Labeling Schemes or Labeling Scams?
Auditors' Perspectives on ISO 14001 Certification

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ABSTRACT

Hundreds of thousands of organizations have chosen to boost their competitive position by demonstrating compliance to the *ISO 14001 Environmental Management System* standard. In order for these standards to become credible policy options, they must ensure the capacity to build an industrial morality and to institutionalize responsibility. Relying on a series of in-depth interviews with environmental auditors, this dissertation contributes to a deeper empirical understanding of these regulatory instruments by, first, exploring how the adoption of an EMS promotes self-regulatory capacity and contributes toward effective environmental protection, and second, discussing the limitations of its accountability structure and the threats to the credibility of the standard.

This project highlights several misconceptions associated with the role of ISO 14001, and explains why both public and private sectors hold conflicting and inappropriate expectations regarding the certification process. According to the environmental auditors interviewed, the standard has helped thousands of committed organizations to effectively improve their self-regulatory capacity as well as their environmental performance. Yet, organizations with no intrinsic motivation can take advantage of the flexibility granted by the standard and the limitations of the conformity assessment process, to obtain an empty environmental certificate. ISO 14001 is a process standard that can help both 'environmental leaders and laggards', but that cannot differentiate organizations based on their level of environmental performance. Because of that, ISO 14001 is increasingly perceived as a socially unacceptable certification system. This project concludes that ISO 14001 is a double edge regulatory instrument that aims both to foster self-regulatory powers, and to act as a market signaling agent. The problem lies in the fact that these two facets of the standard are actually detrimental to each other, perpetuating a cycle that contributes to the discredit of the standard and of the auditing community. In the future, ISO 14001 needs to adjust its non-prescriptive nature and its accountability mechanism, to the character of the organizations seeking certification. In alternative, a new generation of certification programs is emerging, building upon the ISO 14001 standard with an extra layer of requirements, and with a more meaningful role for the environmental auditor.

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Glossary*

Note: In the ISO 14001 context, the terms 'registration-certification', and 'registrar-certification body' are equivalent and used interchangeably. One term is preferred over the other depending on the country. I choose to use only the terms 'certification' and 'certification body', therefore, some quotes were edited in order to ensure consistency throughout this document.

Accreditation - procedure by which an authoritative body or person is competent to carry out specific tasks based on the requirements of international criteria.

Accredited Body - body to which accreditation has been granted.

Accreditation Council - group within ANAB with the responsibility to grant, suspend, and withdraw accreditation of Certification Bodies.

American National Accreditation Board (ANAB) - provides accreditation services for certification bodies operating in the US; it is a private-sector, financially self-supported organization, that grew out of the US voluntary standards community, and that does not report to ISO or the US government.

American National Standards Institute (ANSI) - coordinates the development and use of voluntary consensus standards in the US and represents the needs and views of US stakeholders in standardization forums around the globe; it is the official US representative to the International Organization for Standardization and a member of the International Accreditation Forum.

ANSI/AIHI Z-10 - US national standard that specifies requirements for occupational health and safety management systems.

AS 9100 - specifies requirements for ISO 9001-based quality management systems for the aerospace industry.

Audit - a planned, independent, and documented assessment to determine whether the agreed-upon requirements are being met.

Audit Criteria - policies, practices, procedures, or requirements against which the auditor compares collected evidence about the subject matter.

Audit Findings - results of the evaluation of the collected audit evidence compared against the agreed audit criteria.

Audit Team - group of auditors designated to perform a given audit.

Auditee - organization to be audited.

Auditor - person qualified to conduct environmental audits.

Certification - sometimes referred to as 'registration', it is a procedure by which a third-party gives written assurance that an organization's management systems conforms to specified requirements.

Certification body - also known as ‘registrar’, it is a third-party company contracted to evaluate the conformance of an organization's management systems to the requirements of the appropriate standard.

Certificate - document issued under the rules of a certification system, indicating that adequate confidence is provided that a duly identified product, process, or service is in conformity with a specified standard or other normative document.

Compliance - an indication that an organization has met all its relevant regulatory requirements.

Conformance - an indication that an organization has met all the requirements of a given standard.

Conformity assessment - activities concerned with determining that relevant requirements in standards or regulations are fulfilled.

Continual Improvement - process of enhancing the environmental management system to achieve improvements in overall environmental policy.

Corrective Action - an action taken to eliminate the causes of an existing nonconformity in order to prevent recurrence.

Environmental Aspect - element of an organization’s activities, products, and services that can interact with the environment.

Environmental Impact - any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization’s activities, products, or services.

Environmental Management System (EMS) - organizational structure, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining the environmental policy.

Environmental Objective - overall environmental goal, arising from the environmental policy, that an organization sets itself to achieve, and that is quantified where practicable.

Environmental Policy - statement by the organization of its intentions and principles in relation to its overall environmental performance, which provides a framework for action and for the setting of its environmental objectives and targets.

Environmental Target - detailed performance requirement, quantified wherever practicable, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.

Follow-up Audit - an audit whose purpose an scope are limited to verifying that corrective action has been accomplished as scheduled and to determine that that the action effectively prevented recurrence.

Independent Association of Accredited Registrars (IAAR) - is an association of accredited management systems certification bodies operating in North America.

International Accreditation Forum (IAF) - is the world association of conformity assessment accreditation bodies whose primary function is to develop a single worldwide program of conformity assessment.

International Organization for Standardization (ISO) - a network of the national standards institutes of 156 countries, with a Central Secretariat in Geneva, Switzerland.

International Personnel Certification Association (IPCA) - establishes international criteria for auditor certification and auditor training programs.

International Register of Certificated Auditors (IRCA) - established in London, it is responsible for auditors and training providers' certification.

ISO 9001 - international standard that specifies requirements for quality management systems.

ISO 14001 - international standard that specifies requirements for environmental management systems.

ISO 14001 Certified Organization - the environmental management system of an organization is ISO 14001 certified after it has demonstrated conformance to the standard through the audit process.

ISO 22000 - international standard that specifies requirements for food safety management systems.

ISO 27001 - international standard that specifies requirements for information security management systems.

ISO/IEC Guide 2 - international guideline with general terms and their definitions concerning standardization and related activities.

ISO Technical Committee 207 (TC 207) - is responsible for the development of the ISO 14000 series of international environmental management standards.

Joint Assessment - cooperative assessments resulting in formal mutual recognition of certifications.

Lead Environmental Auditor - person qualified to manage and perform environmental auditors.

Management systems - an organization's structure for managing its processes that transform inputs of resources into a product or service that meet the organization's objectives, such as satisfying customer quality requirements, complying with regulations, or meeting environmental objectives.

Management systems standards - unlike most ISO standards which are specific to a particular product, material, or process, systems standards apply to generic management systems.

Nonconformity - the nonfulfillment of a standard's requirement.

Office audit - is a systematic and independent evaluation performed at the certification body's facility to determine whether its documented certification system has been and continues to be effectively implemented.

Prevention of Pollution - use of processes, practices, materials, or products that avoid, reduce, or control pollution, which may include recycling, treatment, process changes, control mechanisms, efficient use of resources, and materials substitutions.

Process - a set of interrelated resources and activities that transform inputs into outputs.

RABQSA International - is responsible for personnel and training certification; resulted from the merger of Quality Society of Australasia with the US-based Registrar Accreditation Board.

Systems Audit - a systematic and documented verification process to objectively obtain and evaluate evidence to determine whether an organization's management system conforms to the audit criteria set by the organization, and to communicate this process to management.

Technical Advisory Group 207 (US-TAG207) - is the ANSI sanctioned body to develop and advance the official US position in the ISO Technical Committee 207.

TL 9000 - specifies requirements for ISO 9001-based quality management systems for the telecommunications industry.

Training Providers - organizations with competency units and courses certified by RABQSA, IRCA or other personnel certification bodies.

Witness audit - is an evaluation of an audit team conducting a certification audit; the objective is to evaluate the CB audit team's competence, conformity to international auditing requirements, knowledge of applicable standards, and other factors.

** Based on ANAB (2008), Cascio (1996), ISO 14010, ISO/IEC Guide 2.*

Acronyms

ANAB - American National Accreditation Board
ANSI - American National Standards Institute
ASQ - American Society for Quality
BS - British Standard.
CASCO - ISO Council Committee on Conformity Assessment
DOD - Department of Defense
DOJ - Department of Justice
EAR - Environmental Auditing Roundtable
EHS - Environmental Health and Safety
EMAS - Eco-Management and Audit Scheme
EMS - Environmental Management System
EPA - Environmental Protection Agency
EU - European Union
IAAR - Independent Association of Accredited Registrars
IAF - International Accreditation Forum
IESU - International Environmental Systems Update
IPC - The International Personnel Certification Association
IRCA - International Register of Certified Auditors
ISO - International Organization for Standardization
JAS-ANZ - Joint Accreditation System of Australia and New Zealand
LCA - Life Cycle Assessment
MLA - Multi-lateral Agreement
MRA - Mutual Recognition Agreement
NBP - National Biosolids Standard
NEPA - National Environmental Policy Act
NGO - Non-Government Organization
OSHA - Occupational Health and Safety Administration
QMS - Quality Management System
RABQSA Int - Registrar Accreditation Board - Quality Society of Australasia
RvA - Dutch Council for Accreditation
SAGE - Strategic Advisory Group on Environment
TAG - Technical Advisory Group
TC 207 - Technical Committee 207
TRI - Toxic Release Inventory
UKAS - United Kingdom Accreditation Service
UNEP - United Nations Environment Program
VEEP - Virginia Environmental Excelence Program

Chapter I
Introduction

Prologue

It has been suggested that standards and conformity assessment influence 80% of all exports, representing an annual market value of 13.5 trillion US dollars (Thione, 2008). This has prompted hundreds of thousands of organizations worldwide to demonstrate compliance with standards in order to boost their competitive position. The widespread proliferation of international standards is in part associated with the role of the International Organization for Standardization (ISO), responsible for the development of more than seventeen thousand standards pertaining to the most diverse economic activities. Among them, the *ISO 14001 Environmental Management Systems* standard stands out as one of the most widely known. Launched in 1996, ISO 14001 held the promise of revolutionizing the way environmental issues are dealt at the corporate level, supported by an effective and independent assessment by third-party auditors. There are now more than 750 certification bodies worldwide (ANAB, 2008a) responsible for an 'explosion' in environmental auditing that ensures that 223,149 facilities from 159 countries are in conformance to the ISO 14001 standard (ISO, 2010). Despite the recent scandals in the auditing community and the skepticism evidenced by scholars and regulatory agencies regarding the effects of ISO 14001 certification, the number of certified organizations continues to rise, and with it, the growing importance of the ISO 14001 standard in our public policy.

Research Gap

The ISO 14001 standard is part of a growing family of corporate self-regulatory instruments that typify an era of intense regulatory reform. Levi-Faur (2005) called it 'regulatory capitalism', a new paradigm in regulatory theory characterized by the emergence of decentralized forms of regulation, an increase in delegation to autonomous agencies, and the proliferation of internal structures of governance used by corporations to ensure social responsibility. The widespread popularity of third-party certification of Environmental Management Systems (EMSs) is an example of that expansion of self-

regulatory strategies. Yet, they are but a 'tip of the iceberg' of the vast range of internal control instruments that currently influences the behavior of organizations. Standards for quality management, health and safety, information security, food safety or social responsibility are just among some of the thousands of normative systems that currently govern all institutional settings and that characterize the new regulatory order (Gunningham & Rees, 1997).

Throughout the current wave of regulatory reforms, several theoretical models have been proposed that call for the emergence of instruments of self-regulation under some form of state supervision (Ayres & Braithwaite, 1992; Gunningham and Grabosky, 1998; Parker, 2002). One of the most recent is the concept of management-based regulation (Coglianese & Lazer, 2003) where firms are require to engage in their own internal rulemaking efforts toward the achievement of specific public goals. Rather than setting prescriptive requirements, management-based instruments allow organizations to choose their own internal planning and management practices, that way fostering the emergence of efficient innovative solutions while promoting voluntary responsibility (Gunningham, 2009). The adoption of management-based instruments has proliferated since the publication of management systems standards like ISO 9001 or ISO 14001. Basically, these standards provide a set of guidelines that allows organizations to implement an effective internal management program, based on a plan-do-check-act planning process. The ISO 14001 standard in particular constitutes a template for the design of an EMS that can be certified by a third-party auditor in order to demonstrate that an organization is committed toward regulatory compliance, prevention of pollution, and continual improvement.

As the number of ISO 14001 certificates increases and concerns regarding its public policy role rise, several scholars have turned their attention to the function of the ISO 14001 EMS standard. There have been multiple attempts to evaluate ISO 14001 that usually take the form of an assessment of the impact of EMS certification on three basic axes: environmental performance (e.g. Switzer *et al.* 1999), regulatory compliance (e.g. Potoski & Prakash, 2005b) and cost-effectiveness (e.g. Hamschmidt & Dyllick, 2001).

These approaches have been criticized[1] for the fact that they disregard the original intent of the standard, and instead, evaluate the effectiveness of the certification program against misconceptions of what is commonly believed are the objectives of ISO 14001. In addition, most of the empirical literature on ISO 14001 addresses certification as a homogenous phenomenon (Yin & Schmeidler, 2007), failing to recognize that there are substantial differences in the way that organizations embrace their ISO 14001 EMSs. These studies tend to generalize conclusions and present ambiguous findings, while ignoring the significance of the variability in the motivations and outcomes of certified organizations. Finally, from a methodological standpoint, scholars have typically sought answers from large scale surveys (e.g. REMAS, 2006) or qualitative case studies (e.g. Morrow & Rondinelli, 2002) whose validity is affected by the fact that they rely exclusively on self-reported data from consenting participants.

This difficulty to assess the outcomes of ISO 14001 certification has been expressed by several scholars (e.g. Freimann & Walther, 2001). In fact, a common topic across ISO 14001 literature regards the lack of knowledge on how the standard is applied in reality and how it promotes change across certified organizations (e.g. King *et al.* 2005, Morrisson *et al.* 2001, Rondinelli and Vastag, 2000). The EPA (2006), for example, has released a Position Statement where it emphasizes the usefulness of EMSs, and yet warns against the lack of research on how EMS certification affects corporate behavior and environmental performance. Considering the need for further research on management-based regulatory strategies, as well as the current lack of knowledge in what regards the outcomes of ISO 14001, in this exploratory study I adopt a particular approach that relies on the experiences of third-party auditors responsible for ISO 14001 certification, to go beyond previous academic research and explore how in reality ISO 14001 influences organizational behavior.

Research objectives

The goals of this research project are to evaluate the role of the ISO 14001 EMS standard encouraging organizations to self-regulate their environmental impacts and to clarify the

[1] Interview with subject #0985 held on December 1 2006.

message that an ISO 14001 certificate conveys about the certified organization. This project is grounded on Gunningham & Rees (1997), O'Neill (2002) and Switzer & Ehrenfeld (1999) call for an analysis of self-regulatory instruments both in terms of their capacity to build industrial morality and commitment, and also institutionalizing accountability and transparency. Based on this theoretical model, I pursued two distinct lines of inquiry:

The first objective was to evaluate the role of ISO 14001 in terms of its capacity to promote environmental responsibility and self-regulatory capacity. The questions pursued were: (1) What are the goals and requirements of the ISO 14001 standard, and how are those interpreted by environmental managers and auditors? (2) What are the motivations for organizations to adopt and certify an ISO 14001 EMS? (3) What are the outcomes for organizations that get ISO 14001 certified? And, (4) what are the reasons behind any variance among certified facilities?

The second objective dealt with the credibility of the ISO 14001 certification process. Here I attempted to understand: (1) Who are the actors involved in the conformity assessment of ISO 14001 certification in the US? (2) How does the certification system function and what steps are taken to ensure that certification produces credible and consistent information? And (3) what are the legitimacy threats that exist within this accountability structure?

Methodology

In order to address these questions and to better understand how the ISO 14001 EMS standard is applied in reality, this exploratory study relied on an untapped source of data: the environmental auditors responsible for the implementation and verification of ISO 14001 EMSs. There are over two hundred certified Lead Environmental Auditors in the US. They are responsible for the street-level interpretation[2] of the ISO 14001 standard, and more importantly, they benefit from an embedded perspective of the environmental programs of certified facilities.

[2] See Lipsky (1980).

Data collection was based on in-depth interviews with 40 Lead Environmental Auditors, as well as a small number of consultations with members of the US Technical Advisory Group (US-TAG) and ISO's Technical Committees, EMS consultants and trainers, certification/accreditation bodies directors, accreditation assessors, governmental officials, as well as staff members from other EMS certification programs. In addition, I examined an internet forum where systems' auditors communicate on-line and collected all the materials that were pertinent to this project. Careful consideration was given to the methodological integrity of this project, through the triangulation of the data collected and also through research participants' verification of the accuracy of their accounts. In order to ensure the validity of this study, the reader will notice that there was a systematic concern to illustrate each argument with the voices of the environmental auditors interviewed. I urge the reader to take the time to read the dozens of footnotes that sustain the theoretical arguments proposed, and that illustrate the richness of the information that was shared.

Organization of the Dissertation

This dissertation is organized in nine chapters. The present Introduction sets the stage for this project, emphasizing the lack of knowledge in terms of the real life application of ISO 14001, and briefly describing the research objectives and methodology used. Chapter II grounds this research project into existing regulatory theory, framing ISO 14001 and the concept of management systems' certification in the broader regulatory spectrum. Chapter III highlights the difficulties to evaluate ISO 14001 evidenced in the academic literature, and describes in detail the research methodology adopted in this project.

Part A of the dissertation looks at how auditors perceive ISO 14001 adoption in the US, and discusses how the standard has contributed toward the implementation of an industrial morality among certified organizations and toward effective environmental protection. Chapter IV explores the origins of ISO 14001, the intent and requirements of the standard, some of the misconceptions that surround it, and the motivations that drive organizations to become certified. Chapter V evaluates the commitment of certified

organizations to implement an effective EMS, and how that reflects in terms of the outcomes obtained. And Chapter VI explains the heterogeneity evidenced by certified organizations and discusses the factors that enable or obstruct organizational maturity.

Part B shifts the focus of this project to the ISO 14001 certification process and evaluates the impact of ISO 14001 conformity assessment system institutionalizing responsibility and promoting transparency and accountability. Chapter VII describes the accountability structure of ISO 14001 certification, and chapter VII discusses the unintended consequences of EMS third-party audits and the threats that endanger the credibility of ISO 14001.

Finally, Chapter XIX summarizes the main findings of this project, describes the emergence of new certification programs that build upon the requirements of ISO 14001, and discusses the necessary transformations that ISO 14001 certification will likely have to go through in order for the standard to reach its potential as an effective regulatory instrument for environmental protection.

Chapter II
The Regulatory Genealogy of ISO 14001 EMS Certification

The goal of this chapter is to ground this research project into existing regulatory theory, framing the concept of management systems' certification in the regulatory spectrum. I will, first, describe the evolution of regulatory paradigms, from the traditional command-and-control approach to self-regulation. And, second, discuss the emergence of management-based regulation and the rising popularity of management systems' certification programs like ISO 14001.

Regulatory dichotomy

Several forms of government regulation have existed for many centuries, but modern environmental legislation dates back to 1970 when the first Earth Day was celebrated, the US Environmental Protection Agency (EPA) was created, and the first major federal US environmental legislation was enacted. Industrialization and modernization had originated an unprecedented number of threats for our society and, during the 1960s, scientific advances and alarming episodes of natural degradation fostered the rise of a powerful environmental movement[3] that demanded protective regulation against polluting industries, prompting bursts of environmental regulatory statutes. A new era for environmental policy emerged based on a philosophy of 'crime and punishment' that relied on 'command-and-control' legislation to prohibit or restrict environmentally harmful activities (Kraft & Vig, 1999). This first regulatory paradigm was based on statutory requirements ('command') that set environmental targets and impose penalties ('control') when those targets are not met (Gunningham, 2009). In the last three decades, a substantial number of environmental legislation was passed with the goal of reducing environmental harm to a socially acceptable level, either by setting technology standards, which specify measures to be taken, or performance standards, which specify a desired level of performance like a limit on emissions of a pollutant to the water.

[3] The publication of Rachel Carson's (1962) 'Silent Spring' and Paul Ehrlich's (1968) 'The Population Bomb' were important triggers for the emergence of the environmental movement.

Unquestionably, this regulatory approach based on command-and-control legislation has contributed enormously toward environmental protection and public health, particularly when associated with point-source pollution from large business enterprises. But the assumption that the more stringent the enforcement of tougher laws to protect the environment, the better the environment would be protected, has led to an extraordinary proliferation of 'hard' legislation (Ayres & Braithwaite, 1992). In response to this pro-regulatory movement, regulated corporations organized to limit the stringency of regulations and the aggressiveness of the enforcement actions (Kagan, 2004). In addition, several scholars[4] questioned the effectiveness of this regulatory strategy, claiming that traditional protective regulation is unreasonable and unresponsive (Bardach & Kagan, 1982), likely to dissipate voluntary responsibility (Parker, 2002), limited in terms of environmental effectiveness (Potier, 1994), and past the limits of its technical capacity and cost effectiveness (Gunningham *et al*. 1998).

Unquestionably, legislation has failed to protect our society from harm on some occasions (Stone, 1997), and there are certainly regulatory agencies without the necessary resources or political backing to conduct an effectively enforcement. But despite all the criticism and apparent failures, several scholars (Eisner, 2004; Gunningham *et al*. 2003; Kagan, 2004) have claimed that protective legislation prompted remarkable changes in behavior and reduced many forms of water and air pollution (Scruggs, 1999). Considering the arguments of critics and proponents of this type of traditional regulation, it should be emphasized that command-and-control's efficacy and efficiency differs widely depending on the complexity of the problems it addresses (Gunningham, 2009). Even though it may not be an adequate choice for dealing with, for example, global problems like climate change or biodiversity loss, command-and-control can be a very effective regulatory strategy addressing point-source pollution from a homogenous group of organizations. On top of that, traditional prescriptive regulation is frequently considered as the single most important driver of improved environmental performance[5].

[4] The limitations of command-and control regulation in the environmental arena have been fairly studied. For a review on this topic, see for example Fiorino (2006, 1999), Gunningham (2009), Steinzor (1998) and Stewart (2001).
[5] For a review on this topic see Gunningham (2009).

Following the exceptional growth of prescriptive performance-based regulation of the 1970s and its (sometimes unfair) criticism, the rise of the neoliberal movement of the 1980s fostered the emergence of a new paradigm that promised free markets and substantive deregulation. Partisan politics have fueled a fierce debate between the proponents of stringent protective regulation and those that favored reduced regulatory burdens for business. These two contrasting models of regulation seem to have dominated the political discourse over the last three decades. On one side, the advocates of a legalistic approach to regulation based on authoritative norms and punishments. On the other, the proponents of a social approach to regulation based on cooperative problem solving and a remediative response to violations (Kagan, 2004).

Despite industry pressure to reduce economic costs of compliance and the promises of conservative administrations to dismantle the regulatory state, it is now well known that the current neoliberal hegemony did not really contribute to deregulation, but to an intense regulatory flux (Ayres & Braithwaite, 1992). The fact that neoliberal governments were ideologically against direct government intervention and yet largely unable to deregulate, led policy-makers to devise a new range of less intrusive regulatory instruments that were released during the late-1980s and early-1990s (Gunningham, 2009). Levi-Faur & Jordana (2005, 6) called this period the “golden era of regulation”, arguing that liberalization and privatization have actually expanded and extended regulation, with new institutions and new instruments of regulation having an enormous impact on the social and economic fabric. This period of intense regulatory reform was characterized by the emergence of decentralized forms of regulation and new regulatory authorities, illustrated by a shift towards economic instruments and the current proliferation in internal structures of governance used by corporations to ensure social responsibility (Levi-Faur, 2005).

If economic instruments were never well accepted by US industry (besides the overall resistance toward taxation, organizations feared the unpredictability and competitiveness implications of these instruments), a variety of voluntary initiatives gained popularity and

promoted the widespread use of 'unilateral commitments', 'public voluntary programs', and 'negotiated agreements' (Gunningham, 2009). These instruments of self-regulation currently represent the vast majority of norms and regulations that control the behavior of organizations. Using Gunningham & Rees' (1997) metaphor, traditional government regulation represents only a 'tip of the iceberg' of the present regulatory system, while its massive body is composed of a variety of normative systems like rules, values, standards, codes and policies, that govern all institutional settings and that embody a new regulatory order.

A new regulatory order

The current wave of regulatory reforms constitutes a new chapter in the history of regulation. Levy-Faur (2005) called it 'Regulatory Capitalism', characterized by a new division of labor between state and society, an increase in delegation to autonomous agencies, and the proliferation of new regulatory technologies and mechanisms of self-regulation in the shadow of the state (Braithwaite, 2005, 2008; Levy-Faur, 2005).

Many facets of this regulatory capitalism have been previously expressed through innovative regulatory theories. For example, Ayres & Braithwaite's (1992) Responsive Regulation model calls for an approach based on a 'tit for tat' enforcement strategy[6], where regulated entities are subject to escalating forms of regulatory intervention (from mere persuasion to severe punishment) adjusted to their capacity to respond to regulatory demands. Here, the optimal regulatory approach does not consist on a particular regulatory instrument, but on a pyramid of regulatory strategies. At the bottom of this pyramid is self-regulation, considered the ideal strategy because of the fact that it is the least burdensome for taxpayers and regulated industry. But acknowledging the possibility of self-regulation instruments being abused and ineffective, the state needs to bear the capacity to escalate its regulatory strategy with increasing level of interventionism, eventually all the way up the pyramid to command-and-control regulation with nondiscretionary punishment. The most innovative aspect of Ayres & Braithwaite's model lies in the intermediate levels of their regulatory pyramid. Between the well known

[6] See Scholz (1984).

pure forms of self-regulation and command-and-control regulation, they propose a model of enforced self-regulation where each organization would be compelled to write a set of internal rules and establish an internal compliance group, and the state would have to determine whether those rules satisfy policy guidelines, to ensure the independency of the compliance group and to conduct occasional spot inspections to make sure the system was not being subverted.

Around this model of Responsive Regulation, various other theories have been proposed, all characterized by shared regulatory responsibilities and the proliferation of mechanisms of self-regulation[7]. For example, Teubner's (1983) 'Reflexive Regulation' calls for a negotiated regulatory framework focusing on the regulation of self-regulation through systems monitoring, corporate social responsibility and market oriented strategies[8]. Black's (2002) 'Decentred Regulation' demands a shift in the locus of the activity of regulating, from the state to multiple other organizations, based on hybrid, multi-faceted and indirect regulatory instruments. Gunningham and Grabosky's (1998) 'Smart Regulation' calls for regulatory instruments that require governmental intervention, but selectively and in combination with market and non-market solutions, and of public and private orderings. And Parker's (2002) 'Meta-Regulation' states that new regulatory strategies should be designed with the goal of forcing companies to evaluate and report their own self-regulation strategies so that regulatory agencies can determine whether policy goals are being met. Common to all these regulatory models is the proclaimed end to the debate between 'hard' command-and-control regulation versus 'soft' voluntary self-regulation, setting the stage for a third generation of regulatory instruments characterized by mechanisms of self-regulation under state supervision.

Environmental Self-Regulation

Despite the relevance that self-regulation holds in existing regulatory theory, as well as its importance in modern governance, it is striking how it is commonly perceived as an inferior regulatory strategy and dismissed as a fraud or as simply ineffective. One of the

[7] See Levi-Faur (2005, 13).
[8] More on Reflexive Regulation can be found in Aalders & Wilthagen (1997), Orts (1995), Stewart (2001) and Treiber (1985).

reasons for that is because a number of reviews[9] of various voluntary initiatives identified few demonstrated benefits, confined to 'soft' issues like information diffusion and consciousness raising, as well as some limitations in terms of free-riding, lack of enforcement mechanisms, poor monitoring and lack of transparency (Gunningham, 2009). But this explanation is associated with a much broader problem, the stereotypical view[10] of self-regulation that depicts only its purest form as private voluntary regulation without any form of external intervention (Rees, 1998). As a result, much of the debate around regulatory reform has been characterized by a choice between two mutually exclusive approaches, 'strict command-and-control' and 'pure self-regulation'[11] (Sinclair, 1997), blocking the emergence of innovative regulatory instruments as called for by many scholars.

In the environmental arena, the Clinton-Gore administration played a particularly relevant role in the reinvention of environmental regulation, by balancing the strengths and weaknesses of the regulatory approaches used in the past three decades, and promoting a cooperative relationship with business (Clinton, 1995). More than just punishing the poor performers through prescriptive performance legislation, the focus of the regulator began to shift towards facilitating and rewarding the top performers to go beyond compliance. As a result, a diverse set of policies was created to encourage organizations to develop internal instruments of pollution prevention and compliance auditing. Depending on whether they were set by individual organizations or larger groups, and whether they are voluntary or mandatory, multiple forms of self-regulatory instruments for environmental protection emerged in the last decade, for example: sectoral guidelines, covenants, codes of practice, customer and supplier requirements, environmental management systems, environmental charters, eco-labeling, environmental accounting, certification, environmental auditing, and public reporting requirements (Andrews, 1998; Borkey *et al.* 1999; Carmin *et al.* 2003; Jordan *et al.* 2005; Mazurek, 2002; Nash & Ehrenfeld, 1997; and Sinclair, 1997). All these different strategies evolve

[9] See, for example, Harrisson (2001) and OECD (1999, 2003).
[10] See, for example, the definition of self-regulation in Hillary & Thorsen (1999).
[11] A number of articles describe self-regulation and command-and-control regulation as discrete and opposing approaches. See, for example, Bernstein (1993), Buckley (1994), Nash & Ehrenfeld (1996) and Steinzor (1998).

along a spectrum of regulatory instruments where 'pure' government regulation and 'pure' self-regulation stand at opposite ends. In between, there are multiple forms of co-regulation (private self-regulation with some form of public oversight) that illustrate the diversity of regulatory instruments that have emerged in the last decade.

Management-based regulation

We are currently living in a period of intense regulatory reform, characterized by the proliferation of new regulatory instruments in the shadow of the state. As discussed above, in the environmental arena alone there are countless examples of innovative efforts to renovate regulation. One of them, central to this research project, is the concept of management-based regulation.

Regulatory instruments have typically been framed as performance-based (where certain outcomes must be achieved or void), or technology-based (where specific technologies or behaviors are mandated). Yet, Coglianese & Lazer (2003) point out the potential advantages of an overlooked third type of regulatory instrument: management-based regulation (also known as process-based or systems-based regulation), that requires firms to engage in their own planning and internal rulemaking efforts toward the achievement of specific public goals. The fundamental difference between these three types of regulatory instruments is the organizational stage that they target: technology-based instruments target the producing stage, mandating technologies or processes to be used; performance-based instruments target the output stage, specifying outputs that must be attained (Coglianese *et al.* 2003); as for management-based instruments, they intervene at the planning stage, "compelling regulated organizations to improve their internal management so as to increase the achievement of public goals" (Coglianese & Lazer, 2003, 694).

Management-based instruments are efforts to require or encourage a group of organizations to change their management practices and behaviors in ways that align their actions and outcomes with broader social objectives (Coglianese & Nash, 2004). These instruments do not require organizations to reach any specific outcome. In contrast, they

emphasize the importance of achieving environmental improvements while allowing managers the flexibility to choose their own internal planning and management practices in order to reduce their environmental impacts (Coglianese & Nash, 2004; Gunningham, 2009). By placing responsibility for decision making with those who possess the most information about risks and control methods, management-based instruments can be more efficient and effective than traditional regulation, while enabling and promoting innovative solutions (Coglianese & Lazer, 2003). More important, by allowing organizations to make their own rules, they are more likely to encourage voluntary responsibility and to facilitate performance beyond-compliance with minimum legal-standards (Gunningham, 2009).

Management-based regulation can take a variety of shapes and apply to a broad range of circumstances by different types of organizations. Coglianese & Nash (2004) divide management-based instruments in four categories, depending on whether they are sponsored by public or private agencies, and whether they are voluntary or mandatory: (1) the term 'Management-based regulation' usually applies when a governmental agency like EPA mandates an organization to strengthen its internal management (for example, under the US Clean Air Act, organizations are mandated to implement risk management plans); (2) when it is a private organization that mandates its suppliers or members to implement management systems, it is said that they are issuing a 'Management-based mandate' (for example, the American Chemistry Council requires all its members to be Responsible Care certified[12], and the Big-3 Automakers mandate all their tier-1 suppliers to be ISO 9001 and ISO 14001 certified[13]); (3) 'Management-based incentives' are government programs designed to persuade and reward organization to improve their internal management (like EPA's Performance Track Program and dozens of similar State sponsored programs like the Virginia Environmental Excellence Program); and (4) 'Management-based pressure' is created when a private organization tries to encourage others to improve their internal management, usually through the development of sector specific voluntary certification programs that require a commitment to implement a

[12] See, for example, Howard *et al.* (2000) and Prakash (1999).
[13] See, for example, Pezzoli (2000).

management system (there are multiple certification programs related with sustainable foresting and eco-tourism that require the adoption of environmental management practices). From a regulatory standpoint, all these examples of management-based instruments stand as perfect illustrations of the concept of regulatory capitalism described above, based on shared responsibilities and reliance on mechanisms of self-control, setting a form of 'meta-regulation' (Parker, 2002) in which government (and private organizations that want to control their facilities or suppliers), rather than checking compliance against prescriptive performance targets, encourage organizations to set their own self-regulatory system and oversight mechanisms, which are then examined by regulators or corporate auditors (Gunningham, 2009).

