of this among the regulated community, is the key to deterring noncompliance behavior. As Stafford (2011) notes, “Numerous papers in the empirical literature on environmental enforcement have shown that deterrence-based tools such as compliance inspections and penalties for detected violations do increase overall compliance” (Stafford, 2011, p. 8). She further explains that

Enforcement . . . may include a combination of civil and criminal penalties, targeted enforcement, or escalating penalties for repeated noncompliance, ultimately . . . designed to deter violations by increasing the expected cost of noncompliance as efficiently as possible (Stafford, 2011, p. 8).

Traditional enforcement methods revolve around this sanctioning logic. Faced with the burden of escalating costs, the attractiveness of inappropriate behavior diminishes for the potentially noncompliant entity, who becomes more willing to behave as the regulatory enforcer prefers (van Bergeijk, 1994). When used by regulatory agencies, sanctions, whether they are enforcement actions, financial penalties, or even imprisonment, are intended to force behavioral change in the noncompliant entity. Reviewing such coercive instruments, Shimshack (2009) finds that government action is the most important source of noncompliance deterrence pressure, with fines deterring more than non-monetary sanctions.

*Social* motivation for regulatory compliance has also been called “associational” motivation (Burby & Paterson, 1993). This form of motivation is based on the regulated entity’s concern for its standing among its peers and in the wider community. From this perspective, compliance with regulations enhances the image or status of the regulated entity in the eyes of others (Burby & Paterson, 1993). These are “significant others,” who, in the face of noncompliance, inflict social costs on the violator such as shame, guilt, disapproval, or other informal sanctions (Grasmick & Bursik, 1990; Gunningham, Thornton, & Kagan, 2005). Significant others include customers, trading partners, other regulated businesses or entities, the media, advocacy groups, NGOs, the local citizenry, and regulatory agencies (Nielsen & Parker, 2012; Winter & May, 2001). Socially motivated firms therefore comply with regulations to avoid social sanctions and to obtain the approval of and maintain positive relations with important actors in society.

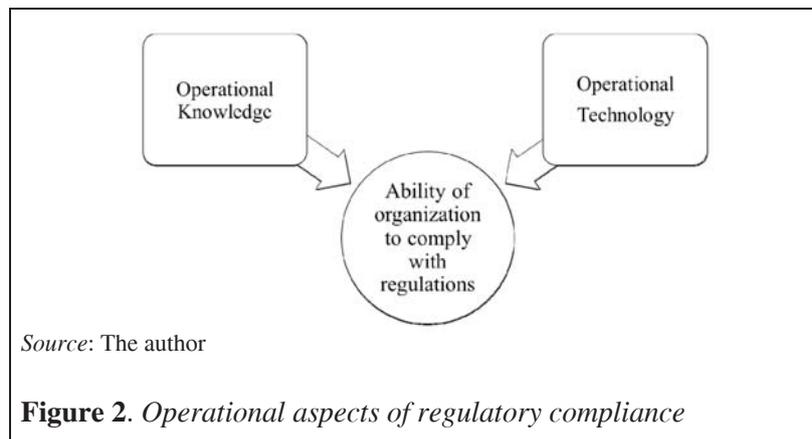
*Normative* motivations for regulatory compliance engage the regulated entity’s internal principles and values, sense of civic duty, and acceptance of the legitimacy of the rules and of their enforcement (Bardach & Kagan, 1982; DiMento, 1989; Nielsen & Parker, 2012; Stigler, 1970; Tyler, 1990). For the normatively motivated firm, the substance of the regulation with which it is complying, or just the act of complying itself, comports with its internal values or morals. Having internalized the norms of appropriate conduct in society, normatively motivated entities are willing to comply with regulations because compliance is “the right thing to do.” A graphical representation of these motivational aspects of compliance is presented in Figure 1.



Apart from its motivations, however, the organization must also be able to comply with the requirements of regulations imposed upon it. This ability is comprised of operational capacities, including awareness and understanding of the rules with which the organization is required to comply, physical and technological assets, and managerial capabilities that the organization brings to bear in meeting its regulatory requirements (Stafford, 2011, p. 6).

Rule awareness entails knowledge of the existence of the rules and regulations that apply to an organization, and an understanding of their requirements. This information and its understanding is necessary for firms to be able to comply with regulations (Winter & May, 2001). The precision and complexity of the regulations in use are also a factor in firms' knowledge of the rules (Winter & May, 2001). Burby & Paterson (1993) claim regulators must provide "information that enables the regulated to understand what constitutes appropriate behavior" (p.755), while Dimento (1989) notes "Business must understand statutes, ordinances, regulations, and judicial opinions" (p.118). Stafford (2011) states "regulated entities may intend to comply . . . but may be noncompliant because they do not fully understand the regulatory requirements" (p. 6). *Knowledge* of the rules and regulations that apply, the precision and complexity of the rules, and experience with them all comprise important aspects of compliance capacity.