Evidently, the increasing importance of management-based regulatory instruments is associated with the growing popularity of standardized management systems. Without them, the job of regulated organizations, and particularly of the regulators that have to evaluate the reasonableness of those internal systems, would be much more complex. Management system's standards provide a framework that allows organizations to implement an effective internal management program, based on a thorough planning process that involves the assessment of risks and an in-built system of maintenance and review (Gunningham, 2009). The International Organization for Standardization, through the publication of a set of management standards that formalize a universally accepted framework for the development of management systems, has significantly contributed to the popularity of these management-based instruments and to their integration in the existing regulatory structure. One example is the *ISO 14001 Environmental Management Systems - Requirements with Guidance for Use* standard

Environmental Management Systems and ISO 14001

There is a growing popularity in the development of corporate management systems, and regulatory agencies and industry associations are increasingly experimenting with programs that mandate or reward the adoption of these instruments of internal control. These efforts have surpassed the environmental arena and today include, for example, quality management, food safety, finance, occupational health and safety, and social

responsibility (Staib, 2005). From a regulatory standpoint, these instruments sit in the middle of the regulatory spectrum. With hard regulation like command-and-control sitting on one side, and soft regulation like pure forms of self-regulation sitting on the other, management-based regulation like ISO 14001 stand somewhere in between, encompassing aspects of both hard and soft regulation. On the one hand, management-based regulation plays hard when it mandates the adoption of mechanisms to assure the compliance with command-and-control regulation, or when it requires independent third-party assessments to assure conformance to the standard. On the other hand, management-based regulation includes characteristics of soft regulation, in the sense that it passes to each organization the responsibility to define its own environmental objectives and environmental programs.

The first examples of EMSs were implemented in the early 1970s as a response to increasing regulatory pressure, and functioned mostly as a set of compliance management procedures. Until the mid 1980s, environmental management was considered a necessary evil, but as regulatory enforcement tightened, organizations had to strengthen their EMSs with auditing procedures not just for compliance assurance, but also for due-diligence of potential liability (Andrews *et al*. 2001; Davies & Mazurek, 1998). During the 1980s, there was an increase in corporate environmental awareness associated with, first, the institutionalization of auditing practices (partly because of the Toxics Release Inventory program), and second, the concept that pollution prevention pays[14]. If until the first half of the century environmental problems were characterized as externalities, since then, several reports[15] documented cases were pollution prevention investments produced economic benefits for both business and society (Andrews *et al.* 2001). From this evolution in terms of environmental awareness, it was not long before several organizations were recognizing the potential benefits of management systems as a way to identify cost-effective opportunities (reducing material inputs, energy consumption or waste production) and began to deal with environmental issues at the corporate level from a more managerial approach.

[14] Introduced by Royston (1979).
[15] See a review on this topic in Andrews *et al*. (2001).

An EMS is currently defined as a set of documented policies, processes and procedures, with the goal of ensuring the effective implementation of an environmental management plan, and compliance with environmental policy, objectives and targets. Generically, these management systems take the form of an environmental version of a 'plan-do-check-act' management process[16], that includes: a statement of the organization's environmental policy and goals; a planning process comprising the identification of environmental aspects and the definition of measurable environmental objectives; implementation procedures (responsibilities, training, and reporting requirements); procedures for monitoring and for dealing with preventive and corrective action; and a review process to refine both the goals and elements of the EMS itself. Basically, what the adoption of an EMS provides is the integration, at all levels of an organization, of a structured and systematic approach to manage environmental aspects, setting a clear definition of the organization's environmental values and the commitment toward regulatory compliance. Based on that, a range of different benefits may result from the implementation of an EMS: risk reduction (with implications in terms of liability, litigation, and insurance costs), identification of improvement opportunities, adoption of innovative practices, enhanced operational efficiency, internal cost savings, compliance assurance, improved relationship with regulators, improved documentation and data management, and increased environmental awareness (Andrews *et al.* 2003; Balikov & Cavanaugh, 1997; Gunningham, 2003; Roht-Arriaza, 1997; Staib, 2005; Stenzel, 2000; von Zharen, 2001).

The widespread use of EMSs has benefited enormously from the work of the International Organization for Standardization and the publication of ISO 14001. Released in 1995, this voluntary standard constitutes a template for the design of EMSs and aims to publicly certify that an organization has demonstrated a commitment toward regulatory compliance, prevention of pollution, and continual improvement. In order for a company to become ISO 14001 certified, it must be audited by a third-party certification body and demonstrate that it meets all the standard's requirements. Prompted

[16] Based on Deming's (1993) Total Quality Management.

by the success of ISO 9001 and several reports[17] praising the emergence of a revolutionary environmental corporate tool, a number of multinational corporations immediately mandated all their facilities and suppliers to implement EMSs, driving ISO 14001 certification to become a requirement for doing business in some industry sectors (Wood, 2003). As a result, the popularity of ISO 14001 now extends worldwide, reaching 159 countries and 223,149 certified organizations (ISO, 2010). Several countries are currently endorsing ISO 14001 EMS standards, as well as offering financial, administrative and regulatory incentives for companies that seek certification. There is also a growing movement demanding greater regulatory flexibility for businesses that have successfully integrated environmental issues into their management strategies (Andrews *et al.* 2003; Clapp, 1998).

Despite the early enthusiasm around ISO 14001 certification, there is still no conclusive empirical evidence that the implementation and certification of an EMS actually results in improved environmental performance (e.g. Andrews *et al.* 2003; Gunningham, 2003; King *et al.* 2005), and there are evidences that ISO 14001 certified facilities have been responsible for serious environmental accidents (Brown, 2004). Several authors have also questioned the importance of ISO 14001 as an effective policy instrument, emphasizing several of its limitations, for example: it fails to take in consideration environmental performance as it does not prescribe specific targets; continuous improvement is associated with management practices and not environmental performance; it does not ensure regulatory compliance neither does it promote disclosure of information; it does not distinguish good from poor performers; and it lacks reporting requirements (e.g. ANEC, 2003; Balikov & Cavanaugh, 1997; Clapp, 2004; Haufler, 1999, 2001; Krut & Gleckman, 1998; Morrison *et al.* 2000; Rodgers, 1996; Roht-Arriaza, 1996, 1997; Stenzel, 2000; Tickner, 1998; Zackrisson, 2000). This vast list of (more or less reasonable) limitations that have been associated with ISO 14001 certification, in contrast to the benefits described above, illustrates the considerable divergence regarding its potential. There are two explanations for this long-lasting controversy: the first one

[17] See, for example, Cascio (1996), Hillary (1997), Lally (1998), Parry (2000), and Stenzel (2000).

regards the turbulent origins of ISO 14001, and the second, its particular nature as a rare process standard (as opposed to the large number of performance standard available).

Even though the ISO is composed by a mixture of public and private actors, it has been argued that the decision making process within the organization is dominated by private industry interests, particularly representing industrial countries (Clapp, 1998; Nash & Ehrenfeld, 1997). The development of the ISO 14001 EMS standard was particularly criticized for its lack of transparency and for being highly dominated by industry representatives from the US. Clapp (1998) claims that about 400 representatives from US industry were actively involved against just twenty representatives from government or public interest groups. Their concern regarding the development of ISO 14001 was associated with fears that other EMS standards, such as the British BS 7750 or the European Union EMAS, could eventually become trade barriers for US industry. As a result, US representatives strongly disputed that the ISO 14001 should stand as the only globally accepted management standard and refused the idea that it could entail any performance or reporting requirements, basically allowing each organization to set its own environmental objectives and its own way to achieve them (Clapp, 1998; Roht-Arriaza, 1995).

Despite the fact that ISO 9001 and ISO 14001 may well be the most classic and popular examples of management-based regulation, because of their contentious birth, they were never quite understood as such. Based on the premise that 'the stricter the laws, the better the environment is protected', several authors insist on criticizing ISO system's standards for their lack of performance targets, when the standards were never intended to be framed as another performance-based instrument. Management-based strategies like ISO 14001 were based on a different theoretical foundation, that by improving internal processes organizations may attain substantial improvements in performance. The problem for the proponents of ISO 14001 lies in the fact that there is still no conclusive empirical evidence to support that theory (Gunningham, 2003). Moreover, there are concerns that the current adoption of management systems is not a strategic decision to deal with environmental issues at the managerial level, but simply efforts to improve

external image and competitive advantage (Coglianes & Nash, 2001), and that ISO 14001 oversight is very limited due to the lack of qualified and credible certification bodies and auditors (Stenzel, 2000).

Today, despite several examples of successful implementation and certification of EMSs (e.g. O'Brien, 2001), there are no conclusive evidences of the outcomes of ISO 14001 certification. In addition, considering all the conflict and criticism that was associated with the development of the standard, it is no surprise that so many perceive it as an industry tool to 'greenwash' the public and a pretense for governments to retreat from environmental regulation (Clapp, 1998; Wood, 2003). As questions rise regarding the value of an ISO 14001 certificate, one must ask whether the demands from certified organizations and the concessions made by public agencies are justified. More importantly, it is critical that we understand the relationship between process and performance, in order to discuss the role of management-based instruments shaping organizational behavior, and how management standards could fit in the broader regulatory framework.

Discussion

Thus far, I have tried to illustrate a trend that began with the emergence of 'legislation', passed by the explosion of 'regulation', until the surface of corporate 'governance', by describing the evolution of regulatory paradigms from the 'pure' forms of command-and-control and self-regulation, to the development of innovative management-based regulatory instruments like the ISO 14001 EMS standard.

Even though the roots of management-based environmental regulation can be linked to the original vision of NEPA back in 1969[18], its practical application is a recent phenomenon. To a certain degree, literature on ISO 14001 reflects the relatively new nature of management-based regulatory strategies. Despite the proliferation of articles pointing out the theoretical benefits and limitations of ISO 14001 certification, as well as

[18] The original version of NEPA (the first modern day environmental statute) was actually a process statute that directed federal governmental agencies in their operations, very similarly to the function that an EMS later came along to provide (Boling, 2005; Council on Environmental Quality, 2007).

some attempts to measure its outcomes in terms of environmental and economic impacts, there is but a relatively small body of empirical knowledge about these management-based instruments and how process-systems indeed leverage managers' efforts to improve environmental performance. It is striking that even with ISO 14001 increasingly important public policy role and the enthusiasm that has led to the certification of over one hundred thousand facilities worldwide, what comes out of most of the literature on this subject is the lack of robustness of the standard's requirements. In addition, despite the recent discrediting events in the auditing community that bring a cloud of suspicion over all certification schemes, the standardization, certification and accreditation bodies that are supposed to ensure the credibility of ISO 14001 certification have gone almost entirely unnoticed.

Gunningham & Rees (1997) argue that in order for self-regulatory instruments to become credible policy options, one must ensure, first, their capacity to build an industrial morality evidenced by principles and procedures that define right conduct, and second, their capacity to institutionalize responsibility, ensuring an effective commitment, accountability and transparency. Along similar lines, O'Neill (2002) suggests that if we need to place trust in (sometimes abstract) systems of control, it is crucial that we, first, investigate the claims we are invited to trust, and second who are those putting them forward. Based on that, it is my goal to contribute to a deeper empirical understanding of management-based regulation, by exploring a paradigmatic example like ISO 14001 EMS certification, along two distinct lines of inquiry. In Part A of this dissertation, I am going to clarify the intent of ISO 14001, and explore how in reality the adoption of an ISO 14001 EMS promotes self-regulatory capacity and contributes toward effective environmental protection. In Part B, I describe the accountability structure of ISO 14001 certification and discuss the threats that endanger the credibility of this instrument. I hope that this work will foster our comprehension of how management-based regulation functions in reality and how it should evolve in order to become an effective regulatory strategy for environmental protection.

The following chapter reviews the different strategies that scholars have employed to evaluate ISO 14001, and, in more detail, describe the goals, objectives and methodology of this research project.

Chapter III
Research Methods

Introduction

As ISO 14001 certification increases and questions regarding its public policy role rise, several scholars have attempted to evaluate the outcomes of adopting an ISO 14001 EMS. However, what seems like an apparent straightforward task, measuring outcomes against a specific set of objectives can actually be quite complex. First, because there is no accepted understanding of the goals of ISO 14001 that would allow measuring the program's effectiveness against them. Even members of the standard-setting committee, testifying before the U.S. Congress[19], expressed conflicting expectations about the function of ISO 14001 (King *et al.* 2005). Second, methodologically it is also extremely difficult to make a fair assessment of some of the claims associated with EMS certification. Assuming that metrics could be developed to assess, for example, increased environmental awareness, it would be problematic to assume a direct relationship between some outcomes and the implementation of an EMS.

This difficulty regarding the evaluation of ISO 14001 is peculiarly illustrated by Freimann & Walther (2001), who attempted to review the impacts of EMS certification, and ended up highlighting the limitations of empirical research in the field of environmental management. Because of that, it is no surprise that most authors interested in ISO 14001 have avoided a comprehensive program evaluation and rather decided to study EMS certification through a narrow assessment of benefits and limitations along pre-defined dimensions. For example, Switzer *et al.* (1999) aimed to answer whether the adoption of ISO 14001 led to improvements in environmental performance, and, emphasizing the difficulties encountered, limited their analysis to a comparison between environmental management goals established before and after ISO 14001 certification. Others[20], like Rondinelli and Vastag (2000) choose an in-depth case study to evaluate

[19] The Increasing Importance of International Standards to the U.S. Industrial Community and the Impact of ISO 14001. June 4 1996. Hearing before the Subcommittee on Science. U.S. House of Representatives. Washington: US Government Printing Office.

[20] Other case studies are for example Bekkering & McCallum (2000), Bouma & Kamp-Roelands (2000), Cockrean (2000), Curkovic & Sroufe (2010), delBrio *et al.* (2001), Hughes & Kemp (2000), Morrow &

why companies adopt EMSs and how management and employees deal with their environmental impacts. Morrisson *et al.* (2001) evaluated ISO 14001 potential to advance sustainable development based on the role of ISO in the development of the standard and on the requirements of the certification process. These examples illustrate the diversity of strategies to evaluate ISO 14001, but many more exist with a stronger focus on economic aspects[21], regulatory compliance[22], auditing[23], management and administration[24], collaboration[25], trade implications[26], or sustainability[27].

A common topic across ISO 14001 literature is, paradoxically, the lack of knowledge on how the standard is applied in reality and how it promotes change across certified organizations[28]: "*Despite their [management standards] importance, the function of these institutions remains poorly understood. (…) Why firms choose to certify, how certification influences behavior, and how outsiders interpret certification remain largely unknown*" (King *et al.* 2005). Perhaps the two most comprehensive attempts to evaluate ISO 14001 implementation in the US came from the Department of Public Policy at the University of North Carolina at Chapel Hill, in association with the Multi-State Working Group on EMSs, the Environmental Law Institute, and the National Academy of Public Management: First, in NAPA (2001), a group of scholars tried to evaluate whether ISO 14001 certification can produce credible and consistent results. They analyzed what the

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Rondinelli (2002), Serafin *et al.* (2000), Switzer *et al.* (1999, 2000), Toffel (2000), Valdez & Chini (2002), and Yap (2000).

[21] For example Heras-Saizarbitoria *et al.* (2011), Freimann & Walther (2002), Hamschmidt & Dyllick (2001), Hughes & Kemp (2000), Vastag & Melnyk (2002), Watson & Emery (2004).

[22] For example Potoski & Prakash (2005b).

[23] For example Ammenberg *et al.* (2001), Potoski & Prakash (2005a), Switzer & Ehrenfeld (1999), Taylor *et al.* (2001), Watson & Emery (2004), Zutshi & Sohal (2002).

[24] For example Ammenberg & Hjelm (2003), Evangelinos & Halkos (2002), King & Lenox (2001).

[25] For example Ammenberg *et al.* (2000), Tack (2000).

[26] For example Bellese *et al.* (2005), Gunningham (1996), Nishitani (2010), Pfliegner (1997), Prakash & Potoski (2006), Raines (2003), Roht-Arriaza (1995).

[27] For example Andrews *et al.* (1999), Krut & Gleckman (1998), Steger (2000), Taylor (1998), Watson & Emery (2004), Welch *et al.* (2003).

[28] "*While the potential environmental benefits of the ISO 14000 environmental management standards are substantial, there are many unanswered questions about how they will be applied in practice and their ultimate effect on environmental quality*" (Morrisson *et al.* 2001, 2). "*Relatively few studies have explored the motivations of firms adopting and certifying EMS and even fewer have examined the results or impacts on the companies that do so*" (Morrow & Rondinelli, 2002, 159). "*Little empirical information exists and few in-depth case studies have been done on the effects of adopting an ISO 14000-certified EMS*" (Rondinelli and Vastag, 2000, 500).

ISO 14001 standard is intended to do, and how the certification system is operated. Second, Andrews' *et al* (2003) tried to assess how EMS implementation affects a facility's environmental performance, regulatory compliance, and economic performance, based on a longitudinal survey[29] of certified organizations. Both these projects made a substantial contribution to the debate on the value of ISO 14001 across two critical dimensions: Andrews *et al.* (2003) look at the outcomes of EMS implementation, and NAPA (2001) focuses on the credibility of the certification system. It is my intention to contribute to this body of knowledge and discuss the conditions under which management-based instrument like ISO 14001 could become credible and effective regulatory strategies. In order to evaluate how the ISO 14001 EMS standard is applied in reality, this exploratory study relied on an alternate, yet to be examined[30], source of data: the environmental auditors responsible for the implementation and verification of thousands of ISO 14001 EMSs certified in the US. Based on a series of in-depth interviews, I explored their privileged insights on certified organizations, with the goal of assessing the outcomes of ISO 14001 certification (in terms of its capacity to promote organizational self-regulatory powers and contribute toward effective environmental protection) and in terms of the credibility of the certification process.

At this point, I should emphasize that the scope of this research project pertains only to ISO 14001 certification in the United States. Although ISO 14001 is an international standard, whose certificates are globally issued by multinational certification bodies, there are suggestions[31] that certification practices are not consistent worldwide. It is not the purpose of this project to evaluate and contrast certification practices in different parts of the world. Therefore, the geographical scope of this research is limited to certification practices in the United States

[29] Other large scale surveys were conducted by ANAB (in press), Aravind & Christmann (Forthcomming), Corbett & Russo (2001), Darnall (2001), Delmas (2000), Franchetti (in Press), Hamschmidt & Dyllick (2001), Heras & Arana (2010), Raines & Haumesser (2002), REMAS (2006), Vastag & Melnyk (2002).
[30] Taylor *et al.* (2001) and Zutshi & Sohal (2002) seem to be the only authors that that studied ISO 14001 based on the perspective of environmental auditors, yet, their analysys was limited to ISO 14001 certification in Australia.
[31] "*I would say northern Europe and the US have stronger more robust certificates and probably less of them. The places where you have hundreds of thousands of certificates and where you have coffee shops that are certified, those are where you're not going to find robust certificates*" Interview with subject #0964 held on January 8 2007.

Research Questions

The goals of this research project are to evaluate the role of the ISO 14001 EMS standard encouraging organizations to self-regulate their environmental impacts and to clarify the message that an ISO 14001 certificate conveys about the certified organization. I hope that this work will contribute to our understanding of how management-based regulation functions in reality and under what conditions this particular type of regulatory instrument can be trusted as an effective strategy toward environmental protection. Relying on environmental auditors' lived experiences with organizations involved in the ISO 14001 certification process, this project is grounded on Gunningham & Rees' (1997) analysis of self-regulation both in terms of its capacity to build industrial morality and institutionalize responsibility, based on which I pursued two distinct lines of inquiry:

- First, I attempted to evaluate the role of ISO 14001 in terms of its **capacity to promote environmental responsibility and self-regulatory powers**. The questions that I pursued were: (1) what are the goals and requirements of the ISO 14001 standard, and how are those interpreted by environmental managers and auditors? (2) What are the motivations for organizations to adopt and certify an ISO 14001 EMS? (3) From the auditors' perspective, what are the outcomes for organizations that get ISO 14001 certified? And, (4) what are the reasons behind any variance among certified facilities?

- Second, I explored the **credibility of the ISO 14001 certification process**. Here I attempted to understand (1) who are the actors involved in the conformity assessment of ISO 14001 certification in the US? (2) How the certification system functions and what steps are taken to ensure that certification produces credible and consistent information? And (3) what are the legitimacy threats that exist within this accountability structure?

A Qualitative Approach

Typically, the study of ISO 14001 and the evaluation of similar types of innovative regulatory programs relies on one of the following two approaches: a qualitative case study where a small number of organizations agree to share their experiences as program participants, or a positivist approach where information from a much larger sample of participants is collected (through a survey or from publicly available databases) and subject to a statistical analysis. If the first approach has strong limitations since it relies almost exclusively on self-reported data, the second fails to take into consideration all the nuances that could affect organizational behavior, while ignoring a myriad of potential impacts that simply cannot be quantified.

The approach that I adopted is distinct in the sense that it relies on the emic perspective of environmental auditors (and a small number of other actors associated with the ISO 14001 conformity assessment system) as sources of data. There are over two hundred accredited Lead Environmental Auditors in the US, responsible for the certification of over five thousand facilities (ISO, 2010). These environmental auditors are not only responsible for the street-level interpretation of the ISO 14001 standard, but more importantly, they benefit from an embedded perspective of the certified facilities. These auditors typically follow an organization throughout an entire audit cycle (3 years), and have the opportunity to evaluate the strength of its environmental goals, the resources invested in its environmental programs, and the environmental objectives achieved. An auditor will also sense the environmental culture of the organization and evaluate the environmental awareness of its workforce, from top-management to the lower-level collaborators. Finally, the auditor will also have access to all regulatory compliance records, as well as community outreaching activities. Despite the potential lack of independence between the auditor and the certified organization, it is very likely that this source of data is somewhat more independent and reliable than that from any direct collaborator of the organization such as its environmental manager. Because of that, it is curious, why such a valuable source of information has been largely ignored by the academic community.

Overall, this approach proved to be very well suited and appropriate to the questions I was pursuing. It was surprising to notice the interest that this project raised among the environmental auditing community, the auditors' willingness to participate in the study, and the dozens of interviews that lasted longer than the scheduled 45 minutes. Environmental auditors were eager to talk about the nuts and bolts of the certification process, as well as its benefits and limitations[32]. More importantly, auditors proved to have a vast knowledge on the behaviors and actions of certified organizations, which was a critical component in order to evaluate the significance of an ISO 14001 certificate. It was particularly rewarding the fact that many auditors were thankful for having someone willing to give them a voice and a chance to tell their 'side of the story'. Because of that, the vast majority of them talked openly not just about the success stories, but also, about the problems that threaten the credibility of the auditing industry[33].

Theoretical Foundation

Qualitative research is an effort to understand situations in their uniqueness, where the analysis strives for depth of understanding (Patton, 1985). Common characteristics of qualitative research are the focus on an emic perspective, having the researcher as the primary instrument for data collection and analysis, an inductive process, and its richly descriptive nature (Merriam, 1998). According to Patton (1990), qualitative methods have been increasingly used for program evaluation and policy research.

This particular research project is guided by a constructivist paradigm. This is based on a relativist approach, where realities are apprehended in the form of mental constructions, socially and experimentally based. This approach is particularly effective when the aim of the inquiry is to understand the reality constructions people hold. The constructivist

[32] "*Absolutely, I mean, when you talk about change… I am loving this discussion! … there are three things that require people to make a change in their culture (…)*" Interview with subject #0073 held on December 2 2006.

[33] "*If you can write a dissertation on it and get some attention with the press, I am all for it because we need to change this. We are not doing a service to the country, we are not doing a service to the world, and most importantly we are not doing a service to companies that are embracing ISO by telling them that they are all right*" Interview with subject #0073 held on December 2 2006.

paradigm relies heavily on the interaction of the investigator and the object of the investigation so that findings are created as the research proceeds. Because of the personal nature of the realities presented, it is important for the researcher to interact with each individual in order to elicit and refine each of the individual constructions (Guba and Lincoln 1985).

In order to explore the significance of an ISO 14001 certificate, I conducted this research through a phenomenological strategy of inquiry. The term phenomenology was introduced by Deutscher (1973) and is based on the notion of understanding social behaviors from the actor's perspective. A phenomenological study describes the meaning of the lived experience for several individuals about a concept or phenomenon (Creswell, 1998). In this particular research, my goal was to explore the lived experiences of environmental auditors on their daily interactions with organizations seeking (or already holding) ISO 14001 certification. Through semi-structured interviews, I attempted to discuss their perceptions and observations about ISO 14001 certified organizations, namely, their enthusiasm and motivation toward the certification process and the types of environmental objectives and environmental programs that were implemented. In addition, based on the achievements observed by the auditors, we would explore the outcomes of the certification process and whether did this process make any difference for the certified organizations. Most importantly, we constantly tried to recover real life examples that the auditors had witnessed to illustrate the strengths and limitations, successes and failures, of the ISO 14001 certification process.

Typically, a phenomenological study requires the researcher to bracket his preconceived ideas about the phenomenon in order to understand it through the voices of the informants (Field & Morse, 1985), and then formulate questions that explore the meaning of informants' everyday lived experiences (Creswell, 1998). Most commonly, this information is collected through long interviews with a number of informants ranging from five to twenty-five (Polkinghorne, 1989). The remaining sections will explore in more detail how research participants were selected, how data were collected and analyzed, as well as the limitations and ethical constraints of this study.

Data Collection

Qualitative research involves the collection of a variety of empirical materials. Data collection is usually extensive, drawing on multiple sources of information such as interviews, observations, documents and reports, and audiovisual materials (Merriam, 1998). The central piece of this research project regards environmental auditors' perceptions of ISO 14001 implementation and certification. Therefore, data collection consisted mostly of interviews with accredited Lead Environmental Auditors. Morse & Richards (2002) suggest that when the researcher knows enough about the domain of inquiry to develop questions about a topic but not enough to provide the answers, it might be appropriate to use semi-structured interviews. As it was in this case, a semi-structured questionnaire was prepared (see Appendix V) focusing on auditors' interpretations of the goals and requirements of the ISO 14001 standard, their perceptions regarding certified facilities' motivations and outcomes, as well as their assessment of the ISO 14001 conformance assessment system.

Although this research involved no more than minimal risk to participants, I followed Human Subjects' research guidelines very strictly. I developed an informed consent form explaining participants' their rights and responsibilities (see Appendix VI): upon their consent, interviews were audio recorded, and unless specifically authorized by any participant, all the information regarding their identity or the identity of any individual or organization was kept confidential. In addition, to ensure that this project was conducted ethically and to minimize the chance of any errors or imprecisions occurring during the data collection process, I shared all the interview transcripts with research participants so that they could edit, delete or amend any statements made. I also developed a research website (see appendix IV) where participants could find more information about this project. Finally, it was only after I obtained permission by the Virginia Tech's Institutional Review Board that I began contacting research participants.

A critical aspect in this study was the selection of research participants. Patton (2002) says that nothing better captures the difference between qualitative and quantitative

research than sampling approaches. If in quantitative research, sampling is usually associated with random selection and statistical probability theory, in qualitative research, sampling focuses on the purposeful selection of a small number of cases. While purposeful sampling introduces bias in any quantitative study, in terms of qualitative research it becomes a strength, as it allows for the selection of cases that are rich in information about issues of central importance to the purpose of the research.

There are over two hundred Lead Environmental Auditors in the US accredited by RAB-QSA International. Their personal information, including name, contact, employer and accreditation date is publicly available. One straightforward way to select a sample of participants would be to randomly select from the RAB-QSA's directory. Such an approach would deal with some of the validity threats associated with qualitative research, but would not necessarily maximize the quality of the information collected and ultimately the value of this study. As Stake (1995) warns, the first criterion one should use is to maximize what we can learn. In addition, Creswell (1998) suggests that participants in a phenomenological study need to be carefully chosen to be experienced individuals. With that in mind, purposeful sampling techniques were used in order to identify those individuals that would provide the richest information.

The approach that I adopted combined criterion and snowballing sampling strategies (Miles and Huberman, 1994). First, I tried to identify a small number of experienced auditors that have been involved with ISO 14001 in the United States since its early development. I relied on a web-forum[34] (dedicated and maintained by system's auditors) to identify individuals that seemed more willing to talk about their work and that reflected an experienced and independent view. I contacted five auditors through this forum (see invitation letter on Appendix II): one did not respond, two declined to participate, and two agreed to be interviewed (although just one of them was able to commit to an interview appointment). Nevertheless, this first interview was enough to get several snowballs rolling. On the following days I was contacted by a number of

[34] Elsmar Cove Forum (www.elsmarforums.com)

auditors who were interested in taking part on the study, and who kept a growing number of snowballs rolling for several months.

As environmental auditors are scattered all over the country and due to cost-limitations, most interviews had to be conducted over the phone. Nevertheless, I wanted to conduct some in-person interviews to ensure that the distance between interviewer and interviewee could not influence participants' responses. To deal with that, I used the RAB-QSA directory to identify and contact twenty Lead Environmental Auditors living in the states of South Carolina, North Carolina, Tennessee, Virginia, West Virginia, Washington D.C. and Maryland (see Appendix I). Of those twenty auditors, ten did not respond to my request, two declined to participate, and eight agreed to take part in this study (although two of them could not commit to an interview appointment). To my surprise, the majority of these auditors did not like the idea of being interviewed in person. With the exception of one EPA official who I met at the EPA HQ, all other interviewees suggested that I meet them at a neutral location: one at a restaurant, two in public libraries and the other three at their homes. Also, one of these auditors initially refused to have the interview audio recorded (there were just two out of 45 participants that refused to be recorded), and it was only after we were done with the interview that he shared some of the most sensitive information. Although these in-person interviews were not substantially different from the ones I had conducted over the phone so far, I had the impression that these auditors were more reserved and cautious on their answers. Contrary to my initial belief, and perhaps because the long distance may contribute to a sense of anonymity, sensitive issues seemed more likely to come up during phone interviews.

After this cycle of in-person interviews and about halfway through the data collection process, I feared that this snowball sampling strategy could point me only in the direction of experienced and popular auditors whose views could be different from the average pool of auditors. Consequently, I decided to purposefully select less experienced auditors and test whether there were indeed any differences based on their professional experience. I went back to the RAB-QSA directory and identified all the Lead

Environmental Auditors that had been accredited between 2005 and 2007, and successfully interviewed 6 of them. This approach was not totally successful in the sense that the date of accreditation is not a very good indicator of auditors' experience, but it led me to conclude that my initial concern was redundant. The majority of the recently accredited auditors that I talked to had several decades of experience with environment and quality management systems. The typical auditor is semi-retired with many years of experience working with EMSs in a specific business sector, and the figure of the 'out-of-college' inexperienced auditor does not exist[35]. As an example, the youngest auditor that I interviewed had almost ten years of experience working with EMSs, and had been doing about fifty audits a year since he became a full time auditor[36].

Another issue that arose during the final stages of data collection was the geographical distribution of the participants. Because I had several snowballs that began rolling on Virginia and neighboring states, I ended up with a fairly large representation of East Coast auditors. As I was not sure whether this could skew the findings of my study, I used the RAB-QSA directory to identify several auditors located on the West Coast. I interviewed 6 more auditors from California, Colorado and Oregon, and concluded that their answers were very similar to what I had heard until that point. In addition, on the later stages of the data collection I began asking participants whether they would limit their work to a particular geographical location and whether there could be any regional differences in terms of auditing approaches. I learned that auditors' location says very little of where they actually audit, and the issue of there being any regional differences was quickly eliminated[37]. One day they may be auditing in Florida and the next day they are in California. As one auditor told me, her average work week was "*I would leave Monday morning, go to the airport and I would come home either Friday night or*

[35] "*A graduate, and I got one here with a masters in environmental engineering but he has never been on a project, so no hands on experience… I am having trouble getting him into the pool because he hasn't had his fingers in one way or the other. Most of our auditors, I don't think we have any auditor that we have hired that is less than 40 years old*" Interview with subject #0958 January 2 2007.
[36] Interview with subject #0228 held on December 6 2006.
[37] "*Only a portion of my work is on the West Coast, I fly everywhere. Although I try to stay in the western region I have gone all over the United States and down to a border town in Mexico. I've gone down to Trinidad this past year and I did an audit in Germany and an audit in the Netherlands so…*" Interview with subject #0108 held on January 12 2007.

Saturday morning… I do that 45 weeks a year"[38]. Again, the concern that my sample could be skewed proved to be a non-issue.

Three months after I started the data collection, I was getting close to the 40th interview and I realized I had reached saturation. I had gotten to a point where I was conducting interviews almost mechanically, to the degree that I often knew everything I was going to hear after talking with an auditor for the first five minutes. I decided to let the snowballs slowly fade and I decided it was time to complement the auditors' experiences with the perspectives of other actors such as Certification Bodies' managers and Accreditation Bodies' members.

All interviews were conducted between November 2006 and February 2007. Overall I ended up interviewing 40 Accredited Lead Environmental Auditors, some of which contributed to this project not just as simple EMS auditors, but as members and top negotiators of the US Technical Advisory Group and ISO's Technical Committees, EMS consultants and trainers, certification body managers, accreditation auditors and as managers of other environmental management certification programs. I also talked with staff members of ANAB and RABQSA. In addition, I talked with an EPA official associated with the Office of Policy, Economics, and Innovation, one litigation counsel of the Department of Justice responsible for the inclusion of EMS certification requirements in plea agreements, and the chairman of the Council on Environmental Quality responsible for the Coalition for Implementation of ISO 14001.

Finally, once I concluded this final set of interviews, I spent a significant amount of time going through another untapped and wealthy source of information, essential for the triangulation of the interviews' data I had collected so far. As I mentioned before, the Elsmar Cove is an internet forum dedicated to business standards, where systems' auditors (mostly quality and environmental) communicate on-line. There are over 60,000 registered visitors to this site, that have contributed with more than 250,000 posts on the several forums dedicated to different business standards and conformity assessment

[38] Interview with subject #0191 held on January 13 2007.

procedures. The ISO 14001 forum alone has over 4,500 posts, many of which are related with the interpretation of standard requirements. There is also a forum dedicated to Certification issues (with 3,500 posts) and another for Accreditation processes (2,000 posts), through which auditors conduct an informal benchmarking process which is filled with rich information on the context of this research project (What's Going On in the Elsmar Cove Forums, 2008). I extensively read the contents of these forums and I collected all the materials that were pertinent to this project. Most of the dialogues between these auditors are very similar to the interviews I conducted and were analyzed simultaneously.

Data Analysis

As is common in most qualitative work, my data collection and analysis proceeded simultaneously. My initial goal was that throughout the four months that lasted the data collection process, I would be able to transcribe regularly so that I could analyze and collect the data simultaneously. Initially I was able to keep a steady pace of transcriptions that, early on, allowed me to adjust the research questionnaire and my approach as an interviewer, and simultaneously, start seeing trends during those first conversations. Nevertheless, as the several snowballs I had rolling picked some speed, I was no longer able to transcribe at the same pace and eventually had to let some of the data analysis to be completed after the data collection process was concluded.

The first step of a phenomenological data analysis consists of arranging the data into statements (Creswell, 1998). Fully transcribing over fifty hours of interviews was a very lengthy process. Nevertheless, it was through that process that I intuitively initiated the development of theoretical concepts, and that allowed me, once I finished transcribing, to immediately write a first draft of the key findings of this project. Once I finished transcribing all the interviews and compiled all relevant information from the Elsmar Cove forums, I initiated the coding process. The goal was to arrange the data into themes that facilitate comparison between things in the same category and that aid in the development of theoretical concepts (Strauss, 1987). I read all the transcripts multiple

times and I highlighted key statements, which I would later arrange into different category documents.

Although I never developed a formal coding key, I started dividing these statements into several categories (documents). I began with two broad topics, 'management' and 'auditing', that I continuously refined into narrower categories. These categories, labeled by codes (units of meaning), were created as I was re-reading each set of statements and later became the key themes of this project. The final part of the data analysis consisted of tying together these themes and selecting illustrative statements in order to make a valid and significant description of the auditors' experiences.

Research Quality

Multiple perspectives exist regarding the importance of verification in qualitative research. Some (Goetz & LeCompte, 1984), claim that qualitative research has been criticized for its failure to adhere to standards of reliability and validity in the traditional scientific sense, and pay particular attention to threats common in experimental design. Others (Lincoln & Guba, 1985), believe that the language of positivist research is not congruent with or adequate to qualitative work. In this search for the right standard of quality, that obviously depends on one's philosophy and research paradigm, I am particularly fond of Maxwell's (1996, 106) straightforward and commonsense view of validity as the "correctness or credibility of a description, conclusion, explanation, interpretation, or other sort of account," and the notion of validity threats as "ways you might be wrong." To rule out those threats, to promote trustworthiness and the highest quality throughout this research process, I utilized the following strategies:

- Triangulation - through multiple data sources and methods, this strategy provides corroborating evidences (Creswell, 1998), allows a better understanding of a situation (Merriam, 1998) and a better assessment of the generality of the explanations that one develops (Maxwell, 1996). In terms of data sources, I relied above all on interviews with environmental auditors. Nevertheless, that information was complemented with another important source provided by an auditor's internet forum, whose posts

provided innumerous examples of situations discussed during the interviews. That information had the benefit of having no researcher's influence. I was a mere observer of these discussions and I never participated or induced any of these on-line conversations. As for data collection methods, like mentioned above, I opted for conducting both in-person and phone interviews, to assure that there was no significant disparity in the data collected. Again, despite my initial concerns, the distance created by the phone conversations was never an obstacle for the openness and honesty of the conversations.

- Member checks (or respondent validation in Maxwell, 1996) consist of taking data, analyses, interpretations, and conclusions back to the participants so that they can judge the accuracy and credibility of the account (Creswell, 1998). Stake (1995) adds that participants should be asked to examine drafts of the researcher's work and to provide alternative language, critical observations and interpretations. Lincoln & Guba (1985) consider this strategy as the most critical for establishing credibility. My strategy here was to carry out a simple validation process, by sending to each research participant the transcript of our conversation and ask for any comments or edits that needed to be made (see Appendix III). This way, research participants had an opportunity to confirm the reliability of the information that was shared, but at no point were they given the possibility to discuss the analysis of that information. The vast majority of the participants had no comments on the interview. Only eight of the interviewees actually made some changes to the transcript, most of them minor edits. Just one of the participants made substantial changes to the transcript, deleting substantial parts of the conversation in order to protect his identity.
- Rich and thick descriptions provide detailed accounts of the cases and evidences for the researcher's findings (Maxwell, 1996), besides allowing the reader to make decisions regarding transferability (Creswell, 1998). As the reader will notice along the remaining chapters of this dissertation, a great deal of effort was given to illustrate every argument with the words of the research participants. The voice of the auditors, through their many experiences, stories and accounts set the tone for this dissertation, and will allow the reader to attest the validity of this project.

Methodological limitations can be pointed out to almost any study that has attempted to evaluate ISO 14001 (Freimann and Walther, 2001). This research project is no exception. I acknowledge that the methodology that I adopted does not provide a flawless evaluation of ISO 14001. Indeed, it is important to emphasize that my purpose is more limited in the sense that I am mostly interested in sharing the experiences of those individuals that deal with organizations adopting and certifying EMSs on a daily basis. When trying to study changes in organizational behavior, one needs to balance the depth of the information provided with its veracity. I recognize that an obvious way to study ISO 14001 is to discuss its impacts with organizations' environmental managers. Such approach would have the limitations of studying only those organizations that consent to participate and the veracity of the self-reported information would be difficult to confirm. For that reason, I pursued a different approach by relying on individuals that may not have enough in-depth understanding on the practices of a particular organization, but that have an embedded and comprehensive perspective on dozens (and sometimes hundreds) of organizations that have adopted and certified EMSs. In addition, I emphasize that the responsibilities of environmental auditors transcend the audit practice. Their role as trainers and consultants, provides them with the in-depth organizational knowledge that most employees likely do not have.

As for limitations that have been typically associated with qualitative research, for example, accusations of lack of rigor and erroneous conclusions associated to the subjectivity of the researcher, I can simply argue that those can be found in every naturalistic approach lacking the rigor of experimental design. It is time that we start perceiving these not as limitations of a study, but as a distinct strength of qualitative research. Accounts made through extensive data collection (through different sources and methods), detailed descriptions, and even the role of the participants assessing the credibility of the study, all add to the value of this research project. In addition, I urge the reader not to skip the hundreds of quotations on footnote, as they not only provide the foundation for my arguments, but they also eloquently illustrate the highlights and drawbacks of the ISO 14001 certification process.

Despite the strengths and the obvious limitations of this methodology, I believe that this study can make a significant contribution to the goal of better understanding the importance of the ISO 14001 standard, and explore the circumstances under which it can help organizations regulate their environmental impacts and used as an effective regulatory tool of environmental protection. I shall now give voice to the environmental auditors, as well as the other actors associated with the certification of EMSs, that have participated in this project.

Part I

A Decade of ISO 14001: Is There a Jubilee to Celebrate?

Chapter IV

The Birth of a Global EMS Standard: Industry perceptions on ISO 14001

Introduction

One decade after its release, the ISO 14001 EMS standard has reached 159 countries with close to 225,000 certified organizations (ISO, 2010). Several industry sectors, like the automotive and chemical industry, have embraced the adoption of EMSs, often mandating their suppliers and contractors to seek ISO 14001 certification[39]. Not only has it been widely accepted by the private sector, but ISO 14001 has also received the attention of several governmental agencies that are endorsing the implementation of EMSs (EPA, 2006). ISO 14001 EMSs are also increasingly used by governmental agencies as a criterion for public policy benefits such as favorable public recognition and regulatory flexibility[40].

As industry mandates for certification increase and the pressure for administrative and regulatory benefits for certified organizations rise, the function and impact of ISO 14001 remains poorly understood (King *et al.* 2005). Throughout this chapter, I try to clarify what the ISO 14001 EMS standard is and the message that an ISO 14001 certificate conveys to the public and policy-makers. Through the lenses of environmental auditors and standard developers, I explore the origins of ISO 14001, the purpose and requirements of the standard, the misconceptions surrounding ISO 14001, and the motivations that drive organizations to become certified.

Research Context

The ISO 14001 EMS standard was published September 1, 1996. It is the most widely known international EMS standard, and it represents the cornerstone of the ISO 14000 family of environmental management standards. ISO 14001 is not a traditional performance standard, as it does not set specific targets that organization must comply

[39] In 1999, the Big Three Northern American auto-assemblers (Ford, General Motors, and Daimler-Chrysler) required all their tier-1 suppliers to attain ISO 14001 certification by 2003.

[40] There are several State programs that require the adoption of Environmental Management Systems. Popular examples are the Virginia Environmental Excellence Program and the Clean Texas Initiative. For a complete list of these programs see www.epa.gov/performancetrack/states

with. Instead, it is a systems standard based on the "plan-do-check-act" process for total quality management (Deming, 1993), that simply calls for organizations to conduct their environmental affairs within a structured management system and integrated with overall management activities (Bell, 1997). Basically, the ISO 14001 standard sets guidelines for the implementation of an EMS that includes eight key procedural elements (Edwards, 2004; Whitelaw, 2004):

- Development of an environmental policy;
- Identification of environmental aspects and evaluation of associated environmental impacts;
- Establishment of relevant legal and other requirements;
- Definition of environmental objectives and targets;
- Implementation of a documented system of operational procedures;
- Monitoring and measurement of operational activities;
- Internal auditing and corrective actions;
- Management review of the system.

Simply put, ISO 14001 is a framework within witch organizations can establish and identify their obligations, set their objectives and targets, and create a comprehensive system of internal procedures that will contribute to the integration of environmental issues with normal business operations. The ISO 14001 requirements are relatively simple, as the standard aims to provide a basic EMS framework, while granting the flexibility that allows any organization (independent of its nature, size or location) to implement an effective EMS (Gallagher & Andrews, 2001). In fact, Bell (1997, 82) cautions that "ISO 14001 is not the state of the art in EMS thinking: it is EMS for everyone". When an organization wants to publicly demonstrate its commitment towards environmental management, or simply to satisfy a client or corporate demand, it can seek an independent ISO 14001 EMS certification. These certificates are issued by a third-party, a certification body (also known as registrars), specially accredited to conduct ISO 14001 certification audits (Baker & McKiel, 1997).

According to the latest ISO survey (ISO, 2010), after more than a decade since the standard was released, the interest in ISO 14001 continues to grow. There were 34 thousand new certificates issued in 2009, for a total of 223 thousand ISO 14001 certified organizations spread over 159 countries. The increasing popularity of ISO 14001 has promoted an intense debate among auditing professionals, environmentalists, public officials and academics over the value of ISO 14001 certification. As a result, a large and diverse body of literature has emerged in the last decade.

On the one hand, professional literature (e.g. Block, 1996; Cheremisinoff & Bendavid-Val, 2001; Parry, 2000) has tended to promote a vast array of certification benefits associated with organizational culture, improved overall management, worldwide consistency, waste minimization, improved public image, customer satisfaction, readiness for future regulation, improved relationships with regulators, reduced costs, access to financial incentives, improved market access, and increased likelihood of long-term sustainability. The reasoning for all these benefits is that, theoretically, a "facility with an EMS can demonstrate more reliable performance, can document its reporting requirements more efficiently and thus be inspected more quickly, and will have procedures for more consistently reducing the frequency of accidents, spills, and other environmentally damaging events" (Andrews *et al*. 2003, 2). This provides opportunities for organizations to go beyond compliance and to minimize unregulated environmental impacts while reducing government's inspection and enforcement costs.

On the other hand, critics have pointed out numerous limitations of ISO 14001. Even before the standard was released, several authors questioned the proclaimed benefits of ISO 14001: "*a new environmental management system is touted as a vaccine against command-and-control regulation, but does the reality match the hype?*" (Begley, 1996). Gleckman & Krut (1997) have been loud detractors of the standard, accusing ISO of positioning the 14001 standard as a 'green seal' of environmentally-sound business operations, of reversing the direction of global environmental performance standards, of being retrograde in comparison to Agenda 21, of not supporting any international environmental convention, of being a step backwards in terms of greater disclosure of

environmental information, and of failing to demonstrate good corporate EHS performance. Later they classify ISO 14001 as a missed opportunity towards sustainability (Krut & Gleckman, 1998; Watson & Emery, 2004). Tickner (1998) also pointed several problems, like the standard's shortsighted definition of pollution prevention focusing on end-of-pipe controls and its lack of benchmarking opportunities. Strachan (1997) further argues that the standard is too concerned with controlling and monitoring of environmental impacts, while neglecting the responsibility of continuously raising environmental standards. Brown (2004) adds that managers are now shifting their attention from improving environmental performance to merely completing procedures and 'getting the box checked'. Morrison *et al.* (2000) warn that even though ISO 14001 can serve as a valuable internal management tool, its ability to meet public policy objectives and address social expectations for corporate accountability is limited. Finally, Pfliegner (1997) states that ISO 14001 may function like a trade barrier and Clapp (2001, 2004) adds that the standard will restrict market access for small and medium sized organizations in developing countries. Additionally, several certified facilities have been featured in the news associated with severe environmental accidents (Brown, 2004; ENDS, 2007, 2006, 2005a, 2003a, 2003b).

The academic community has been cautious when describing the outcomes of EMS certification, and unable to unequivocally demonstrate that EMS adoption leads to improved performance (e.g. Andrews *et al.* 2003; King *et al.* 2005; Steger, 2000; Switzer *et al.* 1999). A multitude of studies has been conducted with the goal of assessing the outcomes of ISO 14001. According to Boiral (2007), these have yielded contrasting results. Some have concluded that ISO 14001 certification tends to improve environmental performance (Berry & Rondinelli, 2000; Florida & Davidson, 2001; Goh Eng *et al.* 2006; Maimon, 2000; Melnyk *et al.* 1999, 2003; Potoski & Prakash, 2005a; Pun & Hui 2001; Raines & Haumesser, 2002; Rondinelli & Vastag, 2000; Russo, 2001; Wells & Galbraith, 2000; Yap 2000). While others were not able to prove that effectiveness (Ammenberg, 2001 cited in Andrews *et al.* 2003; Barla 2005; Boiral, 2007; Boiral & Sala 1998; Mathews, 2001; Morrow & Rondinelli, 2002; Switzer *et al.* 2000; Welch *et al.* 2003). Similarly, while Andrews' *et al.* (2003) longitudinal study found no

improvements in terms of compliance rates, on a survey to 3,700 US facilities, Potoski and Prakash (2005b) concluded that ISO 14001 certification improved organization's compliance with government regulation. Likewise, Pedersen & Nielsen (2000) and Zackrisson *et al.* (2000) were able to link ISO 14001 certification with economic improvements while Boiral (2007), Huhes & Kemp (2000) and Link & Naveh (2006) could not measure any positive economic impact.

More recently, two broad surveys were conducted in Europe and in the US with the goal of clarifying the value of an EMS. REMAS was a three year project sponsored by the European Union that surveyed over 500 certified organizations. The goal of this project was to assess the effect of EMSs in environmental performance, in order to evaluate whether EMSs are indeed a tool that regulators can have confidence in (REMAS, 2006). They concluded that the implementation of a "progressively more robust EMS in place will lead to better site environmental management" (REMAS, 2006, pp 4). Yet, they found that environmental management information was very limited and benchmarks were virtually non-existent. Based just on water and air emissions' data, they confirmed the link between better management and better environmental performance, but warned that this conclusion varied within different European regions and industrial sectors[41]. Similarly, they found a strong link between better management and regulatory performance, but with different effects depending on the country[42].

The University of Pennsylvania's Wharton School also attempted to clarify these questions by developing a survey of the entire ISO 14001 user community in the US (ANAB, forthcoming). Their goal was to asses the conditions under which organizations are most likely to derive the greatest financial and organizational returns on their certification investments. They collected responses from 421 environmental managers (13% response rate) and evaluated the extent an organization improved compared to the objectives it set. For example, asking whether an organization had set a goal in terms of

[41] "The confidence we can have with this statement varies with European region and sector; it is most pronounced in Scandinavia and the food and drink sectors" (REMAS, 2006, pp 4).
[42] "In UK, Eire and Italian regions, better site environmental management appears to lead to more instances of permit condition breaches and enforcement. In other regions, better site environmental management leads to fewer permit breaches" (REMAS, 2006, pp 4).

increased use of recycled materials, and consequently measuring the extent to which the ISO 14001 EMS contributed to attaining that goal. They obviously concluded that "facilities that include performance elements in their EMS to a larger extent are more likely to report greater environmental performance improvement" (ANAB, forthcoming, 13). Still based on those responses, they developed an Environmental Improvement Index and concluded that organizations showed a slight benefit from having ISO 14001 certification. In addition, they concluded that ISO 14001 certification was not a factor in increasing facility business volume or reducing unit cost.

These two particular studies (REMAS, 2006, and ANAB, forthcoming) reflect the huge interest that revolves around the potential of ISO 14001 and other EMS certification schemes. Scholars, regulators, policy makers, private sector and the certification industry were involved in these studies that held the promise of clarifying the real value of EMS certification. Nevertheless, despite the unquestionable relevance of the information collected, these studies have not addressed the limitations highlighted in previous research (Andrews *et al*. 2003): despite the large number of responses, both surveys had small response rates, and they are based on self reported information. The ANAB (forthcoming) survey in particular under-represents the transportation equipment sector, which is known for being mainly driven by an industry certification mandate.

In addition, it seems that most research on ISO 14001 is trying to measure the effectiveness of ISO14001 based on misconceptions of what the purpose of the standard is. For example, a member of the US Technical Advisory Group for TC 207, involved in the development of the standard, eloquently illustrated his discontentment regarding the existing research on ISO 14001, claiming that it is not addressing the fundamental premises of the standard:

> "*The problem I have with a lot of the questions and a lot of the surveys that are done, is that the immediate premise is: we have an EMS, the purpose of the EMS is to get better environmental performance, so tell us how you get better environmental performance? And that is the wrong way to start a survey. You start a survey by saying: are you doing what 14001 says? Are you actually collecting all the data? Are you systematically finding your aspects? And setting your targets? And setting your performance indicators? And*

> *disseminating responsibilities? Do you feel that you have a better handle on managing? And now that you have a better handle on management, are you also per chance getting better performance? That is the way to ask the question*" Interview with subject #0985 held on December 1 2006.

Another concern regards the fact that the empirical literature regarding the efficacy of ISO 14001 has treated certification as a homogenous phenomenon (Yin & Schmeidler, 2007). Yet, that does not hold in practice. There are differences in the design, development and use of ISO 14001 EMSs among facilities, which have an impact on the relationship between certification and environmental performance. For example, Howard *et al*. (2000), when looking at another certification program that builds upon the requirements of ISO 14001, concluded that organization's actions may differ widely even though they all report that they conform equally with standards' requirements, and further warned that outsiders should not assume that a certificate guarantees that certain practices have in fact been adopted.

Considering the methodological limitations of most research on ISO 14001, I adopted a distinct approach, in the sense that it relies on the insights of environmental auditors as the sources of data. In this exploratory study, I also go beyond previous work on ISO 14001 (traditionally focused on measures of environmental performance, regulatory compliance, and cost-effectiveness) and discuss the organizational and behavioral outcomes associated with the certification process. More importantly, the purpose of this project is not to generalize findings to the entire population of certified organizations, but rather to explore the heterogeneity of certified facilities and analyze how they experience different outcomes based on their motivation and maturity. In the following chapters I will explore the outcomes that certified organizations have attained, the barriers they face, and what distinguishes leading organizations from the laggards. But first, it is important to discuss the genesis and the requirements of the ISO 14001 EMS standard, and the motivations that drive organizations to become certified.

The origins of ISO 14001

The early 1990s was a particularly turbulent period in the environmental arena. After the Montreal 1987 agreement that banned ozone depletion substances, other topics such as

global warming, deforestation, and loss of endangered species were making front page news, and fostering an international desire for more environmental stewardship. This was also a defining era for standard setting organizations. The International Organization for Standardization was now widely popular due to the success of its Quality Standard, ISO 9001, symbol of a new generation of process (as opposed to performance) standards. Simultaneously, other standard setting bodies[43] were developing national and regional environmental standards that could potentially became a threat to international trade (Plumhoff, 1999).

In 1991, in anticipation of the United Nations Conference on Environment and Development held in Rio de Janeiro, ISO entered the environmental standards race and made a public commitment to develop international environmental management standards (Murray, 1999). ISO created a Strategic Advisory Group on the Environment (SAGE) to recommend an overall strategic plan to assess the need for standards in environmental management. Eventually, SAGE broke into several subgroups that started developing the first drafts of these standards. While several countries (e.g. England, Ireland and France) were submitting drafts of their own, the US delegation to SAGE took a stand against this process, arguing that standards should be created through a consensus process. This conflict regarding the role of SAGE and its subgroups, led other countries (particularly European) to think that the US was against the creation of ISO environmental standards[44]. Although that was not necessarily the case, this divergence led to the polarization of positions throughout the entire standards writing process,

[43] "*NSF really has a unique role in the formation of 14001 (…) NSF saw that there was a worldwide movement to develop country specific standards for environmental management systems. The UK had BS7750, I think it was called. Europe had something called EMAS, and so we started to work on something called NSF 110, which would have been the US national standard for environmental management. Had things played out a little differently we may well been talking about NSF 110 instead of 14000*" Interview with subject #0974 held on December 20 2006.

[44] "*I think there's no question that internationally the US probably developed its own somewhat bad reputation because of the negotiations around 14001… certainly there was an issue that the US experts were all industry, almost exclusively industry, major industry, and that's for a reason. Major industry in the US wanted to be sure that the standard didn't have things in it that would be detrimental to US business and so I'm sure there are issues internationally where people say 'well, yeah, they weren't interested really in environmental performance; they were interested in protecting their businesses', but that is unfair*" Interview with subject #0969 held on January 5 2007

contributing to the confusion regarding the role of the standard until these days (Cascio *et al*. 1996).

Because of legal cultural differences between the US and European countries (Sheldon, 1997), several issues proved to be highly controversial during the negotiation of the ISO 14001 EMS standard. In the US, the move toward environmental management has been driven by regulatory compliance and potential liability issues, while in Europe, the motivation has often been related with public image and environmental stewardship (Roht-Arriaza, 1995). As a result, different attitudes led to different concerns regarding what should be the requirements of ISO 14001. In general, the US delegation was seeking less substantive and more procedural positions that preserved corporate choices and secured secrecy (Clapp, 1998; Roht-Arriaza, 1995). On the other hand, the Europeans wanted the standard to require substantive improvements in environmental performance (Roht-Arriaza, 1995). The US delegation refused this notion arguing that an EMS standard should not address the same environmental issues that were already addressed by regulatory bodies (Cascio *et al*. 1996). Moreover, ISO did not have the authority or expertise to establish pollutant levels and technology requirements (Cascio *et al*. 1996). The US stance (which ended up prevailing) favored the adoption of a commitment towards pollution prevention, classified by Roht-Arriaza (1995) as "too vague and too broad to be minimally useful". Another area of debate regarded the issue of regulatory compliance. Again, the US delegation firmly opposed that organizations would have to establish and maintain a register of significant environmental effects, for fear that it could be used against them in litigation[45]. The compromise reached was that the standard should only require a commitment to comply with policies and regulations, and a mechanism to assess that compliance. Finally, one last point of contention concerned

[45] "*We have a pretty unique situation with regards to the law in the US. And the specificity of standards and requirements that the government agencies impose on companies in the US, as well as the legal structure where we end up with a lot of law suits against everybody for anything that has ever been done to somebody that caused harm. (…) We had a lot of discussion about that. In some cases, other countries didn't really understand that our concerns were about what that specifically language might say. Who cares whether we have access to records of compliance evaluation available to various kinds of people or not? (…) Other countries have much less of a concern about regulatory compliance issues because they are not so worried that if something becomes public immediately someone is going to file a law suit for 80 billion dollars for some organization not having done something that it was supposed to do*" Interview with subject #0227 held on December 11 2006.

reporting requirements. Although European countries were fighting for significant public disclosure, the US argued that requiring environmental information to be publicly available would discourage companies from setting ambitious and meaningful objectives[46] (Roht-Arriaza, 1995).

The negotiations that led to the development of the standard revolved mostly around the extent to which it would contain substantive performance requirements, or just a set of prescribed procedures and management techniques (Roht-Arriaza, 2002). This conflict was so evident that a substantial number of delegates (even within the US delegation[47]) repeatedly tried to incorporate performance objectives after it was agreed that the standard would be process oriented (Cascio *et al*. 1996). This controversy has transpired outside of the TC 207 to a point that still today, there are several misconceptions regarding what the purpose of ISO 14001 is and what it requires. Many experts in the environmental field believe the standard prescribes worldwide environmental performance. Yet, the ISO 14001 standard does none of that. According to a member of the US Technical Advisory Group for TC 2007:

> *"The goal [of ISO 14001] was simply to allow organizations that had environmental issues and already were doing something about those in a regulatory way, to improve the way they manage those issues. It was not necessarily to improve environmental performance. The goal of the EMS was to do better management. Now, through better management you will get better performance, but that was not what we started out to do. (…) What we needed to improve was the way we managed the issues. The way we manage, the way*

[46] "*Industry, in mass, came to the table to develop a system to do a better job of managing, not a better job of creating a situation that was coercive, not a better job for them to put their heads in the lions' mouth, that was not the idea. Disclosure, frank, brutal, absolutely honest disclosure of certain things in the environmental area is absolutely nuts. You would have to be out of your mind to do that because in the US, at least, as soon as you do that, you will end up in court. There is absolutely no interest in doing that*" Interview with subject #0985 held on December 1 2006. "*Certainly on the environmental communication side, you know the US fought fiercely not to have external communication be an active part of 14001 and you can see that in the funny compromised language associated with environmental aspects, you know, that phrase that you have to have considered sharing your significant aspects and made a record of it… it's such a strange way to do it but clearly it was the US saying 'look, we're never going to approve a standard that requires people to share significant aspects with external parties' and at that point in time no one wanted a 14001 standard published that the US didn't vote for. So, there's compromised language in there for that reason"* Interview with subject #0969 held on January 5 2007.

[47] Several US representatives testifying before the US Congress expressed conflicting ideas regarding the purpose of ISO 14001. See *The Increasing Importance of International Standards to the U.S. Industrial Community and the Impact of ISO 14001*. June 4 1996. Hearing before the Subcommittee on Science. U.S. House of Representatives. Washington: US Government Printing Office.

> *we set objectives and targets, the way we control things, the way we monitor the controls, the way we assign responsibilities, and the way we diffuse responsibilities throughout the organization so that it wasn't just the environmental people that had the responsibility."* Interview with subject #0985 held on December 1 2006

Overall, the original intent of TC 207 was to develop a common platform that organizations around the world could use to help them manage their effects on the environment[48]. The ISO 14001 standard then stands as a framework that allows organizations to identify and evaluate their environmental aspects and impacts, establish their own objectives and targets, implement effective and reliable control processes, and commit to compliance and continual improvement. Presumably, the implementation of such a system should establish a solid base for reliable and consistent management of environmental obligations.

Misconceptions about ISO 14001

Having clarified the original intent of ISO 14001 (even though, the lack of consensus around this issue), lets then try to understand how ISO 14001 is perceived in the real world. The lack of consistency by ISO 14001 auditors in the interpretation of ISO 14001[49] will be addressed in the following chapter. For now, lets discuss how the general public and the corporate sector perceive ISO 14001. The claims and counterclaims around the value of ISO 14001 have been proclaimed loudly since the early publication of the standard (Bell, 1997, 61). These range from "a green passport signifying environmental excellence" to a "a plot by industry to undercut more deserving international environmental initiatives", as well as "a useless tool for improvement", "a basis for eliminating environmental regulation and governmental oversight", "a plot by consultants to make money out of industry" and "a potential non-tariff trade barrier". Although there is no empirical data on this topic, it is relatively safe to suggest that our society has very little understanding of what ISO 14001 is. Typically, if we hear the word

[48] Interview with subject #0227 held on December 11 2006.
[49] "*That is the most surprising and disconcerting issue in the industry. That there is not consistency in the interpretation of certain aspects of the standard. Very upsetting in my point of view*" Interview with subject #0011 held on January 11 2007.

'environment' we are going to associate it with the image of a 'green' organization. On the one hand it may be poor scholarship to make that assumption[50], but on the other, industry has often (perhaps ingenuously) linked the term 'green' to ISO 14001[51].

Indeed, the 'green' terminology is responsible for the biggest delusion around ISO 14001, that is, associating an ISO 14001 certificate with the image of a 'green' organization: *"frankly I think you can be certified and not be green - a company that is environmentally responsible. And I think you can be green and not be certified"*[52]. ISO 14001 is not a performance standard, it is a process standard, therefore there is no specific goals that anybody has to reach. Each certified organization has its own starting point and needs to develop its own goals, but there is no ultimate goal[53]. As one auditor and consultant eloquently put it:

> "*Let's say we have three people who need to loose weight. This guy is 300 pounds and he needs to loose 100 pounds. This guy is 210 pounds and he needs to loose 40 pounds. This third person needs to lose 5 pounds. They are all going to go on a diet. They are all compliant, they can all be accredited, one just has a much further distance to go. (…) You have one company that produces a lead product, we have another company that produces a plastic product, and another company that is an insurance office. All three of them can become certified to ISO 14001.* Interview with subject #0988 held on November 25 2006.

The second biggest misconception regards the issue of regulatory compliance. Although some auditors would state that "*compliance is the baseline*"[54], others would argue that "*every single company is out of compliance continuously, (…) so there is no way for a*

[50] Interview with subject #0988 held on November 25 2006.
[51] For example, the front cover of the journal Environmental Systems Update (2006, 11(4), 1) has the heading "Red, White and Green" referring to the progress made by governmental agencies on the implementation of EMSs. That article states that "While Independence Day brought its usual splash of red, white and blue to the US capital, more and more government agencies are apparently becoming a little greener." According to Krut &Gleckman (1998) "ISO 14001 is heralded by its proponents as industry's answer to the challenge of sustainable development. (…) The front page of the ISO newsletter on ISO 14000 in March 1997 had a half-page photo of a tree in Bavaria , Germany, and is captioned 'keeping our planet intact and preserving its pristine beauty while encouraging sustainable economic growth by judicious environmental management standards is the ultimate goal of ISO/TC207."
[52] Interview with subject #0191 held on January 13 2007.
[53] Interview with subject #0011 held on January 11 2007. Interview with subject #0192 held on November 30 2006.
[54] Interview with subject #0988 held on November 25 2006.

company to be in compliance in order to be ISO 14001 certified"[55]. In reality, an ISO 14001 auditor does not conduct a compliance audit. What it does is conduct a systems audit, and therefore, what the auditor will verify is whether an organization has an effective system to ensure that it is complying with regulation. Those are two very different approaches, and it is important to emphasize that by itself, a systems audit does not guarantee that an organization is in full compliance with regulation[56]. In addition, it should be emphasized that there are several organizations with significant compliance issues that adopt ISO 14001 as a tool to help them get some control over their regulatory requirements[57].

One of the reasons environmental auditors think the number of ISO 14001 certificates in the US remains relatively low, lies in the fact that the corporate sector itself does not understand the purpose and the requirements of the standard. Corbett & Kirsh (2000) identified five myths about ISO 14001 that prevent US organizations from adopting the standard: that it is strictly an environmental standard, it is difficult and expensive, it has no benefits, requirements are less strict in foreigner countries, and it only applies for companies that export to Europe. They add that many of these firmly held beliefs "consist of a kernel of truth concealed beneath dense layers of fiction" (Corbett & Kirsh, 2000, 6). Historically, the corporate sector fears anything that is related with 'the environment', in part because there is the subliminal understanding that it has only negative consequences (like spills, inspections and fines)[58], ignoring that it also refers to positive impacts like conservation of energy and materials[59]. In addition, ISO 14001 requires the introduction of auditing strategies, which organizations still associate with punitive inspections. There is an overall attitude of not liking to have 'people looking around' and 'telling me how to

[55] Interview with subject #0106 held on December 14 2006.
[56] Interview with subject #0108 held on January 12 2007. "*Remember, Certification bodies and ISO 14001 certification do not guarantee compliance. Every certification body has requirements and the accreditation bodies for certification bodies have requirements concerning 'compliance'. Essentially, if the organization has identified a non-compliant situation, developed and initiated the Corrective Action / Preventive Action process and taken all the necessary steps, the certificate shouldn't be at risk under normal conditions*" Retrieved November 13 2009, from the Elsmar Cove website (posted: March 22 2006): http://elsmar.com/Forums/showpost.php?p=142644&postcount=6
[57] Interview with subject #0958 held on January 2 2007.
[58] Interview with subject #0011 held on January 11 2007.
[59] Interview with subject #0959 held on January 1 2007.

do my business', without realizing that the ISO 14001 certification was designed as a tool for continual improvement[60].

Because US companies are so focused on regulatory requirements, they often look at ISO 14001 as just another layer of regulation[61]. Therefore, the standard is approached as another time consuming, bureaucratic, paperwork exercise (as opposed to an exercise in substance and discipline)[62] that organizations have to do without seeing the value of the process:

> "*The motive for getting certified was primarily pleasing an external source - customer or parent company. So the only thing they were planning to achieve was to satisfy (…) the mandate that they get certification: Ford wants us to get certified so doggoned we are going to get certified. We want to get certified preferably without having to swallow a great deal of cost"* Interview with subject *#0988* held on November 25 2006.

As a result, they tend to think that implementing an ISO 14001 EMS is an easy process, and approach the certification as a commodity. Auditors are often asked: how much does a certificate cost and how long would it take for us to get it?[63] This belief that an ISO 14001 certificate is something that can be bought, will likely contribute to the adoption of an EMS that will sit on a shelf without ever becoming part of that organization's management practices[64].

In conclusion, it is important to clarify that ISO 14001 is simply a framework for an environmental management system. It is a business document (made by business for business) that allows organizations to improve their management practices. An ISO 14001 certificate does not recognize achievement neither does it guarantee regulatory compliance, therefore, a certified company should not be perceived necessarily as a top environmental performer. It should be simply perceived as an organization that has put in

[60] Interview with subject #0073 held on December 2 2006.
[61] "*Specially if it is a company where there is an environmental person, that is what they are used to, that is what they look at the system as… as just a way to better their regulatory requirements*" [61] Interview with subject #0192 held on November 30 2006.
[62] Interview with subject #0195 held on February 15 2007.
[63] Interview with subject #0198 held on January 12 2007.
[64] Interview with subject #0079 held on December 13 2006.

place a system to address its environmental issues[65]. In addition, the corporate sector should not fear ISO 14001 as if it was another set of regulatory requirements that they have to comply with, neither should it be a useless documentation exercise. An ISO 14001 EMS is an integrated approach to environmental management that gives organizations a set of tools to control their legal and environmental aspects, and to continually improve their internal processes[66].