Compliance-related operational capacity also means that the organization possess certain materials, equipment, or plant, such as pollution abatement technology. It must also have the capability to operate these effectively (Stafford, 2011). Further, operational capacity includes the ability to conduct specific reporting, organizational, and administrative tasks. Finally, internal compliance management systems for meeting environmental standards, such as the ISO 14000 family, may be considered an element of compliance capacity (Stafford, 2011). These physical and managerial features may be together considered the *technological* aspects of an organization's compliance operations. A graphical representation of these operational aspects of compliance is presented in Figure 2.



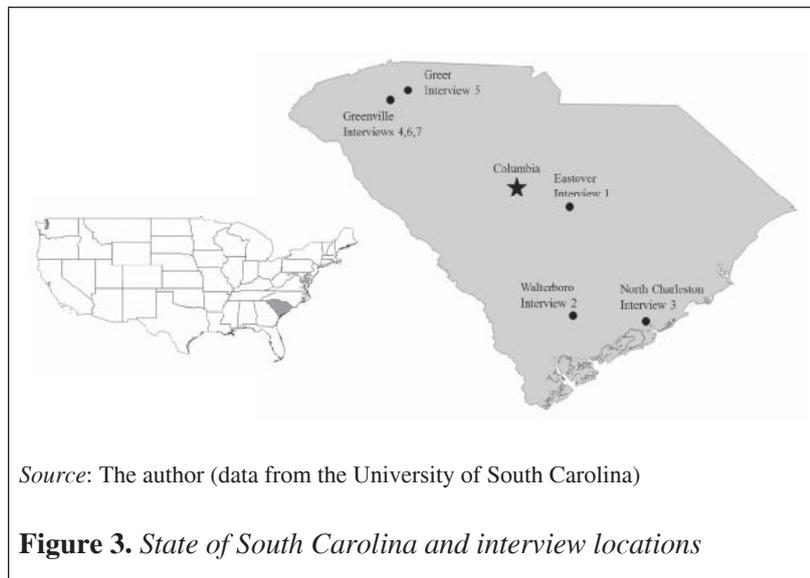
To summarize, the literature contains a number of important concepts regarding organizations' tendencies and abilities of and their effects on regulatory compliance. Organizational compliance may be motivated by instrumental calculations, valued social relations, or the norms the organization has internalized. From these findings, both official and unofficial forms of sanction and suasion emerge as modalities for shaping organizational compliance. From a wholly different perspective, the literature indicates that fiscal, human, and technological resources contribute to an organization's regulatory compliance. From this view, the operational capacity for compliance may be achieved through the acquisition and deployment of key resources: financial, material, human, and organizational. To the extent that compliance operations require obtaining and using these key resources, these operations will be costly (Winter & May, 2001).

## METHOD

To obtain field-level evidence concerning factors influencing top-performers compliance with environmental regulations, interviews were conducted with the environmental compliance managers at award-winning industrial and service facilities in the U.S. state of South Carolina.

### *Study Area*

South Carolina is the 40th largest state in the United States with a land area of 30,060 square miles. The state's population in 2010 was 4,625,364 persons (24<sup>th</sup> in the U.S.).<sup>¶</sup> Agricultural products including tobacco and poultry, and industrial products including textiles, paper products, machinery, chemicals, and automobiles and automotive components are important contributors to the state's economy. The service sector and also tourism, especially along the state's Atlantic coastline, are other key economic contributors. The state's gross domestic product (GDP) in 2012 was \$176 billion (27<sup>th</sup> in the U.S.).<sup>¶</sup> Columbia (pop. 129,272) is the state capital. Figure 3 shows the location of South Carolina on the east coast of the United States, along with the location of facility interviews.



***Interview Subjects and Questions***

Six facilities from the South Carolina Environmental Excellence Program (SCEEP) were interviewed to obtain insights regarding the regulatory compliance and environmental management practices and attitudes of these facilities (Table 1). The operations carried out at these facilities range from wastewater treatment to automobile manufacturing to military weaponry maintenance, and are subject to a variety of federal and state environmental regulations and standards, in particular those governing air quality (Clean Air Act, 1970), water quality (Clean Water Act, 1972), and solid and hazardous waste (Resource Conservation and Recovery Act, 1976). The SCEEP program is a voluntary environmental leadership initiative organized in conjunction with the Office of Environmental Quality Control at the South Carolina Department of Health and Environmental Control (SCDHEC). SCEEP recognizes facilities in South Carolina that have demonstrated exemplary environmental performance. SCEEP members go beyond mere compliance and instead exceed the standards contained in state or federal environmental regulations. They do so by implementing pollution prevention measures, energy and resource conservation practices, and using so-called environmental management systems (EMS). Organizations selected from the SCEEP to be interviewed included four private industrial firms, one quasi-public regional authority, and one federal installation. Air emissions, wastewater emissions, and solid waste disposal are the major environmental compliance concerns at these facilities. A total of seven interviews were conducted during 2004, 2009, and 2010 (one organization was interviewed twice). Table 1 summarizes interviewee information.

**Table 1**

*Facility interviews*

<b>Interview No.</b>	<b>Facility</b>	<b>Location</b>	<b>Industry/Service</b>
1	International Paper	Eastover, South Carolina	Pulp and paper
2	Dayco Products	Walterboro, South Carolina	Automotive components

(continued)

<b>Interview No.</b>	<b>Facility</b>	<b>Location</b>	<b>Industry/Service</b>
3	U.S. Naval Weapons Station	North Charleston, South Carolina	United States Navy weaponry storage and maintenance
4	KEMET Electronics Corp.	Greenville, South Carolina	Electronic components
5	BMW	Greer, South Carolina	Automobile manufacturing
6 and 7	Renewable Water Resources	Greenville, South Carolina	Regional wastewater treatment

Semi-structured interviews were conducted on-site with the primary environmental compliance manager at each facility. Specific questions concerned:

1. The operating environment of the facility, including pertinent environmental regulations, the environmental impacts present, and the role of the environmental manager.
2. A description of any formal or informal environmental management system (EMS) that may be in place, for example ISO 14001.
3. The continuity of facility staff, and of the organization itself, and the presence of sufficient resources to do the job.
4. The manager's assessment of the reasons why the facility exceeds basic regulatory compliance and strives for environmental excellence.

### ***Interview Data***

Key points expressed in each of the facility interviews are summarized here. The summaries follow the sequence indicated in Table 1.

#### ***Interview 1***

Initially content with mere regulatory compliance, the company evolved higher performance standards. ISO 14000 certification is being considered because it would be an asset to keeping the facility's processes organized and accurate. Certification was previously considered but it was determined that the expense did not warrant the need.

Environmental excellence is mandated in the business philosophy – environmental performance and excellence bring business advantages. Pollution is waste, waste is a measure of inefficiency, and inefficiency shuts businesses down. Upper management accepts environmental excellence as a factor of successful business. Internal standards and policies are in place and followed by all staff. The standards are audited, and if all are successfully met, bonuses are awarded to all employees – a strong incentive. Externally, environmental excellence is a response to customers and the local community.

*Interview 2*

Customers require ISO 14000 certification, so it is not optional, but the manager is glad the company is certified. The company was the first automotive supplier to combine the QS9000 system, a regulatory system for the automotive industry, within the EMS.

An understanding of why environmental compliance is important. There is high morale at the plant as well as a personal commitment among workers to pursue environmental excellence in their production. The amenable working environment can be attributed to an excellent safety and environmental record – the workers care. The plant manager's support and proactive approach is the driving force behind commitment to environmental excellence. A dedicated and well-trained workforce, combined with proactive management, enable the company to go beyond basic environmental compliance.

*Interview 3*

Though not ISO 14000 certified, ISO is used as a guideline for auditing and documenting. Its procedures are similar to U.S. Navy ordinances, although not as stringent. Success at the installation is due to the commitment to excellence on the part of upper management as well as the personal commitment of environmental staff.

*Interview 4*

Though not presently ISO 14000 certified, future customer demand will likely necessitate it. The existing EMS has procedures and components taken from ISO 14000 and other sources. A main goal is to eliminate waste completely.

From a personal point of view, the regulatory agency is an equal team member in our environmental management program.

Commitment to environmental excellence flows from the top down, starting with upper management. Furthermore, there are considerable cost-savings of running a clean operation. These create a major driver for exceeding mere compliance.

#### *Interview 5*

The company is ISO 14000 certified, complies with the Title 5 Program for air quality, holds USEPA Performance Track status, and complies with all regulations for the automobile industry. Though a high financial cost is required, the environmental management program benefits greatly from the operational structure that certification provides. Customer and community relations also benefit greatly since it makes our commitment to sustainable practices known.