Motivations for Adopting ISO 14001

Before we discuss the outcomes associated with the adoption of an ISO 14001 EMS, there is one fundamental question that needs to be addressed first - what motivates organizations to seek ISO 14001 certification? Theoretically, ISO 14001 is a voluntary program, oriented towards those organizations that want to take a proactive approach on how they manage their environmental issues. Yet, there are signs that there is a strong component of coercion driving ISO 14001 certification worldwide, and particularly in the US. By the end of 2009 there were 5,225 US organizations certified with ISO 14001. This number is significantly below initial expectations[67], as the US is only the ninth country worldwide in terms of number of certificates[68] (ISO, 2010). Moreover, there is a sense that ISO 14001 in the US is strongly associated with industry mandates for certification[69]. In order to understand the strength of the certification industry, as well as the outcomes and barriers faced by organizations seeking certification, it is critical that we first understand what is driving them.

[65] Interview with subject #0220 held on December 13 2006.
[66] Interview with subject #0220 held on December 13 2006.
[67] *"The US is still on the slow side in comparison to numbers in Europe and Asia Pacific… look at how long it took to get to 5,000"* Interview with subject #0008 held on December 28 2006. *"It is relatively inadequate. [Your expectations were higher 10 years ago?] Yes, absolutely"* Interview with subject #0985 held on December 1 2006.
[68] According to the latest ISO Survey of Certifications (ISO, 2010), China is the country with the higher number of certificates (55,316), followed by Japan (39,556), Spain (16,527), Italy (14,542), United Kingdom (10,912), Republic of Korea (7,843), Romania (6,863), Germany (5,865) and the United States (5,585 certificates).
[69] In 1999, the Big Three Northern American auto-assemblers (Ford, General Motors, and Daimler-Chrysler) required all their tier-1 suppliers to attain ISO 14001 certification by 2003.

The question of corporate motivation to seek ISO 14001 certification has been fairly studied[70] and a variety of internal and external drivers have been found to influence motivations for adopting EMSs. Internal organizational factors play an important role in the capacity of organizations to adopt environmental practices. These may include: first, the existence of a sound organizational strategy in terms of environmental management (Andrews *et al.* 2003); second, significant resources in terms of assets and capabilities, particularly for small and medium-sized organizations (Florida *et al.* 1999); and third, the existence of other advanced management practices such as ISO 9001 quality management systems (Berry & Rondinelli, 1998; Melnyk *et al.* 1999).

Despite the importance of internal factors, Melnyk *et al.* (1999) found that the implementation of EMSs was generally reactive and driven primarily by external pressures. The work of DiMaggio and Powell's (1983) provides an interesting framework to evaluate these motivations. They classify external pressures that shape organizational isomorphism as coercive, mimetic and normative. Coercive pressures are the formal and informal forces exerted on organizations by institutions on which they are dependent. These include regulatory mandates, like requiring an organization to seek ISO 14001 certification through a consent decree, and perhaps more importantly, market pressures, particularly demands from customers and suppliers. Mimicry refers to actions taken by organizations to model themselves against other organizations. Here, the image associated with the ISO 14001 flag awarded to an organization may play an important role. Finally, normative pressures are related to professional and emotional factors, and are typically associated with the role of networks such as industry associations promoting the adoption of certification.

[70] For example, Andrews *et al.* (2003), Bansal & Hunter (2003), Clark (1999), Darnall (2003, 2006), del Brio *et al.* (2001), Delmas (2002), Delmas & Montiel (2007), Delmas & Montes-Sancho (2011), Evangelinos & Halkos (2002), Florida & Davison (2001), González-Benito & González-Benito (2005), Guler *et al.* (2002), Heras-Saizarbitoria *et al.* (2010), Jiang & Bansal (2003), King & Lenox (2001), King *et al.* (2005), Kollman & Prakash (2001, 2002), Mendel (2002), Morrow & Rondinelli (2002), Neumayer & Perkins (2004), Potoski & Prakash (2004, 2005a), Prakash (1999), Prakash, & Potoski (2006), REMAS (2006), Russo (2001), Takahashi & Nakamura (2010), Vastag & Melnyk (2002), Vastag *et al.* (2004).

What drives organizations to seek ISO 14001 was one of the few issues where environmental auditors had a nearly consensual opinion[71]: In the US, the vast majority of organizations are being coerced to get certified either because of customers' requirements or corporate headquarter mandates. The following statement illustrates the view of the majority of auditors:

> "*There are a few companies that do it altruistically just because they think it is the right thing to do and they want to demonstrate their commitment to the environment. There are a few locations that do it because their parent organization decides it's a good thing to do for the company for various reasons and they mandate it. And then there is a large number of companies that do it because they are a supplier to some industry where significant customers said they had to. (…) Somewhere between half and two-thirds I would say are doing it because they have to*" Interview with subject #0108 held on January 12 2007.

The primary motivator for private sector certification is associated with market pressures, namely, customer requirements. This driver is particularly visible in some 'heavy' industry segments like the automobile industry. In fact, ISO 14001 certification in the US only gained some expression after the Big-3 automakers required all their tier-1 suppliers to be ISO 14001 certified[72]. In addition, many international organizations are required to get certified by their parent corporations, particularly from Asia and Europe. In this case, where certification is primarily corporate-driven[73], the motivation is often associated with marketing strategies where a socially responsible image of the organizations wants to be promoted[74].

Despite the fact that the number one driver for certification is customer or corporate requirements, other external pressures may cause organizations to get certified.

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[71] Only two interviewees expressed a significantly different opinion suggesting that the majority of organizations was getting certified because it was a good business decision.

[72] Interview with subject #0191 held on January 13 2007. Interview with subject #0192 held on November 30 2006. "*I worked with a robotics company where the biggest potential environmental issue would be spilling a quart of oil. I also had a small marketing company (designed print ads) being pushed by Ford to implement it*" Retrieved November 13 2009, from the Elsmar Cove website (posted: April 2 2004): http://elsmar.com/Forums/showpost.php?p=74677&postcount=4
"*If they were being pushed by Ford, they implemented, if not then they no longer supply Ford*" Retrieved November 13 2009, from the Elsmar Cove website (posted: April 2 2004): http://elsmar.com/Forums/showpost.php?p=74677&postcount=4

[73] Interview with subject #0228 held on December 6 2006

[74] Interview with subject #0195 held on February 15 2007

Regulatory pressure is a particularly important motivator especially among public entities[75]. There are different ways the regulators have promoted the adoption of EMSs. For example, EPA (2006) has a Position Statement that encourages the use of environmental management frameworks such as ISO 14001. EPA as also tried to lead by example by implementing EMSs at several of its facilities (EPA, 2006)[76]. More importantly, EPA is collaborating with several States in the development of programs that recognize and reward organizations that implement EMSs that contribute to improvements in environmental performance[77]. Another way the regulators have encouraged organizations to adopt EMSs is by increasing their inspection priority in certain industry sectors. Every year the EPA announces which sectors are more likely to be targeted for enforcement and that has lead to an increase in the number of certificates in those particular segments[78]. Often, companies that are being frequently inspected, decide to adopt an EMS in order to reduce their liability[79] and to demonstrate to regulators and other stakeholders that they have a strong environmental program[80]. Finally, where regulators have contributed more significantly for the adoption and certification of EMSs was through consent orders. When an organization is dealing with a serious violation, such as offsite migration of pollutants, the EPA and the DOJ have, as part of a compliance agreement, issued a consent decree that requires organizations to get ISO 14001 certified. Basically, when the regulators find a violation that could have been prevented if there were better management practices, they may reduce or eliminate a fine if an organization agrees to implement and certify an EMS[81].

So far, three major external drivers were identified, all of them with a strong element of coercion: by far the primary driver is customer requirement, then corporate headquarter

[75] Interview with subject #0966 held on January 4 2007.
[76] The National Academy of Sciences (1999) describes the efforts of several federal facilities implementing ISO 14001 EMSs.
[77] See, for example, the Virginia Environmental Excellence Program or the Clean Texas Initiative.
[78] "*They issue, every year, the industry sectors they are going to target for enforcement. (…) For example the mining industry was a big target and so we started to see a lot of interest from mining companies in 14001 certification*" Interview with subject #0974 held on December 20 2006.
[79] Interview with subject #0185 held on December 7 2006.
[80] Interview with subject #0959 held on January 1 2007.
[81] Interview with subject #0955 held on January 10 2007. Interview with subject #0227 held on December 11 2006. Interview with subject #0192 held on November 30 2006. Interview with subject #0073 held on December 2 2006.

mandates, and finally regulatory pressure. Does that mean that every organization certified with 14001 was externally pressured and coerced to do it? The answer is, almost. When asked whether there was any organization seeking certification for internal, altruistic reasons, the majority of auditors stated that there were indeed some companies that were getting certified because they felt it was the right thing to do, but those would probably be just 5 to 10% of the total number of certificates[82]:

> *In my experience, and I have been a lead auditor for years, I can tell you that I had exactly one time I had a company come to me and say they wanted to be ISO 14001 certified…I was their consultant for this, I helped them get set up, I asked them why, and they had absolutely no other reason than because they thought it was the right thing to do.* Interview with subject #0228 held on December 6 2006.

These enlightened organizations are typically motivated by three internal factors. First, a strong management commitment to become an industry leader[83], in part because they look at it as their responsibility to leave less of an impact on the planet[84]. The other factor is related with the pre-existence of other management systems, particularly ISO 9001, where organizations believe that it would make sense to integrate both systems[85]. Finally, and more importantly, several organizations have recognized the savings and value associated with improvements in environmental management. Through their experience, they learned that an effective EMS can lead to reduction in risk and liability, waste minimization, and consequent return on the investment, and they become truly committed to their EMS[86].

Discussion

If the vast majority of organizations is coerced (by customers, corporate headquarters or regulators) to obtain an ISO 14001 certificate, then one must wonder whether this is

[82] "*Without the mandates, it wouldn't happen. I would say probably only about 10% of the companies that I have worked with are very committed to environmental… prevention of pollution and other issues*" Interview with subject #0986 held on December 10 2006.
[83] Interview with subject #0185 held on December 7 2006.
[84] Interview with subject #0997 held on November 29 2006. Interview with subject #0106 held on December 14 2006.
[85] Interview with subject #0011 held on January 11 2007. Interview with subject #0192 held on November 30 2006.
[86] Interview with subject #0008 held on December 28 2006. Interview with subject #0195 held on February 15 2007. Interview with subject #0220 held on December 13 2006.

indeed a voluntary program. Evidently, there is nothing voluntary about ISO 14001 certification in the US. As discussed above, if the purpose of this standard is to improve (voluntarily) the environmental management practices of organizations without requiring any specific outcomes, it is questionable whether organizations that are being pressured to get certified will actually be truly committed to make any meaningful changes in terms of their environmental management, and whether those will result in any significant improvements in terms of environmental protection:

> *"When you are certified because someone tells you to, makes you wonder if there is the internal commitment. Any research that I have read says that an EMS can be a very effective engine for improving performance and for being more efficient. But it has to be the management commitment behind it and it has to be the sort of thinking… it has to be part of a culture. And when it is forced from the outside to meet a customer demand or something… I am just wondering if that is going to be there"* Interview with subject #0898 held on October 18, 2006.

Many auditors agree that when companies are seeking certification in order to please an external party, than their goal becomes simply to obtain that certificate for the lowest cost and effort: *"A company that pursues 14001 certification because it is condition for business in their industry… to be perfectly honest, these companies do the minimum necessary to obtain and maintain certification"*[87]. Nevertheless, they would also argue that despite organizations being *"forced to do it, some dive into it with both feet and have a pretty good commitment… others are going through the motions just to get the certificate"*[88]. The critical questions now become: do companies that are coerced to get certified find the necessary commitment to make it a meaningful process? What value are they able to get from the certification process? And what happens with those organizations that keep doing the bare minimum? In the following chapters, I discuss the varying degrees of commitment evidenced by certified organizations, how are those reflected in terms of the outcomes obtained, and the conditions under which ISO 14001 certification can contribute toward the environmental self-regulatory capacity of organizations.

[87] Interview with subject #0220 held on December 13 2006
[88] Interview with subject #0108 held on January 12 2007

Chapter V

Outcomes of ISO 14001 Implementation: Tales from the Auditing Community

Introduction

So far I discussed the origins and purpose of ISO 14001, some of the misconceptions associated with the standard, as well as the main drivers for organizations to seek certification. According to environmental auditors, the vast majority of organizations certified to ISO 14001 are being coerced by industry or corporate mandates. That external pressure to obtain certification raises concerns regarding the organizations' motivation to implement an effective EMS, and how those translate into meaningful objectives and procedures. Throughout this chapter I discuss whether the adoption of an ISO 14001 EMS can indeed contribute toward the implementation of an industrial morality among certified organizations, evaluating the commitment of certified organizations to implement an effective EMS, and whether that generates any substantial outcomes in terms of the organizations' self-capacity to regulate its environmental impacts.

Who is Committed to ISO 14001?

Many organizations that are coerced to obtain an ISO 14001 certificate often believe that the certification process can be turned into a simple and effortless task. As a result, they either pass it over to their Environmental Department or hire a consultant to put a manual in place, basically turning the EMS implementation process into a commodity. For these organizations, the EMS is just another binder, likely to be placed on a shelf and ignored, that it will rapidly turn into an expensive and time-consuming paperwork drill that they would eliminate in a heartbeat if it was not an essential condition for them to stay in business[89]:

> "*Suddenly, for whatever reason, but sometimes just because 'it is in and looks good', customers are asking for a 'certificate'. Then the rush starts: what do we need, how we have to do this, search for an example, copy it, make it such that it fits the purpose, get the **** paper and lets go on with our business*"[90]

[89] Interview with subject #0191 January 13 2007

[90] Retrieved November 13 2009, from the Elsmar Cove website (posted: January 20 2006): http://elsmar.com/Forums/showpost.php?p=135400&postcount=45

On the other hand, several auditors suggest that once organizations implement an EMS (even if it they were mandated to do so) and they see the benefits of integrating the environment management in their daily business operations, then they really embrace it and the EMS becomes an essential component of that organization's management practices[91]. Their reasoning is: "*if we have to do this, which we do not want to do, then at least lets save some money around the plant*"[92]. These are organizations that would never voluntarily implement an EMS, but because they were mandated to get certified, they saw some benefits in terms of cost reductions and they become really enthusiastic about the EMS process[93]. For example:

> *"I will tell you what some organizations have said, 'you know, we don't think this is particularly important to us but we are doing it because some customer pushed us into this direction'. Even though that may be the starting point, the result is by the time they are finished they decide that it was something useful to them and that there is some value in continuing to do it, and doing it in a manner that passes the straight face test, rather than just, getting the certificate on the wall and being constantly in danger of loosing that certification because you are doing the absolute bare minimum that you have to do to maintain that certification. I think a lot of companies would conclude 'hey, if we are going to have to pay for this anyway, we might as well try to see what value we can get out of it' "* Interview with subject #0227 held on December 11 2006.

The number of organizations that implements an EMS against its will and eventually sees the value of this process is relatively hard to estimate. Some auditors claim that all their clients would maintain the certificate even if customers stopped requiring it[94]. Others suggest that the majority of the organizations that has a difficult start implementing an EMS eventually turn it around[95]. And some claim that it is just a small minority that is actually getting any benefits from seeking an ISO 14001 certificate[96].

It can be argued that the degree of commitment around the EMS is just a sign of the maturity of the organization. The majority starts with a very immature attitude where

[91] Interview with subject #0185 held on December 7 2006.
[92] Interview with subject #0106 held on December 14 2006.
[93] Interview with subject #0185 held on December 7 2006.
[94] Interview with subject #0960 held on January 3 2007.
[95] Interview with subject #0198 held on January 12 2007.
[96] Interview with subject #0073 held on December 2 2006.

their basic goal is to get a certificate as fast as they can with the minimal cost. Even though these organizations do the bare minimum to maintain their certification, they are still required to set internal objectives and targets, and measure their progress against them. Over time, despite their lack of enthusiasm, they begin to develop an understanding of the ISO 14001 process[97]. It may take two or three years (a certification cycle) but eventually the organization will start realizing that they are getting something out of this process[98]. Those first couple of years may seem like a fairly steep ramp because a lot of documentation needs to be prepared and maintained. But that initial burden will quickly fall off and as the metrics indicate improvements in terms of internal management, environmental performance, as well as bottom line returns, the organization will likely mature and fully embrace its EMS[99]:

> *"In three or four years down the roads, even two years, people are not aware that they have implemented a system anymore. It is just how they do business"* Interview with subject #0966 held on January 2 2007.

It is not just a matter of time for an organization to become fully mature and get the most benefits out of its EMS. It also needs to go through a significant cultural change[100]. It needs a profound management commitment that will extend itself through the organization. Some are able to reach that maturity relatively fast, while others are simply not getting there[101]: they may "*recycle this or buy green that, but [they] are not going to see the benefits that are possible*"[102]. The basic premise is that there needs to be a strong management commitment for the cultural change to occur. Without that shift in the culture of the organization, it will probably never mature quite enough in order for the EMS to become a useful tool.

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[97] Interview with subject #0955 held on January 10 2007.
[98] Interview with subject #0008 held on December 28 2006. Interview with subject #0960 held on January 3 2007.
[99] Interview with subject #0079 held on December 13 2006.
[100] Interview with subject #0073 held on December 2 2006.
[101] *"I don't think I would put in terms of time. I think I would put in terms of how seriously they take the program, how effective they are. Some companies may go there very quickly, other s that I am auditing still haven't gotten there and I have been auditing them for many years"* Interview with subject #0955 held on January 10 2007.
[102] Interview with subject #0191 held on January 13 2007.

Gunningham et al (2003) provide an interesting framework to assess the organization's environmental commitment. Their typology of Firm's Environmental Management Styles provides a scale extending from ''Environmental Laggards' through 'Reluctant Compliers', 'Committed Compliers', 'Environmental Strategists', and 'True Believers'. According to the perspective of environmental auditors, the vast majority of organizations seeking ISO 14001 certification fall in the 'Reluctant Complier' category. They are forced to certify and therefore feel no moral imperative to comply with the requirements of the standard or to identify improvement opportunities. These are the organizations that meet the requirements of the ISO 14001 standard doing the bare minimum, implementing small recycling projects with no environmental significance, where the EMS will forever be a burden. Although most organizations start as 'Reluctant Compliers', auditors believe that after some auditing cycles, they will start seeing the value of going through this process. They become 'Committed Compliers' - organizations who take their responsibilities seriously and use the standard to stay in control of their environmental aspects. These organizations would likely maintain their certificate even if they were not mandated to do so, just because they see the value of the EMS helping them stay in compliance with regulatory requirements. Yet, even though these organizations do seek for improvement opportunities, they are predominantly reactive dealing with environmental issues, and invest only in measures that have a relatively fast return on the investment. An organization fully committed to its management system, a 'True Believer' or even an 'Environmental Strategist', is the most likely to see substantial benefits from the adoption of an EMS. These are the organizations with the internal aptitude to fully integrate the environmental issues in their core management, and therefore to pursue meaningful opportunities for environmental and economic improvements. According to environmental auditors, those still represent the minority of organizations that currently hold an ISO 14001 certificate.

The remaining of this chapter will compare the attitudes of these different types of organizations and evaluate their actual outcomes of implementing and certifying an EMS.

Outcomes

The main goal of this chapter is to explore, from the environmental auditors' perspective, the outcomes associated with the adoption of an ISO 14001 EMS by these organizations with different motivations and degrees of maturity. This is a subject that has intrigued scholars for a number of years (e.g. ANAB, forthcoming; Andrews *et al.* 2003; Brouwer & Koppen, 2008; Link & Naveh, 2006; Morrow & Rondinelli, 2002; Potoski & Prakash, 2005a; Potoski & Prakash, 2005b; REMAS, 2006; Rondinelli & Vastag, 2000; Rowland-Jones *et al.* 2005; Steger, 2000; Switzer *et al.* 1999), and still, it is not yet clearly understood (King *et al*. 2005). But before taking upon this issue, it was critical that I first addressed a couple of related topics. First, the misconceptions that exist regarding the purpose of the standard; and second, the pressures that drive organizations to seek ISO 14001 certification.

Despite the fact that the original intent of ISO 14001 was simply to improve management practices, the majority of empirical studies[103] that evaluate this certification program revolve around three basic indicators: environmental performance, regulatory compliance, and cost-effectiveness. Although these are certainly valid indicators, it is also important to acknowledge that the outcomes of adopting an ISO 14001 EMS are not limited to those variables:

> *"Unfortunately, because the environmental field tends to be very emotional, people misunderstood [the goal of the standard]. The environmentalists and the regulators all said: 'oh, great, industry is trying to develop a system so that they can improve their environmental performance'. That was not the goal! And people now, say: 'let's test the EMS to see how we have improved the environmental performance'. Well, they are testing the wrong test. What they should be testing is whether companies are satisfied and are doing a better job of managing what they need to manage so that they can do what they need to do for the environment".* Interview with subject #0985 held on December 1 2006.

This research aims to broaden the scope of the previous ISO 14001 evaluations, by discussing not just the impacts in terms of environmental performance, but also, the organizational and behavioral outcomes associated with the certification process. In

[103] For example Andrews *et al.* (2003) and ANAB (in press).

addition, the objective is not to generalize these findings to the entire population of certified organizations, but rather to analyze how they experience different outcomes based on their motivation and maturity.

Integrating environment with business

As most research revolving around ISO 14001 deals with measures of environmental performance, when I asked auditors what difference does an ISO 14001 EMS make for certified organizations, I was expecting to hear examples of recycling programs and reductions in the consumptions of resources. In spite of that, I learned that improvements in environmental performance are just a small, indirect benefit of the adoption of an EMS. The most important outcomes are associated with the culture of the organization, as well as to other less tangible benefits associated with increased environmental awareness. According to the majority of auditors interviewed, the most important outcome of the adoption of an ISO 14001 EMS is that it elevates the environmental function within the business culture of the organization. Traditionally, environmental management has been associated exclusively with regulatory compliance[104], where it was the responsibility of the environmental department to keep the organization out of legal problems[105]. The introduction of ISO 14001 has challenged organizations to view their environmental interactions more holistically, as a strategic function, rather than just from a regulatory standpoint[106]. More than just another program of the Environmental Department, the adoption of an EMS raises environmental issues to the mainstream decision process of the organization, and the environment becomes part of how the organization is managed as a whole. When an organization decides to implement an ISO 14001 EMS, environmental professionals have for the first time management attention, as they have to sit together with top-management and develop a strategic process to evaluate the performance and efficiency of the organization[107].

[104] Interview with subject #0966 held on January 4 2007.
[105] *"Environmental people were always viewed as keep us out of trouble, the less we hear from you the better, and your job is to keep me out of jail. (…) And what that did was just basically wall off the whole environmental [department]"* Interview with subject #0198 held on January 12 2007.
[106] Interview with subject #0974 held on December 20 2006
[107] Interview with subject #0198 held on January 12 2007

> "*The primary effect that I have seen, the most positive effect that I have seen, is that the environmental group (…) has to integrate with the rest of the organization. They are now part of the organization. They are now considered part of the business itself. They are not a step-son in another building that only if there are problems then you can let me know what is going on. Sort of like maintenance. Maintenance in industry was always… you take it for granted. Unless the lights go out, you never call them. The environmental department was always like that. When there was an emission the environmental department would call the senior management and say 'we are in trouble, we are going to be fined 4 thousand dollars'. But other than that you never hear from them…Senior management doesn't even want to know that they exist. So the biggest change I have seen is the integration of the environmental department with the rest of the business"* Interview with subject #0011 held on January 11 2007.

Top-management commitment to environmental issues is one of the critical requirements of ISO 14001. Therefore, the adoption of an EMS compels managers to have a pulse for the organization's environmental aspects, and requires them to be involved in the decision-making process[108]. But the implementation of an ISO 14001 EMS does not just connect the environmental professional to top management, it is also going to connect all segments of an organization[109], shifting the environmental responsibility from the environmental manager, to each individual within the organization[110]:

> *"The biggest cultural behavior modifications around the EMS [is that it] becomes melted into everybody's job, not just the environmental department and a few key people. (…)The janitor who is throwing away trash, up to the*

[108] Interview with subject #0008 held on December 28 2006

[109] "*Because what happens is that a lot of departments do not talk to one another. Purchasing doesn't talk to research and development, who doesn't talk to marketing, who doesn't talk to various levels of management and so on. So you would have this disconnect. But when you have a good EMS all those parts are connected. It is a good system and so you have a much more efficient system. So, what would happen is instead of research and development telling purchasing 'we need some hydrochloride acid' now purchasing says 'ok, we are getting some hydrochloride acid but we will get you a smaller amount to begin with to see if it is going to work for you'. And research and development works with it and says 'you know, it doesn't work after all', and now you only have 1 gallon to dispose instead of a 55 gallon drum*" Interview with subject #0228 held on December 6 2006.

[110] "*Whether it is the secretary that recycles the printer cartridge (…) or it is the guy that takes the sample of the outflow going into the stream because there is permit involved, everybody has a piece. I think the EMS itself shifts the ownership from the environmental expert to everybody, including the senior management*" Interview with subject #0011 held on January 11 2007. "*I think it expands the environmental department. That one guy on the corner who was responsible for all the environmental issues in an organization, now has, essentially everyone in the workforce, his eyes and hears. (…) When folks understand that what they do has an effect, they come up with better ways, they are part of the communication chain, here is some ideas for how to make this better, lets try this, it just creates (…) stewardship within an organization*" Interview with subject #0966 held on January 4 2007.

> *board operator at the reactor, understand what they need to do and why they need to do it"* Interview with subject #0206 held on January 17 2007.

Not like a compliance system that is often the responsibility of a single environmental manager, the implementation of an EMS is a collaborative process that involves every member and every function of an organization. Therefore, the environmental responsibility within an organization is extended to every employee, which now must be aware of the organization's environmental policy, the impact of its own activities in the environment, and the internal procedures he must follow to manage those environmental impacts. This becomes an empowering process for everybody in the organizational chain[111], and more importantly, it improves handle and information flow[112]:

> "*From the environmental manager's perspective, they now have found many people to shoulder the burden for them and they have found lots of help throughout the company. (…) Also, it opens up some lines of communication among various parts of the organization that perhaps (…) weren't particularly effective before*" Interview with subject #0227 held on December 11 2006.

With increased involvement and new communication channels, all the employees that participate in the implementation of environmental programs can contribute to the definition of what the real issues are, and help top-management define what the environmental priorities of an organization should be. Moreover, when the adoption of an ISO 14001 EMS fosters better management of environmental aspects, it also advances improved management throughout other functions of the organization: "*a lot of this is really Management 101, so, if you are good at environmental management you are probably good at managing other aspects of your business*"[113].

[111] Interview with subject #0953 held on February 20 2007
[112] Interview with subject #0198 held on January 12 2007
[113] "*I would say that in some cases companies came into this and put in place some very interesting programs and systems to manage their environmental obligations, actually providing some usefulness to them in other areas of the company, say health and safety management where they can use the same sort of system that they set up for environmental with some tweaks and put a pretty effective health and safety management system in place*" Interview with subject #0227 December 11 2006.

Increased awareness

As discussed above, the most significant outcome of the adoption of an ISO 14001 EMS regards the increased importance that the environmental function has within an organization. In an ISO 14001 certified facility, all the employees (from the CEO to the maintenance staff) are expected to know the environmental impacts of their activities and their responsibilities within the different environmental programs in place. Not surprisingly, a direct benefit of that cultural change is, first, that organizations become much more aware of the impacts they have on the environment, and second, employees have a heightened awareness of environmental stewardship[114]. ISO 14001 is in great part an awareness standard, as it relies heavily on the fact that if people are aware that their actions have an impact on the environment, they will modify their actions to mitigate that impact:

> "*If you look at it from the environmental policy to the developmental aspects, to the training, to the operational control, all the way down the line… what you are trying to do is make people aware that it is not just one or two people in an organization that is responsible for environmental performance, but it is the whole organization*" Interview with subject #0969 held on January 5 2007.

The first step an organization needs to take in order to get ISO 14001 certified is to conduct an inventory of the aspects and impacts they have on the environment. This is a fundamental exercise that requires organization to take a fresh look at their business and assess the types of impacts they have on the environment, their legal requirements, and the mechanisms of control they already have in place[115]. For many organizations this is an enormous development, because they often lack a basic understanding on the impacts of their activities as well as the regulations they have to comply with. This process allows organizations to set a baseline that later on will guide them through the definition of realistic goals and objectives. Once that inventory is done and environmental programs are set in place, all employees must be familiar with the organization's environmental policy and the impacts their individual jobs have on the environment. That individual awareness alone is a huge benefit because not only they have better housekeeping within the organization, but they also take the environmental stewardship to their homes and

[114] Interview with subject #0073 held on December 2 2006.
[115] Interview with subject #0227 held on December 11 2006.

communities: "*it seems like now employees go home and start recycling at their own places*"[116]. Another indirect benefit of this increased awareness and stewardship is the employee and union buy-in around environmental projects[117]:

> "*If I were to walk in with a quality management system the union would start barking 'you can't do that, we can't do these procedures, bla bla bla'. But, guess what, environmental health and safety issues kind of cuts across the union.(…) Again, the buy in, and they are doing something for the environment, and it is something tangible that the employees can also grasp on and say 'look, this is what I am contributing to the preservation of the environment, for my kids, my grand kids*' Interview with subject #0958 held on January 2 2007.

Despite the importance of these benefits, particularly in terms of their role promoting self-regulatory powers, it is important to revisit the first topic of this chapter and recover the fact that because of external pressures, these organizations have various degrees of maturity in regard to the implementation of their EMSs. It should be emphasized that the benefits described above will be as significant as the maturity of the organization. That is, the stronger the commitment of top-management and the capacity of that organization to change, the more likely it is to benefit from improved environmental awareness and stewardship. In that regard, it should be emphasized that coerced organization on their first steps toward the implementation of a system, likely will not have the necessary top-management involvement to promote environmental awareness throughout the organization. When this occurs, the EMS is typically implemented by a single person who shoulders that burden by himself[118], and one of two things can happen: either the environmental manager is able to slowly show the benefits of adopting an EMS and over time the entire organization will mature and fully embrace it; or the certification will be

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[116] Interview with subject #0106 held on December 14 2006.

[117] "*They are involved in this too, so they do the recycling, they cut off the lights when they leave the rooms, they have a stake on this. The other side benefit, (…) they tend to feel better about the company they are working for, when their company is doing something like this. I fell like they take some pride in the company*" Interview with subject #0192 held on November 30 2006. "*When every employee becomes more aware of their environmental footprint at work, it means that they become more aware at home. (…) I've heard employees say "we do this at home (for example recycle, reuse, use less, turn off) and so I wondered, why aren't we doing it at work too? So I brought it to the ISO Committee and now we do it here too'. Or the reverse, they recycle, reuse, turn off, use less at work and so now do it at home*" Interview with subject #0191 held on January 13 2007.

[118] Interview with subject #0955 held on January 10 2007.

at risk because the organization will not be able to demonstrate its commitment and involvement toward a successful implementation of the management system.

In conclusion, according to the majority of environmental auditors interviewed, the most important outcomes of the adoption of an EMS occurs at the internal level, in the form of improved management strategies, and increased environmental awareness and stewardship. Nevertheless, the question that has intrigued scholars and policy-makers remains to be discussed: is the adoption of an EMS also delivering outcomes in terms of environmental protection, regulatory compliance and cost reductions? For the remaining of this chapter I am going to discuss auditor's perceptions on these different issues.

Environmental protection

The continual improvement requirement of ISO 14001 is one of the most controversial issues around the standard today. Actually, it has been a point of contention since the early SAGE meetings that led to the development of the standard. Despite the recent review of the ISO 14001 standard, guidelines from the ISO/IEC[119] and the International Accreditation Forum[120], Clarifications of Intent by the US Technical Advisory Group to TC 207[121], and newsletters by the National Accreditation Board[122], there is still a lot of debate regarding what should be expected in terms of performance improvements from ISO 14001 certified organizations. The early version of the ISO 14001 standard (1996) was not particularly clear on its continual improvement requirements, and therefore, it was argued that an organization would simply have to show improvements on its management practices. The argument was that, theoretically, improvements in the management system lead to improvements in environmental performance. Today, many auditors[123] still claim that:

[119] For example, ISO/IEC Guide 66:1999 is an International Guide which sets out criteria for bodies operating assessment and certification of Environmental Management Systems.
[120] For example, IAF GD 6:2006 Guidance on the Application of ISO/IEC Guide 66:1999
[121] For example, the U.S. Technical Advisory Group to ISO/Technical Committee 207 Clarification of Intent of ISO 14001:2004
[122] ANAB's newsletter "Heads Up", issue 61 from November 15 2005,
[123] "*The standard says it is the EMS that must improve… and your system can improve and your outcomes may not demonstrate it*" Interview with subject #0106 held on December 14 2006. "*Companies have wide latitude about what they improve. If they make improvements in the management system, that's assumed to contribute to the ultimate goal, which is improvement in environmental performance*" Interview with

> "*I am just telling you right now there is nothing in ISO that requires companies to actually show improvements of the environmental performance. That is not written in there and therefore you cannot audit against that. So, if somebody comes to you and shows you 'here we have improved our emergency response training and then by virtue of doing more training we have come down in emergency cases', then that is definitely in accordance with ISO requirements*" Interview with subject #0172 held on February 20 2007.

What this means is that a certified organization can honestly define as an objective and target to improve its internal communication, its root cause analysis, its documentation controls, or its organizational structure, because those are all system improvements that again, theoretically, may lead to improvements in the performance of the organization[124]. With the recent revision of the standard (2004) and subsequent guidelines from governing bodies, there is a stronger focus on the need to actually demonstrate improvements in terms of environmental performance. In 2005, ANAB published a newsletter with the title "Outputs Matter!" emphasizing that "*expected outputs should be trends of improving environmental performance, legal compliance, pollution prevention, and continual improvement*" because "*users of accredited certification are communicating with increasing emphasis that organizations with accredited certification are not delivering expected outputs [and] they are beginning to question of the value of accredited certification.*" In response, some certification bodies adopted this view as their internal interpretation of key requirements, and their auditors are following those procedures:

> "*Now, with the 2004 version, it is performance, it is definitely linked to environmental performance. The early version, the 1996, was a little bit weak in that area. So, if I improve my document control system, I have improved continually. (…) The newer version lends itself to being, no, this is based on environmental performance*" Interview with subject #0958 held on January 2 2007.

Assuming most auditors follow the ANAB guideline, there is another issue of debate regarding how much improvement should be expected. Since the standard is not precise,

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subject #0108 held on January 12 2007. "*There's a lot of confusion about that. I think that those of us who are lead auditors and are certified need to understand what the standard is saying is that the continual improvement is about the management system itself. (…) The only criteria I have to go by is the ISO 14001 standard, and that's what it says*" Interview with subject #0198 held on January 12 2007.

[124] Rowland-Jones *et al.* (2005) claim that organizations that implement ISO 14001 do not need to comment on overall environmental performance.

there is a wide range of interpretations regarding what is reasonable to consider as an improvement. For an auditor, a 1% increase in recycled office paper has to be considered an advance, and it is not for him to decide whether that is 'enough of an improvement' or not. Moreover, an organization will not loose its certificate if is not able to reach that 1% target. At most, the auditor can look for problems in the different elements of the management system that may have contributed to that occurrence, and write nonconformances on those elements. In conclusion, although ANAB claims that if an organization is not demonstrating continual improvement its certification needs to be challenged, some auditors[125] claim that they cannot guarantee that an organization will improve its environmental performance:

> "*ISO 14001 does not require real rigorous data analysis, it suggests it, it implies it, but it doesn't come out and specify it. (…) As an auditor you try to drive the organization to drive continual improvement, but you cannot fail them if they haven't. You cannot write a major nonconformance if they have not*" Interview with subject #0073 held on December 2 2006.

Considering this, it seems like it is entirely possible that introducing an EMS could make no observable difference to a facility's environmental performance. As Andrews *et al.* (2003) suggest, it is possible that an EMS merely articulates and documents what a facility is already doing, rather than setting ambitious goals. Going back to an earlier point, knowing that the majority of organizations that are ISO 14001 certified in the US were coerced into doing it, assuming that not all of them are truly committed to their EMS, and realizing that environmental auditors have limited authority demanding performance improvements, can we trust that ISO 14001 certified organizations actually improve their environmental performance?

> "*Maybe. Yes and no. Yes and no. Sometimes yes, sometimes no. I mean, they are monitoring it and watching it but I think, again, it comes back to - is it something the company has been forced to do or is it something that they have chosen to do? When it is something that they have chosen to do, I think the*

[125] "*[Improvement in environmental performance] is expected, it is not guaranteed, very important phrase here. Because the 14001 doesn't guarantee better, or improved, or perfect environmental performance*" Interview with subject #0011 held on January 11 2007. "*Nobody would do 14K to get a nice warm fuzzy... Bottom line if the organization wanted to do things based upon public perception of performance improvement it could. The whole improvement thing is currently left to the organization to decide what, how much, when and all that jazz....*" Retrieved November 13 2009, from the Elsmar Cove website (posted: April 5 2004): http://elsmar.com/Forums/showpost.php?p=74850&postcount=14

> *environmental performance typically improves more consistently. When it is something that they have to do, they are kind of happy if they just break even and get a little bit better*" Interview with subject #0008 held on December 28 2006.

The establishing of objectives and targets is one of the key requirements of the ISO 14001 standard. Once an organization conducts its environmental inventory, it must define a methodology to identify its most significant environmental aspects and impacts, and then it has to implement an environmental program that sets quantifiable environmental targets. In order to evaluate how an organization is dedicated to its environmental program, one could look at its environmental targets and assess how robust those are. Therefore, auditors were asked what kind of objectives organizations were setting in order to show continual improvement of their performance. The majority of ISO 14001 certified organizations does not set far ambitious targets, particularly in the first years of EMS implementation. They typically set somewhat redundant objectives like maintain the ISO 14001 certificate or stay in regulatory compliance, plus a couple of convenient objectives often related with resource consumption. Because they know that they will be asked to set new objectives every year, they often have a tendency to set easy reaching targets in order to 'leave something for next year':

> "*There are typically two kinds of objectives and targets. There is the kind that maintains the status quo and those are the kind that says: 'we will stay in compliance' (and almost every company you audit will have a compliance related objective and target). And then they will have a modest stretch goal: 'we want to reduce our cardboard waste by 10%'. So it is usually maintain the status quo with regulation and then have some kind of pollution prevention waste minimization objective and target*" Interview with subject #0974 held on December 20 2006.

> "*They have to commit to other improvement objectives beyond compliance. That means we expect them every year to, at least, have a couple of improvement objectives. They set things that have to do with reduction of energy consumption; the recycling of solid materials; companies that have a lot of chemicals reduce the chemical consumption, reduce chemical waste. Even though they are in compliance, they actually have to go beyond that, so clearly, that is where prevention of pollution, reduction of resource consumption, and all those things end up, little by little, being improved, beyond just fundamental compliance with the laws.* Interview with subject #0108 held on January 12 2007.

When asked about the accomplishments of ISO 14001 certified organizations, most auditors would quickly agree that the majority of companies has indeed improved its environmental performance. Because there is a diversity of organizations seeking certification (from chemical plants to insurance offices), it is hard to make any generalizations in terms of the magnitude of that improvement. Still, there were certain themes that seemed to cut across every organization:

- First and foremost, the minimization of waste sent to sanitary landfill, because of the implementation of reduction and recycling programs on paper, plastic and scrap metal[126];
- Reduction in energy consumption, mostly associated with the adoption of more efficient illumination [127];
- Reduction in hazardous waste as a result of switching to less toxic substances (like water based paints and solvents), better inventory management, and reprocessing of used oils[128].

To a lesser extent, other areas mentioned were:

- Water conservation and reduction in wastewater releases[129];
- And reduction in air emissions[130].

[126] For example: Interview with subject #0108 held on January 12 2007. Interview with subject #0974 held on December 20 2006. Interview with subject #0192 held on November 30 2006. Interview with subject #0008 held on December 28 2006. Interview with subject #0185 held on December 7 2006. Interview with subject #0195 held on February 15 2007. Interview with subject #0198 held on January 12 2007. Interview with subject #0973 held on December 15 2006. Interview with subject #0986 held on December 10 2006. Interview with subject #0988 held on November 25 2006. Interview with subject #0226 held on December 18 2006.

[127] For example: Interview with subject #0192 held on November 30 2006. Interview with subject #0959 held on January 1 2007. Interview with subject #0195 held on February 15 2007. Interview with subject #0198 held on January 12 2007. Interview with subject #0227 held on December 11 2006. Interview with subject #0973 held on December 15 2006. Interview with subject #0966 held on January 4 2007. Interview with subject #0073 held on December 2 2006. Interview with subject #0226 held on December 18 2006.

[128] For example: Interview with subject #0132 held on December 8 2006. Interview with subject #0108 held on January 12 2007. Interview with subject #0958 held on January 2 2007. Interview with subject #0008 held on December 28 2006. Interview with subject #0185 held on December 7 2006. Interview with subject #0195 held on February 15 2007. Interview with subject #0198 held on January 12 2007. Interview with subject #0206 held on January 17 2007. Interview with subject #0227 held on December 11 2006. Interview with subject #0988 held on November 25 2006.

[129] For example: Interview with subject #0227 held on December 11 2006. Interview with subject #0973 December 15 2006. Interview with subject #0192 held on November 30 2006. Interview with subject #0185 held on December 7 2006. Interview with subject #0988 held on November 25 2006.

It is worth pointing out that these objectives and targets set by ISO 14001 organizations are typically focused on unregulated aspects where performance improvements are associated with financial gains, such as, reduction in resource consumption and waste to landfill. Actually, several auditors mentioned that organizations select their environmental programs based on the estimated return of the investment[131].

Regarding the heterogeneity of organizations certified, despite the fact that most organizations are indeed achieving some improvements in terms of environmental performance, it is also true that they are setting particularly soft environmental targets, taking the "*low bearing fruit type approach: do the easy stuff with the quickest payback*"[132]. Most organizations are aiming for the quick wins[133], and although there is nothing wrong in guaranteeing an early success with some environmental programs in order to increase commitment[134], it is important that more mature organizations can go beyond recycling office paper and turning of lights. One of the challenges laying ahead of ISO 14001 certification regards the fact that many organizations are now reaching a stage of maturity where there is no more low hanging fruit to be picked, and it is still not clear whether they will be able to use the EMS tool to make more meaningful improvements in terms of their internal operations and how hose will translate in terms of effective environmental protection. As the ISO 14001 'Committed Compliers' are now beginning to have a hard time identifying improvement opportunities with a short return on the

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[130] For example: Interview with subject #0185 held on December 7 2006. Interview with subject #0206 held on January 17 2006. Interview with subject #0227 held on December 11 2006.

[131] "*I tell (…) the environmental team who desperately need to have the support of management, (…) if they can provide their results from a different objective than monitoring and measurement, if they can also attach a dollar figure, than they get a lot more buy in from management and they start to see it as a return on investment rather than just as environmental maintenance*" Interview with subject #0228 held on December 6 2006.

[132] Interview with subject #0986 held on December 10 2006.

[133] "*Most companies see something: the paper program, usually recycling office paper, everybody starts with that; (…) saving energy is a good one because everybody can turn off excess appliances and lights, that is low hanging fruit; recycling the obvious things is low hanging fruit; consolidating chemical purchases can be a low hanging fruit because it is pretty easy*" Interview with subject #0191 held on January 13 2007.

[134] "*What is the best way to eat an elephant? One bite at a time… it just depends where they are on the cycle*" Interview with subject #0226 held on December 18 2006.

investment[135], the biggest challenge is now whether they will be able to use their EMSs to reach for that high hanging fruit. For that to happen, they would have to, for example, look more critically at their organizations' processes rather than just their waste generation[136]. Organizations that are maturing toward becoming 'Environmental Strategists' should evaluate their operations and the materials they use, not just inside the organization but along the supply chain[137]. Also, unregulated aspects such as greenhouse gases, global warming and fossil fuel dependency, are big issues that should be addressed through their EMSs[138]. A small number of certified organizations, the 'True Believers', have shown that it is possible to adopt strict environmental goals, such as, zero waste to landfill[139], they have redesigned complex pieces of equipment[140], or they started to use biodegradable reusable packaging[141]. But again, only a very small number of organizations has gone so far[142] and it is important that, after a decade since the certification process was launched, more organizations become 'Environmental Strategists' and start reaching for the high hanging fruit that is waiting to be picked.

Regulatory Compliance

Historically, the function of the EMS has been associated with regulatory compliance and risk minimization (Andrews *et al.* 2003). In fact, the first EMS prototypes were basically compliance management procedures, developed in response to the increasing body of

[135] "*That is an issue we are seeing as this matures. Early on when people established a system they have all kinds of things that they can do, it seems like, to realize continual improvement, and then after they have a system for two years, the potentials, the big things are minimized, they have taken care of the big things, and it is smaller potatoes… so it is sometimes I find it that when companies have been registered for a while it is harder to see good evidence of continual improvement, it is on a much smaller scale*" Interview with subject #0192 held on November 30 2006.
[136] Interview with subject #0974 held on December 20 2006.
[137] "*The supply chain is a huge untapped potential for this whole 14000*" Interview with subject #0198 held on January 12 2007.
[138] "*I don't think waste is our biggest issue right now… global warming, emissions and resources are the big issues, and you know, CO2 is not even regulated. (…) I would be much happier if a company cut their CO2 footprint by 20% and they spill a drum of something*" Interview with subject #0205 held on February 12 2007.
[139] "*I have other companies with objectives that are so vast as to be… they have got 6000 people under a ten million square foot and their goal is to have zero waste go to the landfill. So that means they are having to recycle everything, even scrap food. It is remarkable, I have seen it and I have seen it done*" Interview with subject #0228 held on December 6 2006.
[140] Interview with subject #0191 held on January 13 2007.
[141] Interview with subject #0191 held on January 13 2007.
[142] "Maybe 1 in 4 companies makes significant process changes" Interview with subject #0986 held on December 10 2006.

environmental regulation that emerged in the late 1970s. In the US, regulatory compliance has been the most basic indicator of environmental performance used for the past three decades (Andrews *et al.* 2003), and several authors have tried to relate improvements in compliance with ISO 14001 certification (e.g. Andrews *et al.* 2003; Matthews, 2001; Potoski & Prakash, 2005b).

It is not easy to empirically test whether the adoption of an EMS improves regulatory compliance. Because certified organizations are subject to greater scrutiny, there is every reason to expect that they will indeed improve their compliance record. Nevertheless, it is also possible that the adoption of the EMS makes no observable difference, either because organizations had a clean record of compliance prior to certification or because they have not been subject to compliance inspections. It is even possible that, in the short term, the EMS will detect non-compliances that went previously unnoticed (Andrews *et al.* 2003). As a matter of fact, if non-compliances are being detected, then the EMS is doing exactly what it should be doing: "*having an EMS doesn't say you will never have a noncompliance with a regulation; it says that you will find those when they happen and you will correct them and you will prevent them in the future*"[143]. Therefore, one should be cautious when trying to correlate the adoption of EMSs and the occurrence of non-compliances.

Before discussing the perspectives of the environmental auditors, it is worth looking at what ISO 14001 actually requires in terms of regulatory compliance. According to the IAF (2004), the ISO 14001 standard requires organizations to commit to compliance with all legal and regulatory requirements applicable to its environmental aspects and impacts. This commitment shall be supported by requiring all organizations to: (1) identify all applicable regulatory requirements, (2) determine how these requirements relate to its activities, products and services, (3) evaluate conformity with the identified requirements, and (4) take action to correct any nonconformities. What this means is that even though ISO 14001 requires a public commitment to comply with legal requirements, it "does not require actual compliance with the law as a pre-requisite to certification, or for

[143] Interview with subject #0969 held on January 5 2007.

maintaining certification" (IAF, 2004), and therefore, it does not guarantee ongoing legal compliance.

The majority of auditors were cautious when making a judgment regarding whether organizations were indeed improving their compliance record. First, because they are not compliance auditors, and therefore, they cannot say quantitatively whether organizations are indeed improving their record or not[144]. Second, because there is a lot of variability depending on the background and commitment of each organization[145]. Despite that, most suggested that there were indeed some improvements in terms of compliance behavior. Several auditors claimed that for many organizations, it was only after conducting an environmental inventory that they were actually aware of all their environmental aspects and legal requirements, and that they are now able to show regulators that they are in control of their regulatory requirements[146]:

> "*I don't think a lot of the organizations, until they sat down and came up with their list of what applies to the facility, do they actually really know what they are supposed to do. So I do think that overall compliance for most of the organizations I do think it is better*" Interview with subject #0008 held on December 28 2006.

Also, it seems like once organizations have a deeper understanding of their environmental aspects and start trusting their EMSs, not only can they improve their compliance record, but their traditional adversarial relationship with regulators tends to give room towards a more collaborative partnership:

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[144] Interview with subject #0073 held on December 2 2006.

[145] "*It depends on where they were coming into this. Some companies had very impressive compliance management programs in place before 14001 was published. So, (…) I am not sure that for some of them that really improved their compliance program. For others, who clearly had that need, I think they would make that case*" Interview with subject #0227 held on December 11 2006.

[146] "*In order to get that certification, they had to bring in some outside expertise and do a compliance assessment, and you went back and, "wow, you won't believe what we learned". And now I look at the progress they have made and I just think, for them, 14001 is a really good thing. That particular client, after several years after they achieved certification, I went in to do a surveillance audit and they said, 'oh, we had an EPA inspector show up, unannounced, I always heard that that could happen, I got the call and I am like, oh man, I am so nervous' and that EPA inspector, went in, looked at the management system that they had in place and after a while she goes, 'well, I can see I am not going to find any problems here, ok, good job'. By having that management system in place I think they were able to fairly easy convince this regulator that they are on top of things, and they were. But if that inspector had walked in a couple of years prior it had been a whole difference story*" Interview with subject #0955 held on January 10 2007.

> "*Because they have an understanding of how they impact, they have a much better concept of what does the law mean, how they turn the valves and the widgets in their organization. And because they have looked at a lot of the 'what if' scenarios: if this happens, what are my emergency response plans, what are the competencies that folks in that area, what are my critical operation competencies... I think they have a better record and they also have a better relationship with the regulatory agencies. I almost want to say that most of these organizations now feel that they are really partners with regulators, and I think that is a terrific thing because it depends on personal accountability and responsibility, it is not the regulator's job now, it is my job*" Interview with subject #0966 held on January 4 2007.

Improvements in regulatory compliance seemed to be mostly associated with the increased environmental awareness within the culture of an organization. By going through the various steps of the ISO 14001 process, organizations not only gain better knowledge of their legal requirements, but also better risk management associated with more consistent awareness and competence of personnel. For some auditors, the accomplishments were not so much in terms of sustaining a clean record of compliance, but in terms of "*a general feeling of wellness*"[147], clearly illustrated through this account:

> "*One of my favorite questions to ask upper management (…) is: what keeps you up at night? And that is odd ball question because it is not in the standard, but it gives me a lot of information related to the standard. (…) And over time what I am seeing is that (…) they will say, 'you know, I used to really stress over spills or releases or this or that, but I have not worried about it now because things are in place to handle it'. So I think that is the first real value: I am not afraid of my risks and my aspects. That it the first place where they begin to see value*" Interview with subject #0960 held on January 3 2007.

The process of adopting an ISO 14001 EMS can contribute to an increased awareness of an organization's regulatory requirements, promote better risk-management practices, and improve relationship with regulators. I have pointed that the standard only requires a commitment to comply, and therefore, whether this process actually leads to better regulatory compliance ultimately depends on the motivation and commitment of top management. Many organizations with severe compliance problems have been pressured to seek certification by the EPA and the DOJ. Some of those organizations have been

[147] Interview with subject #0973 held on December 15 2006.

able to use the ISO 14001 framework to address these problems and to improve their compliance record substantially[148]. Others thought that they did not have compliance problems "*and after going through the discipline of ISO 14001 realized that they had some shortcomings that they haven't discovered (neither had the regulators)*"[149]. In conclusion, there is very little doubt that by implementing an ISO 14001 EMS, most organizations will improve their knowledge of their environmental aspects and regulatory requirements. For many organizations, that is likely to lead to better compliance, but it is also possible that it may not result in an immediate clean record of regulatory compliance. Regulators and other stakeholders should be aware that despite the fact that ISO 14001 "*provides management a tool for better compliance*"[150], the fact that they are in compliance with all applicable laws and regulations is "*not necessarily true, a matter of fact, not true most of the time*"[151].

Economic Impacts

There is a growing body of literature suggesting that environmental responsibility can lead to increased business competitiveness (e.g. Porter & van der Linde, 1995). Similarly, proponents of ISO 14001 have argued that the adoption of an EMS is likely to produce economic benefits (Block, 1996; Cheremisinoff & Bendavid-Val, 2001). According to Andrews *et al.* (2003), the adoption of an EMSs may contribute to: a reduction in compliance costs; a reduction in the cost of waste disposal and pollution treatment; a more efficient use of resources; the adoption of advanced management practices beyond the environmental domain; and a business advantage over competitors.

Despite these theoretical benefits, there is very little empirical evidence suggesting that ISO 14001 certified organizations do indeed obtain any economic benefits (e.g. Ammenberg & Hjelm, 2003; Andrews *et al.* 2003; Bellese *et al.* 2005; Link & Naveh, 2006; Melnyk *et al.* 2003). Andrews *et al.* (2003) further warn that the implementation of an EMS may involve significant start-up costs and some continuing real costs of

[148] Interview with subject #0192 held on November 30 2006. Interview with subject #0974 held on December 20 2006.
[149] Interview with subject #0220 held on December 13 2006.
[150] Interview with subject #0969 held on January 5 2007
[151] Interview with subject #0008 held on December 28 2006

administration, plus the expenses of hiring external consultants, auditors and certification bodies. On their longitudinal study, they concluded that "the quantified costs reported by most of the facilities outweighed the quantified benefits they could document" (Andrews *et al.* 2003, 292). Nevertheless, they also suggested that "the unquantified benefits that were reported offer some degree of optimism for the potential of an EMS to improve the economic performance of adopting facilities" (Andrews *et al.* 2003, 292). On a more recent survey, Link & Naveh (2006) found no indication that improvements in environmental performance as result of ISO 14001 led to better business performance.

According to the environmental auditors interviewed, most organizations initially look at ISO 14001 implementation as a financial burden[152] and as an added cost for staying in business. Despite that initial cost, the vast majority of auditors strongly argued that when organizations are committed to the EMS, the "*return on their investment has been swift and profound*"[153]. The most obvious outcome for all the organizations that were mandated to seek certification by their clients, is the simple fact that they were able to hold their market share. For many organizations, the business case for seeking certification was simply to stay in business or to maintain a certain percentage of business[154]: "*most of the time, Return on Investment is keeping the customer as a customer*"[155].

What is interesting is that if those organizations that are coerced to seek certification actually implement an EMS properly, they will see an unexpected by-product: "*they begin to realize improvements in cost savings that they haven't bargained for*"[156]. Many

[152] "*When they see the upfront costs of implementation and some consultant is going to charge them 50 thousand dollars to prepare these documents that they already have the software for, and then they are going to come in and for a period of months conduct employee training and all of that… they will say, well we are going to spend a 100 thousand dollars on this before anything happens*" Interview with subject #0185 held on December 7 2006.
[153] "*For example, the landfill in San Diego, at this point they are probably saving about a million dollars a year, not to mention the 9 or 10 tons of pollutants that are not in there just from simple practices. Also, when folks begin to look at energy they can save enough in a year to be able to offset the costs of implementing the standard*". Interview with subject #0966 held on January 4 2007.
[154] Interview with subject #0198 held on January 12 2007.
[155] Retrieved November 13 2009, from the Elsmar Cove website (posted: April 2 2004): http://elsmar.com/Forums/showpost.php?p=74680&postcount=5
[156] Interview with subject #0988 held on November 25 2006.

auditors claimed that they encourage the early adoption of energy reduction projects[157] because of the cost savings associated with them[158]:

> "*One of the first clients that I worked with, which was an electronics firm, they found pretty quickly when they got into this process that there was a ton of money for them to save in energy use, and it had always sort of been looked up as a cost of doing business and nobody was really focusing on it. They went through 14001, they identified energy use as one of their significant environmental aspects, started looking at different kinds of projects they could undertake to reduce energy use and the payback period on some of these projects were almost laughable, like the payback period of a month. They really got religious on the value of this process because they said 'now we can really show management that we are using this not only to improve our environmental performance but also to save the company some money at the same time'"* Interview with subject #0227 December 11 2006.

Another area where organizations have been able to make substantial gains is through waste reductions[159], both in solid waste, liquid waste and hazardous waste:

> *"With all the focus on the identification of the wastes and the costs of producing those wastes that hadn't been identified as being part of the whole organizational process, they started to realize that is where the real savings are coming from, is reducing those wastes*" Interview with subject #0198 held on January 12 2007.

As discussed above, most organizations are still picking the low hanging fruit, pursuing simple projects that could have a positive impact on their bottom line, with a low impact

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[157] *"This week I was auditing an organization that is basically a warehousing transshipment depot type organization. They were very proud of the fact that they had spent 6,000 dollars in each of their office spaces to install motion detector lighting switches, so that it will turn off lights when people are not using them. It cost them 6,000 to rewire each of these spaces and the annual savings on electricity for each of these spaces is 18,000 dollars. So their pay back period is what? 4 months, and of course, that benefit just keeps accruing year after year*" Interview with subject #0220 held on December 13 2006.

[158] "*One of the big things that people can realize financial benefit (…) is to reduce energy usage. You take a really large plant, change their lightning, upgrade to fluorescent type of lighting or low energy use lighting, again, you can have a million or more savings per year. It pays for itself in a year or two*" Interview with subject #0192 held on November 30 2006. "*I don't know if I can convince you, but once a company grasps on to ISO 14001, including 9000, including OSHAS 18000, they realize there is economical benefit to do the things right. If you reduce your impact on the environment, that is going to save you money. We usually encourage people to adopt energy saving projects to begin with*" Interview with subject #0132 December 8 2006.

[159] *"The biggest improvement I see is in solid waste reduction. Sometimes it is 50% or more. Well, when you are spending $50,000 a year having your dumpster hauled away and that gets reduced to $20,000, there is a $30,000 dollar savings. Reduction of liquid waste that has to be hauled away is also a common one*" Interview with subject #0988 November 25 2006.

on their production process. That is why so frequently, organizations adopt programs associated with energy or waste. Basically, those are the ones where they can have some short term financial gains. This concern for the financial outcomes of the environmental programs led many organizations to develop environmental accounting mechanisms on top of their EMSs:

> *"It comes down to whether you are taking it seriously or not. And for those companies who do, management is going to insist on putting a system in place to evaluate the value of implementing 14001. And for those companies, they have to have a process to determine whether it is paying for itself or not. If it is not, they won't do it. So quite often I can go in and see the evidence… they show me… they are using the same tool to show management as they are to show me whether they are improving their performance and whether they are seeing economic benefits. And a lot of times, I think, I know, they are making their decisions, they are setting their objectives and targets based on financial benefits*" Interview subject with #0955 held on January 10 2007.

Actually, this may be one of the most important outcomes of the adoption of ISO 14001 which has been fairly neglected by the academic literature. By linking the environmental improvements with financial gains, "*they are changing mentalities*"[160], they are raising environmental issues to the core management of the organization[161]. Several auditors mentioned that when organizations are not making that connection, they will encourage environmental managers to attach a dollar figure to each environmental program:

> "*The most important factor to me is money saving, I really do see it saving money, most of my clients have saved money. (…) I encourage them to look at the financial benefits because that is what talks back to management to regain further commitment*" *Interview with subject #*0226 held on December 18 2006.

By introducing these concepts associated with environmental accounting, organizations are going a giant step closer to the full integration of the environmental issues into the core business of their organizations. What this means is that the environmental department is no longer responsible for some trivial environmental programs, instead,

[160] Interview with subject #0228 December 6 2006.
[161] "*As an auditor, I want to take the time out of my audit to demonstrate to the plant manager or corporate, some of their key performance indicators that are paying off for them, and ask them to go back and look at what they were doing 5 years ago and compare that with what they are doing today. Translate that into dollars. Usually you can find a very positive impact on the bottom line*" Interview with subject #0973 held on December 15 2006.

environmental aspects become key management aspects of the organization. Simultaneously, top management gets fully involved with programs that were previously considered the responsibility of the environmental department. One auditor brilliantly illustrated this idea:

> "*You want me to say that performance got better? you want me to say it? nah… it is not even the case. You can't even say it is the case. (…) I tell the environmental management people stop speaking 'environmentalese'. Stop talking about conservation or recycle. No. Talk money. Talk conservation of people, man days. The idea of the environmental people speaking management, but management will never speak environmental, that is the improvement. (…) That is the beauty of 14001. It puts a structure and it gives you bottom line dollars much quicker than the quality management system*" Interview with subject #0011 held on January 11 2007.

Thus far, I have talked exclusively about the measurable economic benefits of adopting an ISO 14001 EMS. Basically, the EMS will help organizations identify opportunities for marginal cost savings[162]. Often, they may find substantial bottom line savings by making some process changes. Therefore, auditors strongly encourage organizations to adopt those accounting strategies in order to gain top management support. But if we are to look at the financial impact of ISO 14001, the intangible benefits seem to be quite more important:

> "*Unfortunately, the perception of the benefits of 14001 is too closely tied to accounting profits and losses, cost-savings. 'Oh yeah we are going to save so much money on electricity, and water and other resources'. Where they can convert it they can see the dollars. But what they cannot see, is the intangible benefits that are derived from the EMS, where you cannot put it into the accounting system*" Interview with subject #0106 December 14 2006.

The most important benefit which is extremely hard to account for is the reduction in risk[163]. An organization with better knowledge on its environmental aspects and impacts, with proper training and with strong programs in place, is certainly going to do better risk management. Associated with that, there is likely a reduction in accidents and spills, and also in fines and law suits:

[162] Interview with subject #0953 February 20 2007.
[163] Interview with subject #0079 December 12 2006.

> "*Increased efficiency, fewer regulatory problems and fewer exposures to law suits. All it takes is one incident like that to just really cost somebody a lot of money. At the end of a couple of years of implementation, they look back and they have had no law suits, no employee injuries maybe that could have been caused by environmental problems, they haven't been fined by the regulators, and they say, hey this is pretty good*". Interview with subject #0185 held on December 7, 2006.

This last point raises an important issue. It seems like ISO 14001 may be particularly helpful for organizations with significant regulatory issues that are particularly committed to cleaning their record and improving their public image[164]. Also, if an organization has to be certified in order to stay as a supplier to some customer, then evidently, it is a good investment to seek certification. But if an organization has been able to maintain a clean record of compliance, is not involved in high risk operations, and it is not required to be certified by customers, what benefit does it get? "*You're doing good for the society, but in terms of return of investment for the company, directly, I'm not sure you can think it's there*."[165] Similarly, a small or medium-sized organization may "*find it harder to realize the financial benefits just because of the economies of scale*."[166]

Andrews *et al.* (2003) warn that depending on their motivation, organizations that adopt EMSs could experience either net benefits, net costs, or no observable change. The opportunities to achieve some financial gains depend, first, on the type of organization, because a small insurance office has certainly much more difficulty finding opportunities for improvement than a large chemical plant. And second, on the continuing issue of lack of intrinsic motivation to adopt an EMS. Here, it is important to emphasize that although environmental auditors were eager to share economic success stories[167], the majority of

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[164] "*Particularly those organizations that found themselves in some sort of legal hot water, they would say it has been cost effective for them. They have looked back at the cost of potential fines, sites being shut down for periods of time for failure to comply with rules, the impact on their public image and stock price. The fact that we are not having these issues anymore with the regulators is well worth the cost of what it costs every year to implement 14001 at these plants… just from a compliance management perspective for some organizations they would probably tell you that it was worthwhile*" Interview with subject #0227 held on December 11 2006.

[165] Interview with subject #0108 held on January 12 2007.

[166] Interview with subject #0192 held on November 30 2006.

[167] "*I always tell them there is potential to realize significant cost savings if they do it right. If they do it for the half effort, then it is just going to cost them money. But if they make the effort to give people the*

them agreed that not every single organization is able to reduce costs, particularly if they are not fully committed to ISO 14001[168]:

> *"Not all companies. No, if you don't go into it with the right attitude, you go into it because you have to do it… You are doing it because your employer told you to do it, or because of a consent decree. No, it will forever be a financial burden. It will be a burden on your staff. It will be a pain in the ass and everybody will hate it*" Interview with subject #0191 held on January 13 2007.

In conclusion, although it seems that most companies approach the adoption of an EMS as an added cost, there is a sense that once companies start perceiving the benefits they become true advocates of the 14001 standard. Even organizations that are coerced to get certified, after a few auditing cycles and collecting some of the low hanging fruit, start perceiving the financial benefits of adopting an EMS. Even more important than the cost savings associated with the environmental improvements, the unquantifiable benefits of better risk management are likely critical for many organizations with regulatory and liability issues. Perhaps more remarkable than the direct and indirect financial benefits obtained, it is worth pointing out that the introduction of environmental accounting mechanisms is contributing to the rise of the environmental function within the hierarchy of the organization. Despite the fact that many auditors strongly believe that financial benefits can be obtained by adopting ISO 14001, the question on whether it is cost-effective to get ISO 14001 certified is very difficult to answer. Ultimately it leads us to a recurring topic along this dissertation. What happens with the companies that just want to have the certificate on the wall and never really see the value of using the EMS tool? Some companies just drag themselves through this process without making any

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resources and time to pursuit this they will, most definitely find cost savings. And I have literally seen millions and millions of dollars saved" Interview with subject #0228 held on December 6 2006.
"*I think across the board companies save money. Again, if they do it right, if they put some effort into it and not just want to develop paperwork to pass an audit*" Interview with subject #0974 held on December 20 2006.

[168] "*There is a certain cost for any new program that you adopt, at least an initial cost. If you never get to doing it well, it is a continuing cost with no financial return in your investment. In other words, it costs several thousand dollars a year to be audited by people like me, that is a requirement of the program and costs probably about $10-20,000 to implement the program. If you never get good at it, then those are costs that you spend and you never get back. If you are good at it then chances are, overtime, you will get that money back. But if you only do it halfheartedly it will be a cost*" Interview with subject #0988 held on November 25 2006.

meaningful improvement or ever seeing any benefits. Others will eventually mature and as they start seeing the benefits their commitment will also grow[169].

Discussion

The worldwide adoption of ISO 14001 is a story of success and controversy. Ten years after the standard was released, despite the more than 130,000 certificates granted and the substantial interest shown by the academic community, there is still an unusual lack of understanding regarding how ISO 14001 is implemented in reality. So far, I have talked about two basic myths regarding ISO 14001. First, that it is a voluntary program, and second, that it recognizes 'green' organizations. In the US in particular, that is hardly the case. According to the perspective of environmental auditors, there is only a small minority of organizations with the intrinsic motivation to adopt and certify an ISO 14001 EMS. The majority of organizations is either mandated by their clients or parent corporations, or required to certify as part of enforcement settlements resulting from outstanding compliance problems.

The role of ISO 14001 promoting the self-regulatory capacity of certified organizations is obviously diminished by their lack of internal motivation to make it a meaningful process. Nevertheless, that is no reason to consider ISO 14001 a failure. I have emphasized multiple times that ISO 14001 should not be confused with a performance or technology standard. Because the focus of this certification program is on the improvement of internal management processes, it may take several auditing cycles until an organization fully embodies the policies and procedures expressed on its EMS, and starts perceiving the benefits of its implementation. Auditors often refer to this phenomenon as the maturity of an organization. Typically, they begin as 'Reluctant Compliers'[170], setting easy reaching targets with minimal employee involvement. But as the EMS slowly begins delivering some benefits in terms of risk minimization and cost reductions, top-management commitment grows and spreads throughout every branch of

[169] "*I guess, if you start to realize the savings then it is cost effective. Initially, the first blush through the certification, it probably isn't cost effective because you haven't learned how to look at your system and find things that you can do better. You have to start examining the system very critically. And I don't think you do that early on very well*" Interview with subject #0959 held on January 1 2007.
[170] See Gunningham *et al.* (2003) typology of environmental management strategies.

the facility. As organizations increasingly mature toward becoming 'Committed Compliers' or even 'Environmental Strategists', their dedication to the EMS process also grows, fostering the development of their self-regulatory powers. These organizations take seriously their environmental responsibilities, and effectively use their EMSs to stay in compliance with regulatory requirements and to identify improvement opportunities. More importantly, the environmental function gets elevated within the culture of organization, resulting in increased awareness, better house-keeping and loyalty.