Environmental stewardship and business excellence go hand in hand. The company's environmental philosophy involves exceeding the most stringent standards no matter where they exist and applying them to all operations worldwide. Staying ahead of the curve and exceeding expectations makes retrofitting unnecessary. Ultimately, money is saved and the organization can focus solely on the product.

Plant personnel have a personal commitment to environmental excellence, and are encouraged to suggest improvements, with financial incentives attached to participation.

#### *Interview 6*

In terms of water quality compliance, phosphorus has become a pollutant of concern in the watershed. Chemically treating phosphorus is an option for maintaining the facility's compliance with its water quality permit limits, however the costs that this method adds to treatment are exorbitant.

The pollutant discharge limits set by the regulatory agency are difficult to work with. Permitted pollutant limits are based on the size of the discharger and do not allow for growth. Every five years permits are renewed and these limits are usually lowered. Some facilities would be vulnerable to permit noncompliance and regulatory sanctions when discharge levels are inhibited by an overload on the system that is beyond their control.

If the top-down regulations promulgated by the agency were different there would be more potential for creative solutions.

#### *Interview 7*

This facility and several other wastewater treatment facilities in the watershed have discussed creating a consortium to share discharge loadings and leverage off of one another's technology. In this way, the aggregate pollutant load to the receiving waters can be less than the regulated limit and therefore the overall compliance requirement could be met. The group would work together for an environmental benefit while also reducing the liability and technology expenses that would be incurred when each facility works independently. Through cost and discharge sharing, the chance of noncompliance is lowered. Benefits may be passed on to the consumer, who would spend less for water services, since the facilities' operating costs would be reduced.

### **DISCUSSION OF INTERVIEW RESULTS**

Interview results corroborate several of the ideas posited in the scholarly literature related to motivational and operational aspects of regulatory compliance. They also raise important points of interest to regulators concerned with prioritizing compliance assurance activities and encouraging environmental excellence, and with lagging firms seeking to emulate the compliance practices of top performers.

#### *Socioeconomic Benefits, Organizational Culture, and Compliance*

Some facility managers interviewed in this study expressed the notion that pollution is the equivalent of waste, and that waste, moreover, is an indicator of inefficient production. Complying with environmental standards, from this perspective, means that pollution will be abated. More importantly, however, it means that the facility's own productive efficiency will be enhanced, a potential business advantage. Contrary to the theoretical depiction of organizations as instrumentally-motivated amoral calculators, top performers in this study see regulatory compliance not as an added expense which must be weighed against the costs of noncompliance, but rather as a cost-effective strategy for the organization.

The managers at the facilities interviewed in this study also identified a connection between environmental performance and customer and community relations. Environmental compliance management processes are followed because they are favored, if not required, by the organization's customers. In addition, these organizations seek to be perceived as an upstanding member of the community in which they are located, and believe that environmental compliance performance enhances their image. Top performing organizations recognize that taking into account the demands of significant others, such as customers and peers, benefits the organization itself through increased or enhanced business opportunities. In this way, socially-motivated compliance leads to economic and reputational benefits.

Aware of these socioeconomic benefits, top performers do not confront the question of *whether* to comply with environmental regulations, as suggested by the theory of the instrumentally-motivated organization. Rather, top performers are concerned with *how* to comply with the environmental regulations they face. It is at this point where motivational aspects and operational aspects intersect. Interviews reveal that organizations choose compliance-assisting knowledge assets and technologies, such as environmental management systems, advanced water treatment technologies, and joint efforts for meeting environmental compliance as described in interview 7, by comparing private and social costs against the benefits they know to be forthcoming.

Although no interviewee claimed his facility's motivation for complying with environmental laws was because it was "the right thing to do," across the interview group there was a sense that meeting or exceeding environmental standards is simply "the way we do things around here." Several interviews noted the existence of a well-trained, supported, aware, incentivized work force at their facilities, with a commitment to pursuing environmental excellence. Characteristics such as these lead to high-quality work because of high morale and both an individual, and shared, commitment to environmental quality. At the facilities interviewed here, environmental quality is emphasized and committed to by the organizations' top-level management, and this commitment becomes pervasive throughout the organization. In this way, meeting, if not exceeding, environmental standards is simply "the way we do things around here." When the upper management of the facilities interviewed in this study embraced and actively

encouraged environmental excellence, an organization-wide norm for high-quality performance developed. Environmental quality then becomes part of the organization's culture. At these organizations, a "culture of quality" exists, and anything contrary to environmental compliance is simply not considered.

### ***Thoughts for the Southeast Asian Context***

While at first glance the image of environmental compliance among firms or other actors in Southeast Asia may be rather different than that of the United States, closer inspection perhaps reveals some interesting similarities in term of normative and social motivations.

Instances of environmental rule-breaking – such as the continuing saga of industrial pollution at the Map Ta Phut estate in Thailand and its effects on the adjacent community (Fuller, 2009; Tephaval, 2014), or the annual toxic haze arising from the forest clearing activities of the Indonesian palm-oil industry (E.H., 2013) – are not uncommon in the region. To counter such behavior, compliance theory would likely prescribe a regime of robust compulsion backed by stringent penalties to cause actors to align their behavior with environmental rules. Quickly, however, we are forced to admit to an unevenness in the enforcement of environmental regulations in the region. The work of a number of researchers and institutions suggests the existence of this condition (e.g. AECEN, 2006; AFP, 2014; McCarthy & Zen, 2010; Palmer, 2001), which apparently stems from lax execution and/or a shortage of resources and monitoring and enforcement capacity. In this context, it may be as appropriate to apply the ideas of "willingness" and "ability" expounded in this paper to the issue of regulatory *enforcement* in Southeast Asia as it is to regulatory compliance.

Whatever the root cause of the "enforcement gap" in the region, scholars and practitioners may take as much interest in the responses to it of other stakeholders. Absent robust, instrumentally-based environmental enforcement regimes in Southeast Asia, other forms of regulation, emanating from the normative and social motivations described above, make themselves known. Indeed, Rao (2002) describes the emergence of "green production chains" which are "self-regulating" and encouraged by foreign businesses in the region. Cribb (1990) and Hettige et al. (1996) describe the "informal regulation" of

community pressure in influencing industrial plants in Indonesia and Thailand to reduce their pollution emissions. And in several works, K. Kuperan and Jon Sutinen (e.g. Kuperan & Sutinen, 1998; Sutinen & Kuperan, 1999; Viswanathan et al., 1997) have investigated examples of socially- and normatively-motivated self-regulation in the fishing industry in Indonesia, Malaysia, and the Philippines. Together, these works point to a substitution effect in which unofficial arrangements for environmental regulation fill the gap in the face of weaker formal arrangements.

### **CONCLUSION**

In the era of corporate social responsibility, business models necessarily include those activities which maintain an organization's license to operate in local communities as well as in customer and production chains. With growing concerns for resource scarcity and sustainability, reducing waste and increasing production efficiency are essential for organizations' long-term strategy. Environmental award-winning facilities interviewed for this study are highly sensitive to these issues. The interviews conducted here suggest that facilities' compliance operations and motivations are framed by a recognition of the shadow of the future. These organizations want to remain in business for the long term, and for them, complying with the environmental regulations they face leads not to the imposition of additional costs on the organization, but rather to the accrual of business advantages and reputational benefits. This is the logic of lengthened timelines and big-picture thinking.

Today, environmental regulatory agencies in the U.S. attempt to bring about compliance through a variety of means, including education, technical assistance, incentives, and traditional monitoring and enforcement methods. Understanding organizations' motives and operating capacity for complying with environmental rules helps regulators identify areas of compliance concern and direct compliance assistance resources more effectively. Moreover, as the "new environmental regulation" seeks to reorient the field from "a narrow focus on compliance in favor of a broader emphasis on environmental performance" (Fiorino, 2006, p. 194), top performing facilities such as those interviewed in this study are leading this reorientation by

setting the environmental performance standard. These firms can be of service to regulators by advising on rule formulation and best practices and technologies, as the SCEEP presently does. In addition, environmental award-winning facilities can work with poorer performers in a mentoring capacity to demonstrate improved systems and technologies and model a culture of environmental quality. Cynthia Giles, assistant administrator of the U.S. Environmental Protection Agency Office of Compliance and Enforcement has recently commented on the importance of using “. . . lessons learned about what drives compliance to reduce pollution and improve results” (Giles, 2013, p. 22). This study perhaps provides one such lesson.

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### NOTES

<sup>1</sup> Available at [www.census.gov/geo/reference/guidestloc/st45\\_sc.html](http://www.census.gov/geo/reference/guidestloc/st45_sc.html)

<sup>2</sup> Available at [www.city-data.com/forum/city-vs-city/1881835-released-june-6-2013-50-states.html](http://www.city-data.com/forum/city-vs-city/1881835-released-june-6-2013-50-states.html)

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