The amount of time it takes from an organization to go from 'Reluctant' to 'Committed Complier' varies significantly. Some organizations immediately try to make the most out the EMS implementation process and mature after one or two auditing cycles. Others, seem like they will forever do the bare minimum to maintain their certificate, and will likely never see any benefits from this process. Because of this heterogeneity in the commitment of organizations, it is extremely complicated to make a fair judgment of ISO 14001 as an effective regulatory instrument. What can be said is that, at a minimum, all certified organizations were required to integrate certain procedures in the way that they deal with their environmental issues. In that sense, they had to conduct an environmental assessment that identified (1) the environmental aspects and impacts of every one of their activities, (2) all their legal and other requirements, and (3) their current management practices. This early step in the implementation of an EMS is for many organizations one gigantic accomplishment in terms of awareness of their impacts on the environment and their regulatory obligations. In addition, the adoption of monitoring and auditing processes makes it extremely hard for any organization to unknowingly fail to comply with regulation. I believe that this process, by itself, is a very important contribution of ISO 14001 increasing the self-regulatory capacity of organizations.

Where ISO 14001 certification is perhaps coming short of its potential regards its effect in terms of actual environmental protection. Even though most certified organizations are able to show some degree of improvement in terms of their environmental performance, it is the auditors' perception that the majority of them are not taking ISO 14001 to its fullest advantage. Most certified organizations are, so far, implementing environmental

programs with soft targets, minimal investments and quick pay back periods, often associated with waste minimization and resources consumption. Again, even though these small accomplishments should not be demeaned (due to their significance building support and promoting awareness around environmental issues), it would be important that certified organizations had a more global and long term conception of their environmental objectives, and start promoting more profound innovations in their production processes.

This lack of capacity of ISO 14001 certification to demonstrate overarching and significant improvements in terms of actual environmental protection, plus the outcomes described above pertaining to the increase in the self-regulatory powers of certified organizations, raises one critical question regarding the importance of the ISO 14001 standard. Contrary to the popular belief that the certification of an EMS is recognition of superior environmental performance, it seems that the ISO 14001 standard is particularly useful for organizations with significant environmental impacts and compliance problems. Clearly, more than rewarding 'True Believers' or encouraging 'Environmental Strategists', it seems like the real value of ISO 14001 is in helping the 'Environmental Laggards' to step up and become 'Committed Compliers'. Considering the myths[171] that obscure industry perceptions about ISO 14001, perhaps a much stronger focus should be placed on acknowledging, not the top-performers, but the organizations that were able to use an ISO 14001 EMS to overcome their limitations and get a better handle on their environmental issues. In that regard, it is absolutely essential that we begin to perceive ISO 14001, not as a certificate, but as an instrument of self-regulation: a strategic tool that helps struggling organizations control their environmental aspects and regulatory requirements.

[171] See Corbett & Kirsh (2000)

Chapter VI
Explaining Variance in ISO 14001 Certification

Introduction

In the previous chapters I discussed the different motivations for organizations to get ISO 14001 certified, and the outcomes they get from that process in terms of organizational culture, environmental performance, regulatory compliance and economic benefits. Across those topics, I shared environmental auditors' accounts that exemplify the value of the ISO 14001 EMS implementation process. Most auditors agree that many ISO 14001 certified organizations were able, at least to a degree, to change their organizational culture, to improve their environmental performance, better manage their environmental risks (improving in terms of compliance and liability), and still reduce their bottom line. Similarly, they concurred that many organizations that never had the intrinsic motivation to go beyond just having a certificate, have not been able to see many of those benefits.

I have argued that the effectiveness of the EMS depends in large part on the stage of maturity of the organization. While some organizations quickly see the benefits associated with the adoption of an EMS and become fully committed to this process, others struggle for several years in resentment (some forever), before they see any benefits. In this chapter I will try to explain the heterogeneity in organizations that get ISO 14001 certified and what factors enable or obstruct their maturity. I discuss, first, the conflicting role of the ISO 14001 standard, the organizational factors that shape the different behavior of certified organization, and the critical aspects that facilitate their development.

The ISO 14001 tool vs. the ISO 14001 certificate

Since the first draft of the ISO 14001 standard was released, several authors have criticized its certification requirements. In fact, something that stands out in most of the early literature pertaining to ISO 14001 is the condemnation regarding the fact that the standard does not specify a minimum level of performance, and that it does not ensure

regulatory compliance (e.g. Gleckman & Krut, 1997; Morrison *et al*. 2000). As a result, because ISO 14001 is often perceived primarily as a labeling program that recognizes both environmental stewards as well as poor performers, it is no surprise why it is so often accused of being an 'industry plot', a 'smokescreen', or a tool to 'greenwash' the public (Bell, 1997; Clapp, 1998; Wood, 2003). The reasoning for this is the fact that ISO 14001 does not recognize organizations for the fact that they have reached a certain level of socially acceptable performance, rather recognizing those that have simply adopted a system for the continual improvement of their management practices. Even though this process may seem reasonable and in accordance with the principles of management-based regulation, the problem lies with the many actors that cannot overcome the fact that an 'environmental certificate' may be granted to an under-par organization. In fact, even some of the stakeholders involved in the development of the standard had difficulty dealing with the reality that certified organizations may not be exemplary.

> "E*ven though some of their [EPA] representatives have been part of the development of the standard, even they had a hard time in the late 90s when it was published, coming to grips with the reality that an ISO 14001 certificate did not mean that the company would necessarily be among the best in terms of regulatory compliance. And stakeholders, particularly environmental groups, thought that it was inappropriate for companies to become certified to 14001 unless they were the most exemplary ranks of companies with respect to regulatory compliance. That was a hurdle that had to be overcome*"
> Interview with subject #0220 held on December 13 2006.

There is an evident conflict between the role of the ISO 14001 standard as a tool for improved self-regulation, and the role of the standard as a market signaling agent. The limitations of the signaling agent clearly undermine the potential of the self-regulatory instrument and vice-versa. The reasons for this are, first, because industry mandates are putting an excessive emphasis on the pursuit of a certificate, in detriment to the implementation of an effective EMS. Since many organizations are required to get certified in order to stay in business, they look for a low-cost certificate through the implementation of an EMS with minimal objectives. Second, because many find unacceptable the role of ISO 14001 as a signaling agent, they criticize the requirements of the standard on the basis of being too permissive. Again, ignoring the fact that the ISO

14001 standard is a processes-standard, where the definition of objectives and targets is left to the discretion of each organization.

Curiously, while some criticize the lack of teeth of ISO 14001, environmental auditors are passionate advocates of the standard[172]. They understand that its purpose is not to reward environmental excellence, but to help integrate the environment as a business function of any organization. Essentially, ISO 14001 incorporates the basic elements of a management system based on Deming's (1993) cycle, while allowing the flexibility for any organization to adopt it and use it to the extent they want. In a sense, ISO 14001 provides a framework, but then it is the organization to decide, for example, how ambitious should they set their environmental targets, how strict should they be about their monitoring and auditing programs, how much emphasis should be placed on personnel training.

> "(...) *what matters is all the essential pieces are there, because then each system and each organization is going to take a different shape, meeting the various elements. (…) I kind of see this… there is those turbo tax programs… you have a framework but everybody's inputs are slightly different and everybody's' outcomes are slightly different… but it is organized around a common framework, and that is exactly what should happen*" Interview with subject #0953 held on February 20 2007.

The problem, it seems, is that the standard's greatest strength also seems to be its greatest weakness. By allowing a great deal of flexibility, the ISO 14001 standard can fit to any organization (independently of its nature, location or size) and allow for proper creativity. But on the other hand, the fact that it is fundamentally non-prescriptive, leaves no room for auditors to go beyond the minimum requirements of the standard and demand the adoption of best management practices[173]. By being

[172] *"I want you to know something, I love ISO, it is my passion, it is what I believe in. but at the end of the day, when I live this earth, my passion in life is helping and I believe ISO is an excellent tool to help organizations improve. To help companies improve their financial performance. If they do that, they can build their company and add jobs and ensure employment for people. I see how this can benefit organizations from an environmental or management systems perspective I see it… it is a passion of mine*" Interview with subject #0073 held on December 2 2006. "*I am an addict to the standard and I love it. I think that the people who did the compilations of the standard really did put a lot of thought into it in terms of identifying what was critical and in terms of simplifying it to its base elements*" Interview with subject #0960 held on January 3 2007.

[173] Interview with subject #0195 February 15 2007.

so generic, all organizations can comply at different levels of environmental performance, and therefore become certified despite their lack of commitment or the achievement of very meaningful environmental goals:

> "*The shortcoming is that it is* too *easy to get certified to it. You don't have to loose any weight and you can still get certified healthy*" Interview with subject #0988 November 25 2006.

Considering all of this, it is worth emphasizing that the ISO 14001 standard is somewhat of a double-edged regulatory instrument. The problem is that each of these edges of the sword seem to damage the effectiveness of the other. Careful consideration should be given to the fact that the flexibility that the standard confers turns it into a socially unacceptable certification system, and that the pressure to seek certification turns the implementation of an EMS into a mere formality without meaningful results. At the end, the real problem is not the disparity in terms of environmental conduct of certified organizations, but the whole purpose of the standard that is lost due to its lack of capacity to promote effective self-regulatory powers.

Organizational Barriers

Despite the lenient nature of the ISO 14001 standard and the coercive pressures that foster the implementation of ineffective EMSs, there are other factors that contribute to the wide discrepancy evidenced by certified organizations. Tinsley & Pillai (2006) point several organizational barriers to effective EMS implementation, including: the management style of the organization, its internal commitment, the inexistence of credible plans, lack of innovation and communication culture, and the lack of resources. According to environmental auditors, the most common problem they witness regards how some companies tend to overshoot the EMS implementation process, developing an extremely complex system that goes against the intent of the standard. Many auditors referred that it is very easy for an organization to fall into a labor intensive, useless,

record keeping process[174]. In fact, a common audit finding is problems in documentation, as it is usually a major effort for organizations to keep all the necessary documentation and records in order[175]. Particularly at the early stages of the EMS implementation, this process can be extremely labor intensive and may lead to some internal criticism and antagonism regarding the ISO 14001 process. In addition, some organizations[176] often get caught up in the bureaucratic requirements of the standard and in trying to meet the auditor's expectations end up producing an excessive amount of documentation while neglecting the whole purpose of the EMS implementation:

> *"The other 50% I think have gotten tied up into the bureaucracy of it, you know, just creating manuals and documents and protocols and procedures just to meet the standard and meet the auditor's interpretation of what they should have. As a result of doing that bureaucratic approach they are missing the performance piece*" Interview with subject #0206 held on January 17 2007.

One factor that has not been previously mentioned in the literature deals with the negative influence of external sources in the organizational culture. For example, the internal criticism and antagonism described above can be exacerbated when organizations use external consultants to help them implement an EMS. Several auditors were critic of the role of consultants, considering that their involvement is often not just unnecessary, but can also lead to the dramatic increase in the upfront costs of implementing the EMS[177].

> "*Consultants really add to the cost of these programs. And most of the companies just don't understand the standards and end up paying a lot of money for consultant fees that tell them to do something that they could easily figure out and do without the consulting services. (…) What I really see from the consultants' side is the consultants making it a lot more difficult than it needs to be, they are trying to generate fees, so rather than keeping it simple and making it as easy as possible, they actually make it a lot more complex*

[174] Interview with subject #0191 held on January 13 2007. Interview with subject #0966 held on January 4 2007. Interview with subject #0192 held on November 30 2006. Interview with subject #0206 held on January 17 2007.
[175] Interview with subject #0191 held on January 13 2007.
[176] "*I have seen people do a good job of implementing the system, so that it is not so documentation heavy that is overwhelming but they still have a good system, and then there is other people who have instituted so much record keeping that is almost not necessary and it becomes a burden for the employees*" Interview with subject #0192 held on November 30 2006.
[177] Interview with subject #0986 held on December 10 2006. Interview with subject# 0185 held on December 7 2006.

than it needs to be, and it provides little or no value" Interview with subject #0986 held on December 10 2006

Moreover, when external consultants are asked to develop an EMS, they are interfering with an essential component of the EMS implementation process[178]. They are replacing the employees and the environmental managers in the evaluation of the environmental impacts, and in the definition of the environmental objectives. This interference is not going to contribute to the increased environmental awareness of the employees or to the cultural change necessary within the organization, and it will likely foster a sense of hostility towards the new procedures brought by the external consultants.

That hostility against the certification process was referred by some auditors as organizational cynicism. Usually it is the plant manager or the individuals responsible for the implementation of the EMS that are recalcitrant and resistant to any change that could occur from the process[179]. At the core of the EMS implementation process is the development of a new organizational culture within the organization, however, if the "*staff who are implementing it are cynical about any change effort because they have done a hundred of them before, you are not going to get very good results because there is still going to have cultural cynicism*"[180]. It is also worth emphasizing that when this phenomenon occurs and the EMS implementation fails because the culture of the organization seems to be broken (there is a lot of inefficiency and bureaucracy, no communication channels, and resentment across divisions), it is very likely that this will affect not just the environmental management, but other critical activities of the organization[181].

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[178] "*Our method, is probably a little difference than many consultants because we actually do facilitate rather than create a 14001 in the organization. I don't think an organization can have someone make their 14001, they have to really delve into themselves*" Interview with subject #0966 held on January 2 2007.
[179] "*I have audited one company and two of its plants that was under a consent order from EPA. And there were differences in the two plants in the same parent company, and these were obviously due to the personalities and the worldview of the plant managers. One was indistinguishable from a company that would be seeking certification for its own merits, and because of their desire to do it. Another one was a little bit recalcitrant and was doing it because he had to, and resisted somewhat the changes that were made necessary by the results of the audit. When I went back to that same organization for a surveillance visit, that manager was no longer there. So, draw your own conclusion*" Interview with subject #0220 held on December 13 2006.
[180] Interview with subject #0205 held on February 13 2007.
[181] Interview with subject #0205 held on February 13 2007.

Finally, a recurring topic that is worth recovering deals with the importance of having an intrinsic motivation to seek ISO 14001 certification. There is a substantial difference in using the "*process for value*" instead of the "*certificate for value*"[182]. When an organization seeks certification because of coercive or mimetic pressures[183], it just wants to say that it has a certificate, and it is rarely interested in using the process to get some value out of it[184]. These organizations look at the ISO 14001 certificate as an end in itself, and approach the EMS implementation as a one-shot project:

> "*There is a tendency among some companies to think that once they got the certificate they can sort of wipe their hands and they are all set and they don't have to do anything anymore*" Interview with subject #0228 December 6 2006.

Some organizations make it so clear that their only goal is to please an external source that, on some occasions, the only objective of their environmental program is simply to maintain ISO 14001 certification[185], or more frequently, to set a small number of easy reaching targets while doing business as usual[186]. That said, it is reasonable to believe that without the proper intrinsic motivation, the certification is either doomed to fail[187] or it will take substantial time and effort before the top-management sees any benefits in the process and fully supports the implementation of the EMS[188].

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[182] Interview with subject #0206 held on January 17 2007.
[183] "*I think they just want to say that they have it… for checking the box to the customer or checking the box to the board… they are just looking to say that we got it, (…) yeah, well, keep up with the Jones so to speak, we have it*" Interview with subject #0206 January 17 2007.
[184] "*Lets do it as cheap and as fast as we can, lets just make it a project and then it is done, and then we will just do maintenance*" Interview with subject #0206 January 17 2007. "*Sometimes you will see a situation where management will say, ok, lets go ahead with the EMS implementation, if you have any problems just let me know*" Interview with subject #0185 held on December 7 2006.
[185] Interview with subject #0228 held on December 6 2006.
[186] Interview with subject #0974 held on December 20 2006.
[187] "*Sub-ordinates convincing top management to go for ISO-14001 may sound nice - we do have initial successes; but these examples have almost been failures in the long run*" Retrieved November 13 2009, from the Elsmar Cove website (posted: February 15 2008): http://elsmar.com/Forums/showpost.php?p=236160&postcount=4
[188] "*You must have management support to make this work. If you can't demonstrate to management that this program will either increase profits or decrease losses, then you'll have a hard time getting the traction you need to be successful*" Retrieved November 13 2009, from the Elsmar Cove website (posted: February 17 2008): http://elsmar.com/Forums/showpost.php?p=236232&postcount=11

Keys to success

Following the previous section on the barriers for a successful implementation of an EMS, it was not surprising to hear that the majority of auditors interviewed[189] indicated top management commitment as the single most important factor for the successful implementation of an ISO 14001 EMS:

> "*The best I've seen is when the top management actually believes in the principles of the ISO Standard. (…) When all of management is on board, there is a 'power' that you can almost sense and these companies make the biggest improvements.*" Interview with subject #0191 held on January 13 2007

Top management commitment is translated by a good understanding of the requirements and benefits of the ISO 14001 standard, and consequently by embracing the EMS implementation with the goal of improving internal processes, more than just for waiving a certificate. It should be reflected by how much support they give to the EMS in terms of visibility and resources provided, and also by the existence of communication channels. Top managers should be in touch with their employees by attending meetings, talking with workers, evaluating procedures[190]. Also, they must be open to the necessary cultural change, promoting a new paradigm along the individuals responsible for the implementation of the EMS[191] and encouraging the shared responsibility of EMS implementation across the entire workforce[192].

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[189] "*I would say that the most important thing is management commitment. To me, if the management isn't committed I can tell you that the rest doesn't follow through*" Interview with subject #0226 held on December 18 2006. "*Management, that would be number one! A committed management! In any system, it doesn't have to be environmental, any system. If you don't have a committed management it is not sustainable. But if your management team is committed and your management team reinforces the importance of the program, the rest of organization will be committed*" Interview with subject #0959 held on January 1 2007. "*Definitely top management (…) I really believe that is the most important thing. When you see a company with heavy management commitment, you see that (…) everybody in that company understands it and they know how they fit in*" Interview with subject #0955 January 10 2007. "*It is motivation of the top leadership. (…) That is why Japanese companies generally do this well. If the top-management is only doing it because someone above them told them they have to do it, then they are going to do the minimum required*" Interview with subject #0988 held on November 25 2006.

[190] "*It all as to do with top management. How much they support it, how visible that support is and the resources they provide. (…) If the top person is 'this is what I believe in, this is what we are going to do', they show visible support, they attend meetings, they re-enforce the message, they are out talking to operations. Then people get the message: 'oh uau, the CEO is really serious about this'*" Interview with subject #0974 held on December 20 2006.

[191] Interview with subject #0205 held on February 13 2007. Interview with subject #0106 held on December 14 2006.

[192] Interview with subject #0955 held on January 10 2007.

The second key to success is establishing environmental accounting practices. It was just said that the success of the EMS depends on management commitment. Well, several auditors[193] argued that the best way to get management buy-in is by attaching a dollar figure to the environmental programs. Then managers will see the return on investment and the impact on the bottom line, rather than just environmental monitoring reports:

> "*For those companies who do [are taking it seriously], management is going to insist to put a system in place to evaluate the value of implementing 14001. And so for those companies they have to have a process to determine whether it is paying for itself or not. If it is not, they won't do it*" Interview with subject #0955 held on January 10 2007.

Another aspect mentioned regards the importance of understanding the intent and the requirements of ISO 14001. Several auditors mentioned that poor employee training is an obstacle to a successful implementation of the EMS[194]. Therefore, they emphasize the importance of having a sound training program that emphasizes the benefits of EMS implementation and promotes environmental awareness[195]. The consulting industry is supposed to play a strong role in this training process and therefore, another key to success is the appropriate use of external experts. Several auditors criticize consultants suggesting that they just want to get a company registered and not necessarily help them improve. It is critical that consultants do not replace the internal structure of the organization, and should only be used when an organization lacks a specific internal expertise[196].

> "*The companies I go to that use consultants to design a whole system often don't have the best system because their own people haven't been involved in it. The best systems are where you use the consultant for what you need, you*

[193] "*I encourage them to look at the financial benefits because that is what talks back to management to regain further commitment*" Interview with subject #0226 held on December 18 2006. "*When I go in and whether I audit or whether I consult, one of the first things I talk about with the environmental team is no matter how great your environmental objective is, management is not going to give it a whole lot of appreciation unless you attach a dollar figure to it*" Interview with subject #0228 held on December 6 2006.
[194] Interview with subject #0185 held on December 7 2006. Interview with subject #0955 held on January 10 2007. Interview with subject #0073 held on December 7 2006.
[195] Interview with subject #0073 held on December 2 2006.
[196] Interview with subject #0955 held on January 10 2007.

know, for the right help, but you still have a lot of people involved from your company in it" Interview with subject #0192 held on November 30 2006.

One last key to success regards the importance of documentation. While some auditors argued that excessively bureaucratic and paper dependent EMSs were a major barrier to its success[197], others claimed that it was essential to have detailed documented procedures[198]. The reasoning lies in the fact that having all the procedures formalized ensures that the EMS is not fully dependent on a single person. In addition, detailed documented procedures should not have to be a paper burden if properly formalized and organized in an electronic system, and available in a shared network[199].

Leaders and laggards, champions and free-riders

On the previous sections I highlighted some of the shortcomings of ISO 14001, emphasizing the flexibility granted by the standard and cautioning against the existence of a wide range of certified organizations in terms of their environmental performance. There is a minority of organizations that is truly environmentally responsible or that has matured enough that they have been able to grasp the benefits of successfully implementing an EMS. Those organizations are setting challenging and innovative environmental objectives, with the goal of improving their environmental performance, public image, and bottom line:

"*They have found a way to recycle greater than 99% of their solid waste stream. So they have nothing going to a landfill! (…) To offset their electricity use they purchased wind energy as one of their objectives and targets*" Interview with subject #0008 held on December 28 2006.

"*They spent 2 years figuring out what to do with their Styrofoam. (…) They are currently sending it to Canada, and they are paying to recycle this in Canada, because they can say that they can recycle 100% of their waste products including the Styrofoam and that is remarkable*. (…) *I am auditing companies that are really committed to environmental improvements and prevention of pollution. I could give you an example of an [automaker] where they recover rain water to flush the toilets, and companies that built a geothermal unit to recycle heat and cold from the water to reduce the cooling*

[197] Interview with subject #0192 held on November 30 2006. Interview with subject #0206 held on January 17 2007.
[198] Interview with subject #0185 held on December 7 2006.
[199] Interview with subject #0955 held on January 10 2007.

and heating from their plants. There is some really great stuff going on out there" Interview with subject #0986 held on December 10 2006.

"*I used to hesitate to promise financial returns. I used to just push for a zero cost implementation. However, many of my clients are seeing $40,000+ savings, year over year. Some are seeing $100,000+ savings. If you have improvement opportunities, this program can be very beneficial both environmentally and financially*"[200]

Nevertheless, not every ISO 14001 certified organization sets such ambitious objectives, particularly when there is no obvious direct return on the investment. Some ISO 14001 literature warned against this discrepancy among certified facilities (Yin & Schmeidler, 2007). For example, Brower & Koppen (2008) pointed that half of their case studies showed no ambition and rather static environmental objectives, while the other half were consistently and significantly improving their performance. According to the perspective of the environmental auditors interviewed, there is a small minority of certified organizations that are truly environmental champions. Then there is probably a larger number of organizations that implemented an EMS because of external pressures, and it is actually using it effectively to identify opportunities for improvement. But considering that ISO 14001 standards leaves the definition of environmental objectives and targets to the certified organizations, I tried to answer what is the bare minimum a company can do to maintain a certificate and how easy it is to free-ride ISO 14001:

"*I think a company can get there on a free ride with a minimal amount of effort. It's evident during the audit that there is not a major effort being applied by that company. The 14001 standard is written loosely, and it allows for a lot of latitude in assessing continuing improvement, conformance and such. So… that 20% can slip through the crack*" Interview with subject #0973 December 15 2006.

What this means is that it is relatively simple for a company to pencil wipe, to do the homework without getting any better[201]. Since the standard never describes the magnitude of the continual improvement, as long as an organization shows small

[200] Retrieved November 13 2009, from the Elsmar Cove website (posted: February 16 2008): http://elsmar.com/Forums/showpost.php?p=236187&postcount=8

[201] "*It is easy to pencil wiping this one and just put it in place. Yes, quite a few, specially in Europe. Pencil wiping means you are doing the paper work. They are doing their homework but they are not getting better. There are undoubtedly a number of companies like that*" Interview with subject #0988 November 25 2006.

improvements, it is in conformance[202]. It is then certainly possible for an organization to turn business as usual into minimal environmental objectives; it just takes "some clever wording"[203]:

> "*Even the company that I am working now, we are not doing anything different because we are ISO certified than our current business. The current way we do business is just documented. (…) I mean, when you look at the standard there is absolutely nothing wrong in doing that. An example of what it does is: do I have new goals every year? Yeah, I am showing continual improvement because I am doing this and that; but is this company getting as much as they could get from using the ISO Standard as a tool to step back and look at the big picture along with looking at the small department/division pictures to see potentials for improvements? No! But can they be certified and stay certified doing that? Yeah*" Interview with subject #0191 January 13 2007.

Acknowledging that the ISO 14001 standard has a requirement for continual improvement, it made sense to ask auditors how, in their perspective, an organization could maintain a certificate doing business as usual. Shouldn't auditors be able to identify those practices and pressure organizations to establish meaningful objectives and targets? The answer to this question was surprising, and almost consensual[204], "it depends on the certification body"[205]:

> "*Look at ISO 14001, I am not going to kid you, I have been around the block long enough to tell you that if you want a cheap system you certainly can. (…) Unfortunately, colleagues of mine on the auditing side are not putting lots of pressure on companies, and I have to tell you, I am certainly embarrassed sometimes with what I see*" Interview with subject #0172 held on February 20 2007.

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[202] Interview with subject #0008 held on December 28 2006.
[203] Interview with subject #0191 held on January 13 2007.
[204] "*I would say that the performance, the toughness of gaining the certificate and the robustness of the audit varies from certification body to certification body, and everybody will claim that they are wonderful and tough but fair, but there has been no measure of that*" Interview with subject #0964 held on January 8 2007. "*When auditors and certification body personnel get together, they often lament the fact that there are other certification bodies out there that are not as scrupulous as the reputable ones that I work for, and people say things like: everybody knows that if you want to get a certificate on the wall you go to XYZ certification body who are easy. There are certification bodies with that kind of reputation*" Interview with subject #0220 held on December 13 2006. "*I have seen a couple of places that have transferred over from other companies to our company, that given their situation, I can't understand how they could have been certified*" Interview with subject #0195 held on February 15 2007.
[205] Interview with subject #0106 held on December 14 2006.

> "*I don't think it is [easy] with my audits and the certification body I work for. I don't think it is at all. I've come across some where it seemed like (…) some certification bodies were less strict. I've been told there is a wide variation among certification bodies in terms of how tough it is to pass the audits and get the certificate*" Interview with subject #0108 held on January 12 2007.

Although several authors (Krut & Gleckman, 1998; Morrison, 2000) have criticized ISO 14001 on the argument that it fails to reward environmental excellence, what happens in reality is that several organizations have been able to use the ISO 14001 EMS to improve their environmental performance, minimize risk and liability, improve their compliance record, while reducing their bottom-line. Several auditors are actually proud of how hard they work their clients and the achievements they have made. Some of these organizations already had a genuine concern for environmental issues, but many had poor compliance records and have been able to use the EMS process to gain some control over their environmental aspects. Nevertheless, a persistent topic along this chapter are the organizations that lack the internal motivation to implement an ISO 14001, and never make a genuine effort to seek some benefits from this process. This issue is particularly problematic in the US because certification is mostly driven by client mandates. The reason why many of these organizations seem to be able to get certified by doing 'business as usual' seems to be more of a problem of the certification industry than of the standard itself. This issue is the central theme of the following chapter.

Discussion

A fundamental question across this study regards what differentiates certified organizations on their approach to environmental management. Throughout this chapter I explored several explanations for the heterogeneity of ISO 14001 certified organizations in terms of their commitment toward improved environmental management and overall environmental performance. The first justification regarded the conflicting role of ISO 14001. If on one hand the standard is an instrument for organizations that want to voluntary manage their environmental aspects through an integrated approach, on the other, ISO 14001 sets the requirements that allow an organization to become certified and benefit from public recognition. The problem is that the strengths of the first seem to be the weaknesses of the later (and vice-versa), which led the ISO 14001 standard into a

growing spiral of misinterpretations and criticism regarding its public policy role. As an instrument that aims to promote the self-regulatory capacity of organizations, the ISO 14001 standard is praised by environmental auditors who claim to have seen substantial improvements in terms of organizational culture, environmental performance, regulatory compliance and cost savings, particularly among those organizations with more room for improvement. Yet, the flexibility granted by the standard, associated with its inclusiveness and its non prescriptive nature, is fiercely criticized by some who cannot accept that organizations with compliance problems may be rewarded with an 'environmental certificate'. Likewise, the industry mandates for certification that held the promise of bringing revolutionary gains in environmental performance along the supply chain[206] and that promoted the worldwide adoption of ISO14001 certification, turned the implementation of an EMS into a mere formality without meaningful objectives or any real impact in the capacity of organizations' capacity to self regulate.

According to the environmental auditors interviewed, a heterogeneous group of organizations is ISO 14001 certified, in part because of the flexibility granted by the ISO 14001 standard. What distinguishes those organizations is their internal motivation to seek certification, translated in terms of top-management commitment toward the effective implementation of an EMS. When there is an intrinsic motivation, top-management is committed to use the EMS implementation process for value. As a result, resources will be devoted to training, and top-managers will be highly involved in the implementation and evaluation of the environmental programs, raising the visibility of this process and promoting the necessary cultural change for the effective adoption of the EMS across the entire organization. When the motivation is external, the organization typically wants the certificate for value, ignoring the EMS implementation process. An unqualified environmental manager or an external consultant will likely implement an EMS that will turn into a labor-intensive record keeping exercise, increasing costs and promoting resentment and hostility toward environmental projects, while doing business as usual. Even though some organizations are able to, overtime, see the value of the EMS implementation process and effectively use it to find opportunities for improvement,

[206] As suggested by Delmas (2007) and Switzer *et al*. (2000).

others will never have the conditions to mature enough to see the usefulness of this process.

Despite the lack of teeth of the ISO 14001 standard, organizations that are doing business as usual and are not able to demonstrate continual improvement of their environmental performance should not be able the get certified. Nevertheless, according to environmental auditors, free-riding ISO 14001 does not seem to be particularly difficult. Besides the fact that the standard does not set robust requirements, it seems that the demand for low-cost certificates led the certification industry to also differentiate itself. If some certification bodies are being more forgiving than their counterparts, they are certainly contributing to the public recognition of organizations that not only are poor environmental performers, but are also not putting any effort to improve their self-regulatory powers.

I would like to emphasize that the heterogeneity evidenced by certified organizations is not necessarily a negative aspect. I remind that the original purpose of the ISO 14001 EMS standard was to allow any organization, independent of its nature or compliance status, to adopt a common framework for improved management of environmental issues. In fact, environmental auditors have suggested that the ISO 14001 process is particularly effective for under-par organizations with a significant margin for improvement. I reinforce that for many organizations, the adoption of an EMS contributed not just in terms of improving environmental performance, but more importantly, as a driver for organizational change and increased environmental awareness. Yet, it seems like those successes are somewhat shadowed by the unconvincing efforts of externally pressured organizations.

If the majority of organizations are asking ‘how much does it cost for me to get a certificate?’ when they should be asking ‘what do I get from implementing an EMS?’ isn’t it possible that the certification process, rather than promoting the adoption of best management practices, could actually discourage it? If some organizations are allowed to free-ride ISO 14001, benefiting from the lack of teeth of the standard as well as an

apparent leniency by the conformity assessment system, they are not only wasting resources but they are also lowering the common denominator and discrediting the image of the ISO 14001 certificate. Understanding the enormous potential (and limitations) of ISO 14001, caution should be used when discussing the efficacy of industry mandates or other types of external pressures (like regulatory or administrative incentives), as they may simply contribute to a 'certificate rush'. I would refrain some enthusiasm around any attempt to externally drive more organizations to seek ISO 14001 certification, because of the consequences associated with the lack of intrinsic motivation regarding the adoption of an EMS. If the ISO 14001 standard is indeed to improve management practices and promote environmental stewardship, there needs to be a major paradigm shift in the adoption of EMSs. More emphasis should be given to recognize and reward those organizations that are indeed using their EMSs effectively, while eliminating the actors that have a negative impact on the reputation of the standard. On Part II of this dissertation I will describe the ISO 14001 conformance verification system, and discuss how its characteristics are contributing (or not) to the promotion of self-regulatory powers among certified organizations, and to the credibility of the ISO 14001 EMS standard.

Part II

Who Guards the Guardians of Environmental Certification?

Chapter VII
The Accountability Structure of ISO 14001

> "*So my question of the day....who is watching the watcher....cuz they ain't doing it themselves!!!*"[207]

Introduction

It is estimated that standards and conformity assessment influence 80% of all exports, corresponding to a market value of 13.5 trillion US dollars just for 2008 (Muse, 2008). These numbers have prompted hundreds of thousands of organizations to leverage compliance with standards in order to boost their competitive position. In addition, organizations are increasingly promoting the development of globally accepted standards, as well as demanding globally accepted assessments of compliance (Muse, 2008). As a result, new patters of environmental auditing practices have exploded in recent years, where numerous certification bodies ensure that organizations are compliant with those standards, supervised by several accreditation bodies and international associations that establish an intricate accountability network.

When the ISO 14001 EMS standard was launched in 1996, it held the promise of revolutionizing the way environmental issues were dealt at the corporate level, supported by an effective and independent assessment by third-party auditors. One decade after the standard was released and with more than 130,000 certified organizations worldwide, recent scandals in financial audit and several incidents with certified organizations[208] brought a cloud of suspicion over the ISO 14001 conformity assessment scheme (ENDS, 2003c). Part II of this dissertation discusses the development of new patterns of environmental auditing, and evaluates the impact of ISO 14001 conformity assessment system institutionalizing responsibility and promoting transparency and accountability. Like Power (1994, 2005) I, first, describe how the ISO 14001 conformity assessment systems operates and, second, explore the unintended consequences of EMS third-party audits and how they put in risk the credibility of ISO 14001.

[207] Retrieved November 13 2009, from the Elsmar Cove website (posted: June 5 2003): http://elsmar.com/Forums/showpost.php?p=51631&postcount=13
[208] See several examples in ENDS (2007, 2006, 2003a, 2003b).

Research Context

Even though the auditing activity can be traced back to the eighteen century, associated mostly with ship inspection and international financial accounting (Furger, 1997; Switzer 1999), it has been suggested that, over the last twenty years, our society has undergone an 'audit explosion'. This theory refers to the growth of audit and related monitoring processes, evidenced by the transformation and emergence of new formal institutions for monitoring (Power, 1994). There are three main bases for the 'audit explosion' (Power, 2000). First, the expansion of accounting and other mandates driving financial auditing, spurred by public management reforms[209] that emphasize financial control and the need for organizations to become 'auditable'. Second, society demands for greater accountability and transparency of both public and private service providing organizations, which promoted corporate governance and the widespread adoption of internal auditing practices. And third, regulatory reforms and the rise of quality assurance practices.

Because of their requirements for organizations to adopt management control systems, the emergence of quality assurance programs and the popularity of the ISO 9001 standard played a significant role in the 'audit explosion'. On one hand, the implementation of such management systems by organizations represents the incorporation of a tool for internal organizational control. On the other hand, the external verification process requires organizations to have those systems of self-regulation audited by a third-party (Power, 2003). This concept of 'control of control' is critical to the theory of the 'audit explosion' as it reflects a "qualitative shift in the lens of auditing, from people, practices and products to management systems" (Power, 2003, 189). This paradigmatic change in the auditing activity is illustrative of the current regulatory reform based on the development of innovative instrument of meta-regulation (Parker, 2002), which subordinate performance assessments and emphasize the evaluation of the integrity of management systems. This concept of systems auditing is a good example of 'regulatory capitalism' described in chapter II, illustrating the proliferation of new regulatory

[209] Popularized as 'New Public Management' by Hood (1991).

technologies and regimes of enforced self-regulation where the audit activity acts as the enforcement arm of regulatory strategies that prescribe frameworks of internal control for regulated organizations (Power, 2003).

The effects of management systems in the audit explosion transcend the realm of quality assurance to encompass other areas such as occupational health and safety or social responsibility. In the environmental arena, the adoption of systems audits was no exception, surpassing in popularity the traditional instruments of compliance auditing, due-diligence auditing, and many other types[210] of environmental audits that have been employed by organizations to identify unanticipated environmental compliance problems and liabilities (Hillary, 1998; Medley, 1997; NAPA, 2001). Like its quality counterpart, EMS audits benefited enormously from the publication of ISO 14001. This EMS standard provides a framework for the adoption of environmental internal controls, which is also susceptible of being subject to external oversight. According to ISO 14001, an audit is a systematic and documented verification process to objectively obtain and evaluate evidence to determine whether an organization's EMS conforms to the criteria set by the organization. This means that under the ISO 14001 framework, an audit is viewed as a set of interdependent processes to achieve objectives related to the continuous improvement of an organization, in which individual audits are subsystems of a broader audit program, which is itself a subsystem of the overriding environmental management system (Karapetrovic & Willborn, 2000b).

In order for an organization to implement an effective ISO 14001 EMS, it needs to conduct frequent internal (first-party) audits to ensure that the EMS is effectively implemented. Those are typically conducted by a qualified employee of the organization itself. When organizations are required by external forces (such as clients) to implement an EMS, that second-party may reserve the right to conduct their own external audits. But, as it is often the case with ISO 14001, when an organization is mandated to obtain ISO 14001 certification, it needs to have its EMS audited by a third-party certification

[210] For example, compliance audits, activity audits, energy audits, issues audits, preacquisition audits, suppliers audits or insurance audits (Dittenhofer, 1995; Hillary, 1998).

body (ANAB, 2008a), whose auditor's sole purpose is to determine the extent that the organization's EMS conforms to all elements of the ISO 14001 standard (Johnson, 1997).

The benefits of environmental systems audits have been fairly discussed in the academic literature (ANAB, 2008b; Brockway, 1997; Dougherty, 2006; Maltby, 1995; Pearson *et al.* 1993; Unhee, 1997; Welford, 1996; Vinten, 1996; Zutshi & Sohal, 2003). Internal audits serve primarily as an early warning system and as an information mechanism for managers, bringing organizational discipline to the implementation of an EMS. An effective audit program should also contribute to the identification of potential problems, reducing the exposure to environmental risks, compliance problems, litigation and adverse publicity. It provides essential data for better decision-making, to find cost reduction opportunities, to assist benchmarking across facilities, and to assess training needs. External audits, by clients or particularly by third-party certification bodies, add the value of publicly demonstrating the organizations commitment to environmental protection, contributing to an improved relationship with stakeholders, increasing employee awareness and loyalty, and as a tool for public relations and marketing.

Based on the theoretical benefits of environmental systems audits, a growing number of governmental agencies and business associations has issued mandates for ISO 14001 certification, contributing significantly to the proliferation of third-party EMS audits in the last decade. Because these organizations often have no means to check the conformance of certified facilities, third-party auditors and certification bodies are playing an increasingly important public policy role. For regulators, third-party auditors could potentially share some of their oversight responsibilities, verifying the compliance programs of certified facilities, while allowing public enforcement agencies to make a more efficient use of their resources by focusing on poor performers (Switzer & Ehrenfeld, 1999). In addition, federal and state environmental agencies are increasingly relying on ISO 14001 certification as a criterion for public policy benefits, such as favorable public recognition and regulatory flexibility (NAPA, 2001). Third-party certification also has important implications for global commerce, on one side removing technical barriers to trade, and on the other, as a market signaling agent, instilling

customer confidence and allowing organizations to distinguish themselves (TC 207, 2008; ANAB, 2008b). Considering these public policy implications, NAPA (2001, vii) warns that it is essential that this certification process produces credible and consistent results, and that those who rely on it (regulatory agencies, private organizations, as well the public) have appropriate expectations of what it represents: "how the ISO 14001 [conformity assessment] system works, what it was intended to do and how it functions in practice, and who are the professionals who are actually operating this system."

In his view of the 'Audit Society', Power (1999) states that even though an audit process could potentially open up organizations to external scrutiny and thereby provide a basis for enhanced control, it also faces the risk of being seen as a fraud of 'empty comfort certificates'. As the audit society demands for greater accountability and stricter surveillance mechanisms are designed, O'Neill (2002) adds that the wrong sorts of accountability strategies are being used, and that the "new systems of control may have aims and effects that are quite distinct from the higher standards of performance, monitoring and accountability that are their ostensible, publicly celebrated aims." In Part II of this dissertation, I try to answer whether ISO 14001 certification can indeed restore trust by making organizations more transparent and accountable, or if in the contrary, ISO 14001 could end up further damaging trust? As O'Neill (2002) warns that confidence must be placed with great care when we are being asked to trust increasingly abstract and obscure systems of control, if we are to place trust in a certification system like ISO 14001, we need to understand, first, which claims we are invited to trust and, second, who are those putting them forward. In the remaining of this chapter I will describe the conformity assessment structure of ISO 14001 and investigate who are the actors involved in ISO 14001 certification who are soliciting our trust, to whom they are accountable, and for what it makes them accountable.

ISO 14001 Conformity Assessment

Conformity assessment is any activity concerned with determining directly or indirectly that certain requirements are being fulfilled. The conformity assessment of ISO systems standards such as ISO 14001, includes several processes of auditing, certification and

accreditation to ensure that an organization is in conformance to the requirements of the standard. It should be emphasized that ISO is just responsible for the development and publication of standards, and that it does not issue certificates of conformity. In fact, ISO 14001 conformity assessment is based on a verification of an organization's EMS by a third-party certification body which should be independent of both ISO and the organization they certify. Therefore, the value of an ISO 14001 certification depends on the independence and competence of the third-party certification body, and ultimately on the confidence that the end users of the certificate have in that agent.

To assure that certification is performed rigorously and fairly, an accreditation process is necessary to recognize that a certification body is qualified to conduct that task. It is said that an organization is granted 'accredited certification' when the third-party that issues its certificate has attained formal recognition from an accreditation body that it is competent to carry out certification in specified business sectors (ANAB, 2008a). Because certification bodies rely on EMS auditors to assess the conformance of certified organizations, auditor competence also plays a crucial role in the significance of an ISO 14001 certificate. As a result, the importance of the accreditation function also extends to the recognition of the credentials of management systems auditors. However, the conformity assessment system of ISO standards does not end with the accreditation bodies, as there are also several international organizations that oversee the job of the accreditation bodies. These multiple layers of oversight establish an accountability structure that is governed by multiple ISO standards and guidelines that define criteria, procedures and principles for conformity assessment and accreditation. It is important to emphasize that EMS certification goes beyond the ISO 14001 standard and the role of EMS auditors. Above them, there are multiple agencies with oversight responsibilities, each of them governed by its own ISO standard, that form a complex conformity assessment ecosystem. Figure 1 illustrates this intricate structure, as well as the oversight and economic relationship between each actor. This diagram also highlights situations of potential conflict of interest where the 'inspector' economically depends on the 'inspected'. On the next sections, I will describe, one layer at a time, the organizations

involved in this web of guardians of the guardians, and identify the mechanisms that ensure consistency among these actors.

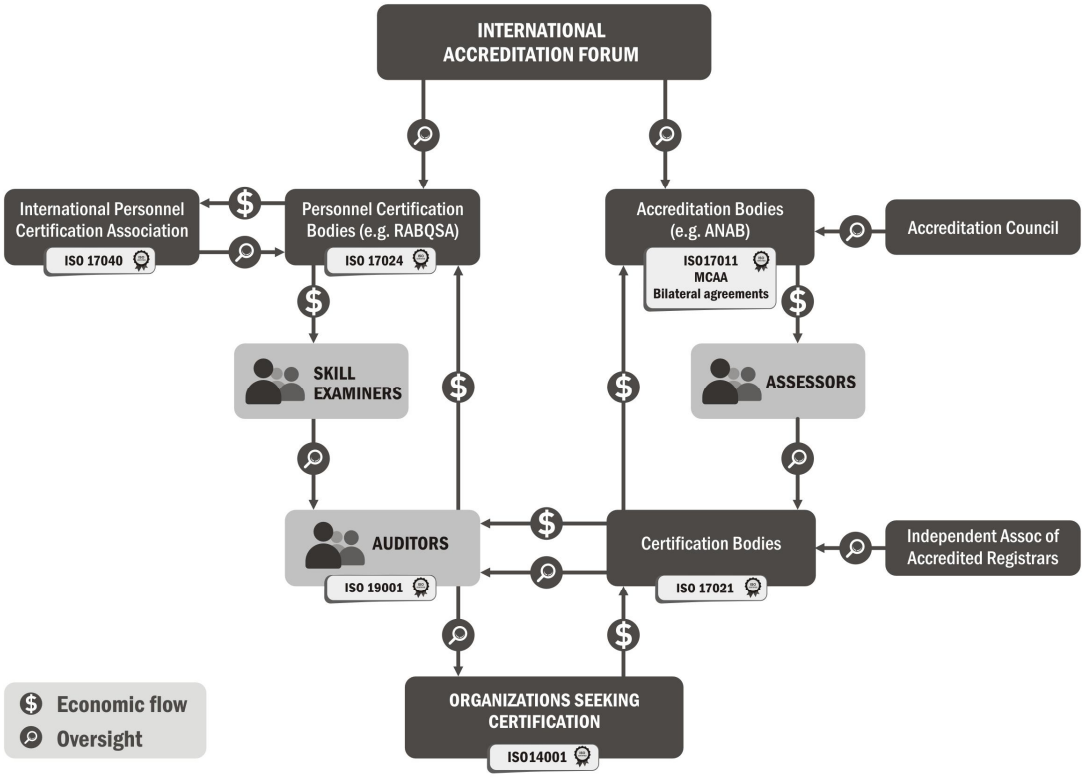

Figure 1 – ISO 14001 Conformity Assessment Structure

ISO 14001 Certified Organizations

Organizations seeking certification are at the bottom of this ISO 14001 conformity assessment system. According to the ANAB (forthcoming) survey, the majority of ISO 14001 certified organizations in the US are multinational companies, mostly from the chemical, metal or transportation industrial sectors. Even though the ISO 14001 banner often portrays these organizations as environmental leaders, King *et al.* (2005) warn that these may indeed be poor performers trying to improve their status (or reputation) as a result of external pressures such as market demands, corporate mandates or enforcement settlements (chapters IV and V discuss in detail the motivations that drive these organizations to seek ISO 14001 certification). Even though a diverse set of internal and

external drivers has been identified[211], there are signs that there is a strong component of coercive pressures driving ISO 14001 certification, particularly in the US.

According to the perspective of environmental auditors, most organizations start this process as 'Reluctant Compliers'[212], whose goal is to pursue ISO 14001 certification because it is a condition for business. Typically they turn this process into a commodity, implement a cheap EMS, and do just the minimum necessary to obtain and maintain certification, setting easy reaching targets[213]. It is very likely that these organizations will select a certification body based mostly on costs, rather than on the certificate's credibility. Moreover, their relationship with the environmental auditors will probably be characterized by some degree of adversarialism and lack of transparency[214], just as if the auditor was another regulatory enforcement agent. These defensive strategies and 'blamism' (Hood, 2002) influence the auditing process and disregard the purpose of the standard, stifling continual improvement and organizational innovation (Hunt 2003):

> "*If you have a non-conformance that means you loose. That means a point was scored against us. So the perception (…) is diametrical opposed to the whole purpose of what an ISO audit is. They are trying to hide everything under the rug, and the auditors are trying to, supposedly, find opportunities for improvement and help them evolve with their system*" Interview with subject #0073 held on December 2 2006.

On the other hand, some of these organizations have been able to see the value of the EMS process. They became 'Committed Compliers' (or even 'Environmental Strategists') who have identified opportunities for improvement, minimized their risk and

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[211] There is a significant body of literature on this topic, for example, Andrews et al., 2003; Bansal and Hunter, 2003; Clark, 1999; Darnall, 2003; Darnall, 2006, del Brio et al, 2001; Delmas, 2002; Delmas & Montiel, 2007; Evangelinos & Halkos, 2002; Florida & Davison, 2001; González-Benito & González-Benito 2005; Guler, Guillen, & Macpherson, 2002; Jiang & Bansal, 2003; King & Lenox, 2001; King, Lenox, & Terlaak, 2005; Kollman & Prakash, 2001, 2002; Mendel, 2002; Morrow & Rondinelli, 2002; Neumayer & Perkins, 2004; Prakash, 1999; Prakash, & Potoski, 2006; Potoski & Prakash, 2004, 2005a; REMAS, 2006; Russo, 2001; Vastag & Melnyk, 2002; Vastag, Corbett & Kirsch, 2004.

[212] See Gunningham *et a*l (2003) typology of organization's environmental commitment.

[213] Interview with subject #0220 held on December 13 2006. Interview with subject #0172 held on February 20 2007.

[214] *"The most unsuccessful audits, the ones I enjoy the least are the ones where you walk in and you see a wall of defensiveness, or they are ok until you suddenly mentioned that there might possibly be a nonconformance and all of a sudden they start putting on a fight*" Interview with subject #0955 held on January 10 2007.

liability, and more importantly, increased their environmental awareness and stewardship. These organizations take pride on the robustness of their EMS and on the significance of their ISO 14001 certificate. They select a certification body not just based on costs, but also on the certificate's reputation. Here, the audit process is characterized by a sense of partnership, where the auditee is enthusiastic and cooperative, and prepared to accept non-conformances as part of the continual improvement process[215]. Similarly, the auditor is perceived not as an enemy, but as someone that can bring value to the organization:

> "*We are not here because we want to beat you over the head, but we want to help you, give you some feedback on your system, improve your system and give you some value added auditing. And if the auditee goes with that view, if we write some nonconformances or if they look at that as a way to improve rather than a 'wait a minute now' reaction, it goes better*" Interview with subject #0192 held on November 30 2006.

In conclusion, the different motivations to pursue ISO 14001 certification not only influences the internal culture of the organization, but it also affects the type of relationship an organization has with its certification body. As some may use this process as a learning opportunity and expect a thorough and competent auditor, others will likely look for the easiest route and seek lenient auditors who will not jeopardize the certification process.

Environmental Auditors

As the ISO 14001 standard is growing in popularity, external environmental auditors are becoming key players in the environmental arena. Through their interpretations, they form the linkage between the ISO 14001 standard and its application in reality (Ammenberg *et al*, 2001). Essentially, the role of the EMS auditor is to assess whether an organization's EMS conforms to ISO 14001. However, if the requirements of the standard are not implemented consistently and competently, then the purpose of the certification process can be undermined. Basically, if an organization contracts on the basis of ISO 14001, then it must be assured that a certificate awarded in one facility is as legitimate as those in other facilities (NAPA, 2001).

[215] Interview with subject #0974 held on December 20 2006.

Ensuring auditor consistency has been a major concern of the auditing industry and a variety of methods has been used to promote that uniformity. First of all, management systems audits (like ISO 14001 and ISO 9001) are governed by another ISO standard - *ISO 19011 Guidelines for quality and/or environmental management systems auditing* - designed to provide orientation on internal and external systems audits. There are also auditor training programs, which are an essential step for auditors to initiate their auditing career. An 'Environmental Lead-Auditor' course[216] consists of an accredited 5-day training program covering the requirements of the standard as well as auditing fundamentals (ISO 14001 and ISO 19011). Then, depending on the certification body they work for, auditors receive some form of continuing education. Typically, once a year each certification body gathers their auditor pool for a 2 or 3 day training session. These are calibration sessions where the certification bodies try to level the auditing process by discussing how certain elements of the standard should be interpreted and how auditors should act upon certain situations[217]:

> "*The certification bodies that do it the best are the ones that have some ongoing continuing training. Get the auditors together (…) once a year to review the standard, review what kind of findings we are having and try to be consistent on how we write things*" Interview with subject #0192 held on November 30 2006.
>
> "*In our annual conference we talk about difficult audit situations and that is one of the most interesting, best attended sessions, where we can all share the types of situations we've run into that put pressure on us*" Interview with subject #0198 held on January 12 2007

In addition, certification bodies usually publish some form of electronic newsletter where new interpretations of the standard and auditing guidance are published[218].

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[216] "*The first thing is we all go through our 5 day Lead Auditor Course, which teaches the approach that we use. You have to do that to be a certified Lead Auditor*" Interview with subject #0206 held on January 17 2007.

[217] Interview with subject #0960 held on January 3 2007. Interview with subject #0008 held on December 28 2006. Interview with subject #0172 held on February 20 2007. Interview with subject #0220 held on December 13 2006.

[218] Interview with subject #0192 held on November 30 2006. Interview with subject #0226 held on December 18 2006. Interview with subject #0185 held on December 7, 2006. Interview with subject #0191 held on January 13 2007.

Other formal mechanisms of auditor's oversight include the certification body's[219] review of audit reports[220], client feedback forms[221], as well as peer review evaluations (when conducting team audits)[222]. Another form of ensuring audit consistency is through infield assessments. Several certification bodies have policies where each auditor is observed by his director on a frequent basis (once a year[223] to every three years[224]). Others have more structured forms of oversight, for example, a hierarchy of auditors where the lower ranked report to their line managers with whom they have ongoing training sessions[225].

Finally, several environmental auditors mentioned that the most important learning mechanism is through informal mentoring sessions. Auditors frequently work on teams and while traveling together, they typically share stories, approaches and strategies that help ensure auditor consistency[226]. Some auditors mentioned that they have informal

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[219] *"The certification body that I work for does a lot to ensure consistency and this is very important to them. (…) They have a standard methodology that is used among all auditors worldwide, we do have training as I mentioned earlier, quite a bit of intensive training, we also have opportunities to work together, when we have an audit that requires an audit team, it happens that we work together in that way. And then they also have a process for peer reviews so that we are witnessed by someone else within the certification body on a periodic basis, just to see that we are consistent and that we are using the same methods*" Interview with subject #0955 January 10 2007.

[220] *"It is part of the management job is to review all of their reports and we require hand written notes along with a very detailed report, not just checkboxes. One, that tells you that the auditors has been there and they were specific in what they saw and did for each element of the standard, and we review the report*" Interview with subject #0958 held on January 2 2007.

[221] *"We have a survey and I encourage my clients, please, fill it out, if I need to improve I need you tell me where I need to improve, and I ask them where should I improve my audit skills*" Interview with subject #0959 held on January 1 2007. "*Clients give feedback to the certification body who then gives it to the auditor. And we also get interpretations of different elements and processes and procedures from the certification body all the time: what is to be our official stand on a particular thing. You are always kept in the loop on that regard*" Interview with subject #0228 held on December 6 2006.

[222] "*[The Certification Body] gives each client that I go to an evaluation form to fill out for me and then our offices review those evaluations. In addition to that, each auditor who audits with a co or a lead is given an evaluation form to fill out for that other person and is turned in as part of our documentation from the audit. So every time I audit with somebody else I evaluate them and they evaluate me*" Interview with subject #0960 held on January 3 2007.

[223] Interview with subject #0226 held on December 18 2006.

[224] Interview with subject #0220 held on December 13 2006. Interview with subject #0958 held on January 2 2007.

[225] Interview with subject #0206 held on January 17 2007.

[226] *"The thing that I think helps me know that I am performing consistently to one of my clients is when we actually work on a job together. And we sort of talk about how we do things and how do we interpret, and something we see on a job, or how we prepare our report, I think that is probably the mechanism I think is more effective is the one on one auditor when we work together and talk about how we do things*" Interview with subject #0008 held on December 28 2006.

mentoring groups[227] to discuss audit findings, which seem to function just like a peer to peer check and balance. Another important learning instrument is the Elsmar Cove Website, where auditors can find answers and discuss online any issue related with systems auditing[228].

Personnel certification

One of the strategies to ensure the legitimacy of the ISO 14001 certification process is by guaranteeing the aptitude of the environmental auditors. For that purpose, there are Personnel Certification Bodies that evaluate both auditors and training providers. Worldwide there are several of these Personnel Certification Bodies. For example, UK's International Register of Certificated Auditors or the National Standards Authority of Ireland. Headquartered in the US is an organization called RABQSA International, formed in 2005 from the merger of the US Registrar Accreditation Board and The Quality Society of Australasia International. This is basically a for-profit multinational company with principal offices in Milwaukee, Sidney and Athens, responsible for the certification of the majority of Environmental Auditors in the US[229].

RABQSA offers two distinct types of auditor certification: a qualification and a competence-based approach. There are 194 Lead Environmental Auditors certified under the qualification model[230]. This is the more simple and conventional approach where the auditor needs to attend an accredited training course, and document his industry work experience and audit days. This personnel certification system is considered problematic because it fosters the heterogeneity of the auditor pool. Since it relies excessively on the auditor's professional experience, many auditors with different backgrounds and auditing styles believe they are the most qualified, while everybody else is doing a disservice to the auditing industry - "*obviously there has to be somebody not correct in that*

[227] Interview with subject #0132 held on December 8 2006.
[228] Interview with subject #0988 held on November 25 2006.
[229] According to the RABQSA online register (www.rabqsa.com), over 200 Lead Environmental Auditors in the US are certified by RABQSA.
[230] According to the RABQSA online register (www.rabqsa.com), there were 194 Lead Environmental Auditors certified under the competence-based approach (accessed December 2008). This represents 96% of the total number of certified Lead Environmental Auditors in the US.

scenario."[231] As a result, despite its simplicity, this certification approach is limited in the sense that it allows a problematic disparity in auditing styles and subsequent lack of consistency in the conformity assessment.

In order to deal with the flaws of an approach that relies just on the qualification and experience of someone, RABQSA recently developed a more innovative competence-based scheme that relies on evaluations of auditor's knowledge and skills. That entails, first, an exam of auditor's know-how on management systems and auditing principles; second, an online assessment of the auditor's personal attributes (like objectivity, partiality, tenacity) designed against the principles of the ISO 19011 standard; and third, an examination of auditing skills[232]. This skills verification (similar to a witness audit) is conducted by a 'skills examiner' who is also certified by RABQSA. The problem with this certification approach lies in the fact that most auditors "*are very reticent to have that examination conducted*"[233]. First, because not only it is much more expensive for the auditor[234], but it also raises a conflict of interest in the sense that skill examiners' revenue depends on the number of auditors they examine and there may be a tendency for them to give away competencies[235]. In addition, most auditors feel like they are very qualified and they demean the usefulness of an online personality assessment test, the capacity of a skills examiner or the credibility of the whole certification:

> "*Trying to determine whether somebody is competent to do anything is an extremely large challenge. I am not a 100% convinced anybody really knows how to really make a determination about whether somebody is competent to do an audit or not. (…) how do we know that the witness auditors [skilled examiners] are qualified to go out and do witness audits? What makes them competent to do that job?*" Interview with subject #0227 held on December 11 2006.

[231] Interview with subject #0947 held on February 20 2007.
[232] Interview with subject #0947 held on February 20 2007.
[233] Interview with subject #0947 held on February 20 2007. According to the RABQSA online register (www.rabqsa.com), there were just 8 Lead Environmental Auditors certified under the competence-based approach (accessed December 2008).
[234] Interview with subject #0997 held on November 29 2006. Interview with subject #0172 held on February 20 2007.
[235] "*I think competency based is going to be hard to police. (…) Competency based auditors means the examiners for the auditors are going to get revenue depending on how many people can they evaluate annually. There is going to be a tendency to give away the competencies. So, I think, as long as they have things based on finance and revenue streams, they are going to have problems with the credibility of the standard*" Interview with subject #0073 held on December 2 2006.

Despite the proclaimed benefits of personnel certification[236], many environmental auditors disdain the role of personnel certification bodies. Not only do they have minimal understanding of the activities of these organizations[237], but they are highly critical of the service they provide. Very often they see them as for-profit companies that just want to make money out of the auditors. As a result, many reputable auditors choose not to be certified at all, simply because their competence is not questioned by their clients or employers. In addition, some auditors[238] are so critical of the role of RABQSA that they rather seek their certification from an European personnel certification body[239]:

> "*The accreditations are basically just a purchase of a certificate... you have to turn in your audits and pay to be RABQSA certified. I have never done that. I have audited maybe probably 2 hundred some companies over a period of 9 and a half years. (…) My qualifications and approval come from my company*" Interview with subject #0986 held on December 10 2006.

It should be emphasized, however, that despite all the criticism and the evident flaws in the certification of environmental auditors under both approaches, RABQSA is simply trying to implement a system that conforms to the ISO 17024 standard. Just like certified organizations must conform to ISO 14001 and auditors must follow ISO 19011, personnel certification bodies have a standard that sets *Requirements for Bodies Operating the Certification of Persons* - ISO 17024. This standard focuses on defining and examining competence of personnel and the competence of the examiners of personnel. But ISO 17024 (like the other ISO standards) does not specify how objectives

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[236] *"RABQSA certification can help you maximize your career potential and attain your professional goals. If you're seeking employment, your certification provides evidence of competence and qualifications that can help you land a job. (…) According to the annual salary surveys published by Quality Progress magazine in the last five years, certified management systems auditors earn on average substantially more than their counterparts who are not certified*" RABQSA (2008).

[237] Interview with subject #0132 held on December 8 2006.

[238] *"They only want your money but they don't bring anything in return*" Interview with subject #0172 held on February 20 2007. *"It is a service organization and the level of service that they are providing is, excuse my language, is really shit. I mean, even for us as auditors, when you go to RABQSA they deduct the money right away from your account but they don't reply to your emails, they don't reply to your phone calls, it takes them 4 months to give you an updated certificate*" Interview with subject #0172 held on February 20 2007. "*I've long viewed the RAB as a 'rogue' group. (…) I'm IRCA and have avoided the RAB like the plague*" Retrieved November 13 2009, from the Elsmar Cove website (posted: February 16 2005): http://elsmar.com/Forums/showpost.php?p=100507&postcount=4

[239] According to the IRCA online register (www.irca.org), there are 39 Lead Environmental Auditors located in the US certified by IRCA (accessed December 2008).

are to be met. It simply requires RABQSA to implement a scheme that defines competency criteria that are examinable and measurable, which, paradigmatically, is something auditors seem not to believe in.

International Personal Certification Association

In order for an organization to become ISO 14001 certified, it first needs to be audited by a Lead Environmental Auditor. That auditor is likely certified by a Personnel Certification Body that relies on another certified actor, the skills examiner, to attest his auditing competence against ISO 19011. Well, the Personnel Certification Bodies must also conform to a standard (ISO 17024) and therefore someone needs to accredit them.

There is an organization that adds another level of oversight to this conformance assessment structure. The International Personal Certification Association (IPC) is a body that conducts peer assessments among their members, ensuring conformance to ISO 17024 and overall consistency across Personnel Certification Bodies. RABQSA and IRCA, for example, have engaged in those peer assessments[240] that are governed by another standard, ISO 17040, that defines *General Requirements for Peer Assessment of Conformity Assessment Bodies and Accreditation Bodies*. Besides the leading role of IPC, there is also a substantial degree of cooperation between several international personnel certification bodies setting guidelines and multi-lateral agreements for the services they provide. For example, RABQSA's competency-based certification is audited by a parallel organization called the Joint Accreditation System of Australia and New Zealand (JAS-ANZ)[241].

Curiously, the majority of environmental auditors has a minimal understanding of the role of these overseeing organizations, and yet criticizes their lack of capacity to ensure the credibility of the certification process. It is worth pointing that along this accountability structure, norms (standards, guidelines and agreements) are created and oversight mechanisms are put in place, to ensure the credibility of the whole certification

[240] Interview with subject #0947 held on February 20 2007.
[241] Interview with subject #0947 held on February 20 2007.

process. Yet, it seems though that as we climb this ladder, the comprehension and acceptance on the role of these organizations seems to diminish.

Certification Bodies

So far I have talked about organizations seeking certification, environmental auditors and different bodies that verify auditors' competence. But there is another branch of this conformance assessment structure that is missing - certification bodies - the entities responsible for the actual ISO 14001 certification, as well as those that accredit them. When an organization seeks ISO 14001 certification it needs to hire a certification body to, first, conduct an office audit to pre-assess the EMS documentation, and second, send an environmental auditor to verify *on site* the situation of that organization. Based on an auditor's report, the certification body decides whether an organization should be certified or not. In the US there are currently 35 accredited certification bodies[242], typically large multinational corporations[243] that offer assessment services, as well as training and consulting services through other corporate branches. Similarly to all other actors involved in the conformity assessment of ISO 14001, certification bodies are also governed by an international standard, ISO 17021, that sets *Requirements for Bodies Providing Audit and Certification of Management Systems*. This standard basically intends to ensure that a certification body and its auditors are free from conflicts of interest, and that assigned audit teams possess adequate competence for each specific client (Dougherty & Dalrymple, 2008). In addition, ISO 17021 requires certification bodies to implement their own management systems and thereby 'walk the talk' (Dougherty & Dalrymple, 2008).

There is a strong debate on the auditing industry regarding the quality and consistency of certification bodies. There are some that are well regarded and a small number with a very poor reputation. In general, auditors would agree that the majority of the

[242] According to the ANAB online register (www.anab.org) accessed December 2008.
[243] According to ESU (2008), the top- ISO 14001 certification bodies in the US are ABS Quality Evaluations (897 certificates), Lloyd's Register Quality Assurance (757 certificates), BSI Management Systems (722 certificates), NSF International (636 certificates), Intertek Systems Certification (619 certificates), Underwriters Laboratories (487 certificates), Det Norske Veritas Certification (432 certificates), Quality Management Institute (now SAI Global) (355 certificates), Perry Johnson Registrars (236 certificates), and TUV America (185 certificates).

certification bodies are relatively similar, with a small minority known for 'being easy' or for having a 'different style'. There are however, a few reports that due to increasing competition caused by a decline in the number of new certificates, certification bodies may be becoming less strict on the application of the standard on an attempt to maintain their client base. Multiple threats exist that jeopardize the credibility of certification bodies. The most obvious deal with the lack of motivation to raise adversarial situations and therefore to identify non-conformances. This notion of 'soft-grading' occurs because on one side it makes the job of the auditors easier, and on the other, the certification body is able to maintain a positive relationship with its clients. There is also pressure to reduce costs by using 'cheaper' auditors and by cutting audit duration. And there have been complaints that certification bodies were doing consulting and auditing for the same organization, basically developing an EMS with one hand and auditing it with the other. This issue will be further explored in the next chapter, but for now it is important to point out that there is a fundamental flaw in the conformity assessment of ISO 14001, due to the lack of independence in the auditor-auditee relationship. From the Enron collapse to the more recent scandal in the financial sector, the auditing industry is facing a deep crisis that extends to the management systems' sector. According to an ENDS report (2003d, 2003f) a huge amount of variation has been encountered in the approaches and practices of different certification bodies, and there is a widespread concern regarding the quality of EMS audits. As a result, a variety of actors is involved, formally and informally, in assuring the integrity of the ISO 14001 certification process.

Independent Association of Accredited Registrars

The Independent Association of Accredited Registrars (IAAR) is an organization that represents certification bodies operating in North America. Even though IAAR does not provide formal oversight over its members, it still plays an important role promoting consistent certification of management systems. One of the goals of IAAR is to encourage the widespread accreditation of certification bodies under ISO 17021, and therefore ensure that their operations are being evaluated by an accreditation body. In addition, IAAR promotes and facilitates dialogue among its members through their frequent meetings.

Despite the fact that certification bodies operate in an extremely competitive environment, the IAAR functions as a debate forum where certification bodies have been able to promote consensus building among its members and foster the adoption of professional practices that help ensure the credibility of the certification program (IAAR, 2008). Rather than trying to identify and 'weed-out' second-rate certification bodies, the IAAR attempts to be an inclusive setting where poor performers are not blamed but invited to adopt common best-practices.

Accreditation Bodies

If the role of the IAAR is to facilitate dialogue and promote consistency, the role of the accreditation organizations is to ensure that certification bodies are indeed operating in a competent manner and in conformance to the requirements of ISO 17021. One example of the 'audit explosion' in this realm is the rise in the number of National Accreditation Authorities that have been set up to accredit certification bodies in their respective regions. These are normally not-for-profit bodies operating under some form of government supervision that ensures their independence, and their non-commercial and non-competitive nature[244]. That is the case with most European accreditation bodies, but not of the American National Accreditation Body (ANAB).

ANAB is the US accreditation body for management systems certification, including quality, environmental, information security, food safety, and occupational health and safety management systems, plus numerous other industry-specific requirements. ANAB was formed by the American National Standards Institute (ANSI) and the American Society for Quality (ASQ), and it is an independently governed entity, financially self-supported by fees charged for its accreditation services. The job of ANAB can be described quite succinctly: they do to a certification body what the certification body does to an organization seeking certification[245]. That is, as the certification body sends a team of '*auditors* to *audit*' an organization's conformance to ISO 14001, ANAB sends a

[244] Retrieved November 13 2009, from the Elsmar Cove website (posted: March 1 1999): http://elsmar.com/Forums/showpost.php?p=6193&postcount=1

[245] Interview with subject #0952 held on February 5 2007.

team of '*assessors* to *assess*' a certification body's consistency with ISO 17021. In more detail, ANAB evaluates a certification body's written policies and procedures, including the credentials of its auditors; if those are acceptable, the ANAB assessor performs an on-site examination of those internal operations, and then witnesses the certification body conducting a complete client audit (ANAB, 2008b). During their assessments, ANAB typically evaluates the certification body's procedures for determining what competence is needed on an audit team, the auditor selection process, how complaints are handled, and how the appeal system functions. In addition, ANAB also investigates complaints received either by clients or by other certification bodies denouncing misconducts by their peers[246]. The information collected by ANAB is then passed on to an independent *Accreditation Council* who is responsible for making a final decision on accreditation issues such as granting, extending, suspending, withdrawing or terminating a certification body. In addition, the Council is also responsible for approving any procedures or advisories published by ANAB. This Council is composed by several members such as industry representatives, government officials, standard setting agencies, consultants and trainers, as well as certification body representatives[247].

The most visible work of accreditation bodies are witness audits, where they actually follow a team of ISO 14001 auditors and evaluate their competency[248]. Even though many auditors find these a valuable process[249], there is also a vast number that are quick

[246] Interview with subject #0952 held on February 5 2007.
[247] Interview with subject #0948 held on February 13 2007.
[248] "*I've undergone several of those already in my career and they send out two trained auditors and they sit back like flies on the wall and listen and take notes and then make an assessment at the end of the audit whether I'm conforming to auditing standards or not*" Interview with subject #0973 held on December 15 2006.
[249] "*I've been witnessed twice, and I think that's an excellent process. If you look at every audit you do as, you know, how would you be witnessed in this situation… if you are aware of that, that is something that keeps you honest*" Interview with subject #0198 held on January 12 2007. "*It is a little intimidating when somebody's sitting there listening to everything you do during an entire audit without saying a word. But they are pretty thorough and they write a report and they write nonconformances, although I didn't have any, so I think it's pretty good*" Interview with subject #0108 held on January 12 2007. "*I think they do a good job when they are witnessing audits here. (…) But I have seen some good feedback that they provide*" Interview with subject #0192 held on November 30 2006. "*I would definitely say that they are important, if nothing else, it helps me… (…) I know that they have found things with our certification body, they have found parts of our process that could be improved and I think that is good. Anything that they can do to help our processes is good overall and it is also good validation. When they finish an audit they always sit down with you at the end and give you a debrief and tell you formally what they have found and if there are*

to criticize the relevance of this process. They argue that because someone is at its best during a witness audit does not guarantee that he is going to make all audits that way[250], and they strongly criticize the expertise of the individuals responsible for assessing their competency[251].

Part of the problem of assessing auditor competency is that it seems like each auditor believes he has the right approach while everyone else either does not understand the standard or does not have the appropriate auditing skills. Similarly, when a certification body looses a client, it automatically assumes that their competitors are either being lenient or not quoting enough audit days[252]. As a result, there is a universal sense of discontentment toward the accreditation bodies, and accusations that ANAB should do a better job weeding out poor performers[253]:

> "*I think they could do more. I think that in some cases they know who some of the bad apples are but for political reasons they don't pursue them aggressively enough. (…) When we the auditors know who the bad certification bodies are, and the costumers know who the bad certification bodies are, and they are still allowed to continue to hold an ISO accreditation, it is disturbing*" Interview with subject #0988 held on November 25 2006.

What auditors and certification bodies do not seem to realize is that the role of ANAB is very similar to theirs. They are basically assessing whether a large number of organizations is in conformance with a standard (ISO 17021) based on a very small

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any non conformances and also informally tell you what you are doing right and it is good to have that validation" Interview with subject #0955 held on January 10 2007.

[250] "*All of a sudden, people who play it fast and loose when they are being audited by someone else, are very strict and by the book. I think it is just a difficult thing to assess*" Interview with subject #0997 held on November 29 2006.

[251] "*I was witnessed probably 4 or 5 times so far, and 2 out of the 5 I had total inexperienced witness auditors. (…) Excuse me, when I am auditing a company I have to provide that I have industry experience, I have to provide all that detail, and they are not following their own rule. That totally upsets me*" Interview with subject #0172 held on February 20 2007.

[252] "*In most cases, they really don't know. If they loose business to another certification body and then they automatically assume that 'they are going to be easier on the client and that is why the client accepted them', I don't think that is normally the case*" Interview with subject #0948 held on February 13 2007.

[253] "*They are doing an absolutely horrible job. They got rid of one certification body but they are coming back. There is probably about 4 certification bodies out there that ought to really have their hands slapped. And one of them ought to be eliminated*" Interview with subject #0132 held on December 8 2006.

sample of observations[254]. In addition, they may be reluctant to trigger a suspension or withdrawn action unless they have very sound evidence since it may involve a lengthy and costly process[255]. Moreover, there is one fundamental issue with the role of accreditation bodies, ANAB in particular, in the sense that they financially depend on the fees paid by certification bodies that they accredit[256]:

> "*They are looking as much for customer base as anybody because their revenue depends on how many certification bodies they accredit. (…) They have got a customer base that they have to maintain to stay in business. So, do I then kick out 30% of the certification bodies that I know are no good? Gee, I would be shooting myself in the foot wouldn't I?*" Interview with subject #0958 held on January 2 2007.

The root of this discontentment is that, in reality, accreditation bodies are not the proclaimed independent, non-commercial, non-competitive national organizations that many believe they should be. Although, theoretically, each National Accreditation Body should supervise the certification bodies operating in its particular country, the most popular ones, like ANAB, UKAS (UK), RVA (Holland), JAS-ANZ (Australia/New Zealand) operate at a global scale in competition with their counterparts. This phenomenon has perverted the nature of the accreditation services and led the European Union to recently consider the need to provide them of a legal framework (Council of the European Union, 2008). Under this new regulation, accreditation services are regarded as a public authority activity and EU Member States are required to appoint and monitor a

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[254] "*As in any auditing process, we are only doing a sample for a large certification body, who has maybe a thousand auditors. We are doing one audit per year per standard. So if they do QMS, EMS, RC… they would get 3 witness audits a year and one office audit. If you have a thousand audits, what is the chance of seeing those? It would take years and years and years*" Interview with subject #0948 held on February 13 2007.

[255] "*There were maybe as many suspensions for failure to pay ANAB dues than there were related to performance matters … there is an appeal process so if one of these certification bodies feels that ANAB is making some judgment that is improper or is otherwise going to have some serious impact on their business. They can appeal that and it is an extensive process for all involved, including ANAB to go down that road, so, I think there is a reluctance on their part to really go down that suspension road or withdraw an accreditation unless they really feel that the evidence they have is so sound that it is going to hold up, because they don't want to go through all that trouble and go through the appeal process and lose*" Interview with subject #0227 held on December 11 2006.

[256] "*But like everyone else, they need to make money. Look at the things they have done. They are doing it from the aspect of 'we need more money, we need more revenue coming in, so lets now do…'* they are faced with the same things" Interview with subject #0191 held on January 13 2007. "*But, you have to look at ANAB and say 'who pays them?'. We do, the certification body does. So they are in it for money too. They are not for profit but they still need to have an income. So you always got that little bit of an element in their system*" Interview with subject #0959 held on January 1 2007.

single national accreditation body. In essence, this regulation will ensure that national accreditation bodies are independent from the conformity assessment bodies they accredit, that they operate on a not-for-profit basis, and that they do not compete with other national accreditation bodies (Council of the European Union, 2008). This monopolistic approach to accreditation in Europe will certainly address some of the legitimacy threats associated with the auditing industry. However, this new policy will have an impact on the 'one certificate accepted everywhere' goal for ISO standards, and it is not clear how it will affect accreditation and certification services in the US, where for the most part people resent having to deal with a monopoly.

International Accreditation Forum and Multi-Lateral Agreements

The chain of accountability on this conformity system does not stop with the accreditation of certification bodies. There is another layer of supervision responsible for ensuring the consistency among accreditation bodies. The International Accreditation Forum (IAF) is a global association responsible for the development of a single worldwide program of conformity assessment. Basically, the role of IAF is to ensure that an organization certified by an accredited body can have its certificate recognized elsewhere in the world - 'certified once, accepted everywhere' (IAF, 2008). IAF's main task is basically to develop guidance, rules and procedures for the operation of accreditation bodies, and to promote the exchange of information and cooperation among its members. They also provide some level of oversight based on the establishment of mutual recognition arrangements, known as Multilateral Recognition Arrangements (MLA), between its accreditation members (IAF, 2008). The purpose of these agreements is to ensure that equivalent accreditation bodies operating in countries signers of the MLA are following the same standard, and that they recognize each other's certificates. Each IAF MLA member is subject to an evaluation by one of its peers, in order to ensure full compliance with international standards and IAF requirements.

ANAB is a member of the IAF and one of the original signatories of the IAF MLA for EMS certification - the Multilateral Cooperative Accreditation Arrangement (MCAA). In addition, ANAB has signed separate bilateral agreements with accreditation bodies from

a variety of countries (Holland, UK, Brazil, and China), to promote mutual learning and to ensure that their accredited organizations are recognized nationally and internationally (ANAB, 2008b). In reality, what this means is that certification bodies from different parts of the world may seek ANAB accreditation, but also that certification bodies operating in the US may be accredited by a foreign organization.

Discussion

The scenario that is described above has many similarities with Michael Power's depiction of the Audit Society. According to Power (1999), regulatory initiatives are increasingly and explicitly seeking to utilize the cognitive and economic resources of regulated organizations to ensure compliance, particularly through internal and external audit of control systems such as EMSs. As third-party audits promise to correct the practices of organizations to wider public demands for control, the EMS audit explosion has become a regulatory instrument with an important public role, serviced by an aspiring class of professionals. As environmental auditors are the crucial agents responsible for the implementation of the certification programs, other private bodies (with quasi-state functions) oversee the self-regulated organizations through a mixture of associational and regulatory roles. Ultimately, this system relies strongly in the trustworthiness of those experts that produce the certification label. However, this trust is institutionalized by certification/accreditation arrangements for those providing the label; in other words, labels have been created for those doing the labeling. In addition, EMS auditing is not ruled exclusively by the ISO 14001 EMS standard. In order for that particular certificate to be awarded, a multitude of other standards and labels was produced. It is not just an organization that gets certified to ISO 14001, it is also the auditors, the certification and accreditation bodies that need to demonstrate compliance to their own standards and obtain their own labels of adequate competence. The EMS conformity assessment ecosystem illustrated in Figure 1, is governed not by one standard, but a myriad of norms and guidelines:

- ISO 14001:2004 - Environmental Management Systems - Requirements with Guidance for Use;
- ISO 19011:2002 - Guidelines for quality and/or environmental management

systems auditing;

- ISO/IEC 17021:2006 - Conformity assessment - Requirements for bodies providing audit and certification of management systems;
- ISO/IEC 17011:2004 - Conformity assessment - General requirements for accreditation bodies accrediting conformity assessment bodies;
- ISO/IEC 17024:2003 - Conformity assessment - General requirements for bodies operating certification of persons;
- ISO/IEC 17040:2005 - Conformity assessment - General requirements for peer assessment of conformity assessment bodies and accreditation bodies;
- IAF GD 24:2004 - Guidance on the Application of ISO/IEC Guide 17024:2003;
- IAF MLA 4:2005 - Policies and Procedures;
- IAF PL 1:2003 - Code of Conduct for Accreditation Body Members of the IAF;
- IAF/ILAC A1:2006 IAF/ILAC Multi-lateral Mutual Recognition Arrangements - Requirements for Evaluation of a Regional Group;
- IAF/ILAC A2:2006 IAF/ILAC Multi-lateral Mutual Recognition Arrangements - Requirements for Evaluation of a Single Accreditation Body;
- IAF/ILAC A3:2006 IAF/ILAC Multi-lateral Mutual Recognition Arrangements - Key Performance Indicators - A Tool for the Evaluation Process;

If behind each ISO 14001 certificate is an extremely complex structure of accountability, it is important to emphasize that EMS certification is just a tip of the iceberg of these instruments of self-regulation. Besides the popular quality and environmental standards, the International Organization for Standardization has created more than 17400 standards pertaining to the most diverse economic activities, and currently there are over one hundread ISO standards being published or revised every month. To assess conformance to ISO's management systems standards alone, there are now more than 750 certification bodies active around the world (ANAB, 2008b). These thousands of standards, auditors and certification/accreditation bodies illustrate what Levy-Faur (2005) called 'the golden are of regulation' based on the proliferation of self-regulatory mechanisms and an increase in delegation to autonomous regulatory agencies.

Despite the concerns expressed by Power (1994, 1999) and the recent discrediting events in the auditing community, it is noteworthy how the conformity assessment system that is supposed to ensure the credibility of ISO 14001 certification has gone almost entirely

unnoticed. Despite its extraordinary complexity and multiple layers of oversight, the ISO 14001 conformity assessment system has disconcerting limitations. First, because it provides minimal oversight throughout the entire assessment structure[257]. Second, because it is based on a narrow definition of accountability, based on assessments of competence rather than the quality of the results delivered (Thione, 2006). And third, because it is built on top of a disturbing conflict of interests. It is striking that an industry whose goal is to provide trust and that goes long ways to ensure that there are "no real or perceived conflict of interest" (ANAB, 2008b)[258], could not address the fact that auditors (throughout the entire conformance system) depend economically on the auditee.

The ISO 14001 conformity assessment system is based on the principle that if a body is competent to develop a certain task, the outcomes of those actions should be positive. That principle is even similar to the heart of management-based regulation, where by improving internal processes organizations may attain substantial improvements in performance. But what seems reasonable from a theoretical standpoint is also very easily subverted, particularly when the attribution of labels has such public policy and economic consequences. There seems to be a disproportion between the implications of having an ISO 14001 certificate, and the robustness of its conformity assessment. The existing system may be sufficient to ensure that an organization that is intrinsically motivated to implement an effective EMS, will in fact be able to improve its self-regulatory capacity. But for many organizations the stakes are much higher, and an ISO 14001 certificate is essential for them to stay in business or to obtain regulatory and administrative benefits. For those, the current conformity assessment is probably not robust enough to deter free-riding.

The unintended consequences of this conformity assessment system and how it is endangering the credibility of ISO 14001 is the subject of the next chapter.

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[257] "*Well, it's minimal oversight, certainly. (…) Going to somebody once a year or twice a year, to audit their system and only auditing a sample is certainly consistent with the idea of the standard but it is not consistent with robust oversight*" Interview with subject #0964 held on January 8 2007.

[258] For example, prohibiting a certification body to engage in both consulting and certification on behalf of a single client within an extended time frame so that auditors are truly independent of the systems they audit (ANAB, 2008)

Chapter VIII
Auditors Perceptions on the Conformity Assessment of ISO 14001

Introduction

On the first part of this dissertation I analyzed the foundations of the ISO 14001 standard, and cautioned against the existence of a wide range of certified facilities in terms of their environmental performance. There is a minority of organizations that has been able to impose strict mechanisms of internal control and that has grasped the benefits of successfully implementing an EMS. Nevertheless, not every ISO 14001 certified organization shows the managerial ambition to impose meaningful environmental objectives or to improve its self-regulatory capacity.

There seems to be three explanations for this phenomenon. One is the intrinsic motivation organizations have to adopt an ISO 14001 EMS. Contrary to common believe, ISO 14001 is not a voluntary standard. Many organizations seek certification in order to maintain their client base, not because of their will to self regulate their environmental aspects. The second regards the non-prescriptive nature of the ISO 14001 standard. Since it does not specify precise objectives or actions, it is then possible for an organization to turn business as usual into minimal environmental objectives and pencil wipe an ISO 14001 certificate. And the third explanation deals with the certification industry and the lack of teeth it seems to have to push certified facilities to impose rigorous management systems and improve their overall performance. There is a general feeling that auditors have a limited influence over certified organizations, that some certification bodies are more lenient than others, and that there is no proper oversight to calibrate them.

The second part of this dissertation is dedicated to this last argument, the conformity assessment structure of ISO 14001. On the previous chapter I illustrated the extraordinary complexity of this accountability web, describing the role of the different bodies responsible for ensuring credible and consistent certification. There are a multitude of organizations with oversight responsibilities, all subject to their own ISO standards (and their limitations), playing conflicting roles, facing external competition, and with

minimal sanctioning power. This final chapter aims to explore the implications of this intricate system of guardians of the guardians that is a reflex of the emerging new patterns and intensities of auditing and inspection described by Powers (1999) in the Audit Society. I will discuss, first, the limitations of management-based standards for certified organizations and conformance assessment actors, and second, the threats to the credibility of the certification industry.

Research Context

Throughout this dissertation I illustrated several misconceptions regarding the ISO 14001 EMS standard. The conformance assessment system of ISO 14001 is no exception, with businesses, government regulators, policy makers, academic researchers, and environmental groups having conflicting expectations regarding the role of this third-party certification process (NAPA, 2001). The reason for this lies in the commonalities that environmental systems auditing has with financial and compliance audits. The difference between a compliance audit (where the goal is to determine compliance or non-compliance) and an EMS audit (where the goal is to verify that an effective management system is in place to ensure compliance, prevention of pollution, and continual improvement) is a poorly understood concept in the environmental policy arena (NAPA, 2001; Wilson, 1999). Moreover, there seems to be some confusion regarding the role of third-party audits, steaming from the fact that many of the firms that offer this type of audit are primarily accounting firms (Switzer & Ehrenfeld, 1999).

Implicitly or explicitly, each type of audit makes claims about what it can achieve and why we should trust it (Courville *et al.* 2003). Nevertheless, Power (1999) argues that there is a disparity between the public expectations of system audits and the reality of an audit's technical and operational capacity. That disparity is palpable in the skepticism expressed by many scholars regarding the lack of robustness of ISO 14001 conformity assessment (e.g. NAPA, 2001; Paterson, 2002; Switzer & Ehrenfeld, 1999) and the discontentment regarding evidences that there is a wide discrepancy among certified facilities (e.g. Brower & Koppen, 2008; Yin & Schmeidler, 2007). Third-party management systems certification has in fact been criticized for several reasons: first and

foremost, due to the fact that systems auditing shifts the focus of the assessment from first-order performance objectives to the performance of the management system (Power, 2003), contributing to a conception of accountability that is narrower than the discourse of environmental protection demands (Power, 1999); second, the potential conflict of interest that results from the lack of independence between auditors and auditees, and how that undermines the sanctioning power and the consistency of application of the standard's requirements by the certification bodies (Switzer & Ehrenfeld, 1999); and third, the lack of accountability and public deliberation on the certification/accreditation process, requiring the end users of the certificates to trust the experts responsible for the certification (Power, 1999; Switzer & Ehrenfeld, 1999).

These limitations have profound consequences for the credibility of ISO 14001 certification. On one hand, the competitive nature of the auditing industry and the demand for low-cost auditing services may foster a decline in rigorousness and competence, undermining the value of an ISO 14001 certificate and perpetuating the prejudice that self-regulation is used as a smokescreen (NAPA, 2001). On the other, ineffective and futile conformity assessment may also have unintended negative effects for certified organizations, associated with the rise of 'auditee mentalities' (Power, 1994). What this means is that the pressure that organizations face to become auditable promotes a decline of organizational trust, and the adoption of defensive strategies which stifle organizational innovation, lower employee morale and increase audit compliance costs (Hood, 2002; Hunt, 2003 and O'Neill, 2002, cited in Power, 2005).

Even though audit's technical efficacy is still unproven (Courville *et al*. 2003), it holds the promise of contributing to the organizations' self-regulatory capacity and to provide public accountability for lack of government oversight. Perhaps because of those theoretical benefits, EMS auditing is already an important strategy used by thousands of organizations to create legitimacy, functioning as an important market signaling agent. Considering ISO 14001 public policy implications, it is crucial to evaluate its conformance assessment system capacity to institutionalize responsibility across certified organizations. In order to prevent some of the unintended consequences of the audit

society, Power (2003) suggests three dimensions that should be considered when empirically evaluating the outcomes of an audit program: the body of knowledge that informs the audit process; the organizational structure of oversight bodies; and the nature of the operational auditing process. In the last chapter I provided a detailed description of the design and operation of ISO 14001 conformity assessment system, and emphasized some of its limitations. In the following sections I will discuss in more detail the characteristics of the ISO 14001 certification process across the dimensions suggested by Powers (2003), evaluate how this system is contributing to the accountability of certified organizations, and how it could be affecting the overall credibility of ISO 14001.

Managing for auditability

On the EMS certification ecosystem, ISO standards provide the foundations along which a variety of different actors coexist. The ISO 14001 EMS standard has been thoroughly discussed in the previous chapters and it represents the central piece of the certification process. It should now be clear that ISO 14001 is not a performance standard. That is, ISO 14001 does not specify environmental targets that certified organizations must meet. On the contrary, it is a management-based standard that requires organizations to adopt certain management processes, such as setting their own objectives and targets, implementation procedures, and evaluation strategies. Along with that, it is not the auditor's role to decide what objectives are to be set or what processes should be implemented[259].

The flexibility granted by ISO 14001 is in harmony with the theoretical principles of self-regulation. That is, it allows those with the deeper knowledge on the activities of an organization to find the most suitable solutions to manage their aspects and impacts. The problem lies in the fact that many organizations do not have the internal motivation to actually self-regulate their environmental aspects through the adoption of an effective

[259] "*I'm an EMS Auditor (…) and as long as an organization does what the standard requires and they state they will do according to their procedures and policy where can I find them wrong? As an auditor your job is to determine conformance to the standard in question, and not to impose your own mindset on the auditee. Do they conform to the standard? Yes No. Are they complying with their policy? Yes No. Are they complying with their procedures? Yes No*" Retrieved November 13 2009, from the Elsmar Cove website (posted: November 27 2001): http://elsmar.com/Forums/showpost.php?p=22127&postcount=45

EMS. For an organization to become certified, it basically needs to implement an EMS that conforms to the ISO 14001 standard, and comply with its environmental policy and internal processes. It is the certified organization to decide what those processes should be. Hypothetically, an organization could "*use eeny-meeny-minie-moe or flip-a-coin*"[260] as long as they can prove that that is an effective process. As a result, when corporate or market pressures force organizations to become certified, they end up developing management systems solely with the purpose of obtaining the desired certificate. Those EMSs are then implemented not with the intention of becoming a useful management tool, but simply to pass a third-party audit[261]. Examples[262] of this phenomenon are evident on an auditors' web forum, where environmental managers describe the uselessness of their EMSs against the auditor's despair:

> EMS Manager - *We will have our ISO 14001[audit] next month. But, I am in a big doubt now whether to list some of the aspects or not to, because we do not have a sound control over them. The auditor may either find that the control does not happen or the aspect is not identified. (…) Do we rather list it there without a control or not to mention it?*
> Auditor - *Dear Friend, Your doubt gives an impression as though you are establishing an environmental management system for the auditor. Then you are wasting your time. If you are establishing a system for improving your organization's environmental performance, then this doubt will not arise. You should identify all the aspects that have impact(s) on the environment(…) Since the system is YOURS, you may decide as to how you are going to address this based on the available resources. By doing so, you not only meet the audit requirements, but also the intended*

[260] Retrieved November 13 2009, from the Elsmar Cove website (posted: August 31 2005): http://elsmar.com/Forums/showpost.php?p=119543&postcount=17

[261] "*ISO 14001 can and has often been used as, frankly, a smokescreen, to show the appearance of appropriate environmental performance by having a framework in place that should improve environmental performance. But it is entirely possible in many cases to get so caught up in the framework that the goal is lost. It becomes the goal to build the framework and make sure all the paperwork is in place rather than to produce the actual improvements on the environment*" Interview with subject #0949 held on December 12 2007.

[262] "*– Hello Covers, thanks for your help, we got our re-certification (EMAS and 14001) a short time before Christmas. The auditor found the aspects evaluation table suitable for our company ... but we did it only to be in accordance with EMS requirements. We both knew the truth about it ... – Terrible shame, my esteemed friend... If you did the Aspects only for the sake of the audit, you missed one of the most fundamental parts of the ISO 14001 process. It is the cornerstone of planned, structured improvement in the system. Without that, you have essentially the same system, whether good or bad, you had before ISO 14001*"Retrieved November 13 2009, from the Elsmar Cove website (posted: January 20 2006): http://elsmar.com/Forums/showpost.php?p=135348&postcount=38

purpose of ISO 14001 - i.e. improvement of your organization's environmental performance[263].

This concept of managing for auditability transcends the ISO 14001 EMS standard. The same phenomenon can occur when organizations seek certification with other popular systems' standards like ISO 9001 for quality management, ISO 22000 for food safety, OSHAS 18001 for Occupational Health and Safety, or SA 8000 for social accountability. In addition, and perhaps even more troublesome, is the fact that the conformity assessment structure that oversights these different types of certificates is also subject to the same type of pressure of managing for the auditor. As discussed above, auditors (ISO 19001), personnel certification bodies (ISO 17024), certification bodies (ISO 17021) and accreditation bodies (ISO17011), are all governed by similar ISO standards that set minimal requirements for their operations. In the end, they face the same struggles that the organizations they certify. They have to set their internal procedures according to a standard and demonstrate conformance to an external party. And just like an auditor has very limited influence or sanctioning power over an organization that does the bare minimum to obtain an ISO 14001 certificate, an accreditation assessor cannot eliminate a second-rate certification body if it manages to comply with the minimum requirements of ISO 17021.

Even though there is a substantial amount of resentment among the auditing community regarding the role of supervising bodies and their capacity to successfully identify and eliminate below-average actors, it seems though, that those organizations are restrained by the standards and norms that control their activities. In fact, very few auditors were capable of pointing out possible improvements to the operations of this conformance structure[264]. The same thing happens with the ISO 14001 standard itself. Despite the fact that most auditors recognize that there are organizations that do not deserve to be

[263] Retrieved November 13 2009, from the Elsmar Cove website (posted: February 13 2006): http://elsmar.com/Forums/showpost.php?p=138487&postcount=2

[264] "*I don't know, it is a hard thing to police and I can understand why the insurance companies and some of the other folks don't have confidence enough in the process to reward the folks for their efforts. I wish I had a good answer for that one but I really don't know*" Interview with subject #0185 held on December 7 2006. "*I think the biggest thing would be trying to get consistency from certification body to certification body and auditor to auditor. That clearly would be the biggest improvement to the process, how it is going to happen, I don't know*" Interview with subject #0008 held on December 12 2006.

certified, the vast majority[265] believes the ISO 14001 standard is perfect the way it is. The critical argument of this discussion is that these management-based standards may work extremely well in some situations, but not necessarily in all of them. In Part A of this dissertation I illustrated several examples of organizations that were able to use ISO 14001 to develop an effective EMS, that actually helped them to improve their self-regulating capacity as well as their impact on the environment. Likewise, many environmental auditors and certification bodies have a reputation for being rigorous, credible, and for bringing value to their clients. So, where lies the problem?

> "*Where you come out weak is when you get everything lining up and you get the wrong combination together, (…) in other words, a weak Certification Body with a client that got certified for the wrong reasons, then you are likely not going to get what you want out of that certification*" Interview with subject #0952 held on February 5 2007.

The fundamental flaw with the existing conformance assessment system is that it is grounded on personal integrity and responsibility[266], while caged on a fierce competitive arena. It is not just the facilities that are using ISO 14001 certification to satisfy clients' requirements. It is also the auditors, certification bodies, and even accreditation bodies that are competing against each other for client satisfaction and market share. As a result, when all these organizations governed by ISO standards, act not with the intent of being more efficient, rigorous, consistent or trustworthy, but with the sole purpose of being profitable and auditable, the foundations on which this certification system is built is shattered. The internal systems that govern both certified organizations and the bodies

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[265] *"I am an addict to the standard and I love it. I think that the people who did the compilations of the standard really did put a lot of thought into it in terms of identifying what was critical and in terms of simplifying it to its base elements*" Interview with subject #0960 held on January 3 2007. "*I think that the standard, as written in 1996, was an outstanding accomplishment of the writing task force. It is born out of the fact that 8 years later there was only a minimal amount of change necessary to update it to the 2004 version"* Interview with subject #0973 held on December 15 2006.

[266] *"I mean, at some point in time there has to be some personal integrity and personal responsibility, and we go in with the assumption that people are trying to conform. But that goes back to the all basis of third party certification. A certification body goes into a client once or twice a year. And they are trying to make an independent assessment on whether the client does have a system implemented and that they are operating it. Now, if an organization is trying to manipulate the process, they can. If they are not honest, then the third party certification won't be able to have confidence on them. There is a basic assumption that the organization is trying to conform. And the same thing exists in the oversight of the Certification Bodies. We have to have a basic assumption that we can trust the Certification Body*" Interview with subject #0952 held on February 5 2007.

that supervise them, become useless as a self-regulatory instrument, endangering the entire credibility of the certification process.

Credibility at risk

So far, I have demonstrated that not all organizations have an intrinsic motivation to become certified or to improve their self regulatory capacity. Likewise, the standards that govern ISO 14001 certification do not stand as strong enforcement instruments, lacking specific performance objectives or stricter sanctioning authorities, for the sake of enhanced flexibility. As a result, it is important to discuss what are in reality the consequences of this complex, yet fragile, conformity assessment system, and how it is jeopardizing the credibility of the entire certification industry:

> "*There is certainly a perception out there among some companies that this whole thing is just a money making venture for various folks: ISO sells standards; other standard setting bodies sell standards and training courses; auditors have generated a nice living for themselves through this; consultants the same thing… It is hard to fight that perception when you see certain things happen out there in the market place. If people are getting certifications that are essentially shams and nobody is taking them to task for that, it certainly helps fuel that perception that all people need to do is really write a check and that's all they need to do to get their certification*" Interview with subject #0227 held on December 11 2006.

This perception that an ISO 14001 certificate can be turned into a commodity and bought is the result of several flaws of the conformity assessment system, induced by the non-prescriptive nature of the ISO standards. As described in the above account, the threats to the credibility of an ISO 14001 certificate have multiple origins. For example, a wide-range conflict of interest and lack of independence between auditor and auditees, lack of consistency in the interpretation of the standards and auditing styles, or even issues of personal and organizational honesty. In the remaining of this chapter, I will describe some of these problems and how they impact the credibility of ISO 14001 certification.

<u>Lack of consistency</u>

One would think that as a result of the numerous strategies to train and calibrate auditors (from ISO Guidelines and accredited courses, to ongoing training, to several forms of

formal and informal accountability) that they would form a uniform group, able to provide consistent and reliable oversight over other organizations. Nevertheless, an important finding of this project is that auditors form a very heterogeneous group, with different backgrounds and motivations, and consequently with different concerns and auditing strategies. According to NAPA (2001, 27), in order for auditors to work competently and uniformly, they must have "requisite competence in environmental science, technology, environmental law and regulation, and systems auditing." But in reality, ISO 14001 auditors have very distinct backgrounds and competences in terms of their environmental expertise. Broadly, they have two diametrically opposed origins. One is the environmental auditor[267], with an academic background on natural sciences, and proficient in environmental regulation, because he was either a state environmental inspector or an EHS manager for the private sector[268]. The other is the quality auditor[269], typically a plant manager involved in quality systems, that later decides (or is encouraged[270]) to add to its ISO 9001 quality credentials other standards such as ISO 14001, ISO 22000, TL 9000 or OSHAS 18001[271].

[267] *"I have been in the environmental business for all of my career, so I had a reasonable environmental background in regulation, and I just thought that ISO 14001 would be a good, interesting niche for my business. (…) I could still stay in the environmental field and I thought that it would be a sort of specialty area that I could focus on*" Interview with subject #0008 held on December 28 2006.

[268] For example: Interview with subject #0008 held on December 28 2006, Interview with subject #0997 November 29 2006, Interview with subject #0108 held on January 12 2007, Interview with subject #0132 held on December 8 2006, Interview with subject #0191 held on January 13 2007, Interview with subject #0198 held on January 12 2007.

[269] *"I was already a quality auditor. I have been doing that for about 10 years, and a few years into it the big three automotive costumers, particularly Ford, began to strongly promote it [ISO 14001] and it became clear that it was going to become a requirement for the supply chain. So, out of necessity and benefit to my clients, it made sense for me to develop that [ISO 14001] certification also*" Interview with subject #0988 held on November 25 2006.

[270] *"My company [certification body] has decided to make all of their automotive auditors get training and get approved to do environmental audits, with little or no environmental background or experience. (…) It provides cost reductions to the companies going through the services because you don't have to have two separate auditors:, one audits the quality side and the other does the environment side. But the limitation is that those auditors are only going to come in and see 'did you do an internal audit? Did you have a management review? have you identified your environmental aspects and impacts?' They will have little or no chance or knowing if they had missed aspects and impacts because they don't have the background or experience to know which ones should be identified that were not*" Interview with subject #0986 held on December 10 2006.

[271] For example: Interview with subject #0988 held on November 25 2006, Interview with subject #0073 held on December 2 2006, Interview with subject #0959 held on January 1 2007, Interview with subject #0960 held on January 3 2007.

There has been a strong contention between these two opposite sides regarding auditors' qualifications. On the one hand, the environmental group criticizes[272] quality auditors on the argument that they lack training in environmental sciences, which is critical to understand some of the concepts of ISO 14001 like environmental aspects and impacts, environmental monitoring, emergency preparedness, and, above all, environmental regulation (Roth-Arriaza 1997, Johnson, 1997). Also, because quality auditors are trained to think about systems and management sanctions, they typically reinforce the systems' procedures of ISO 14001, ignoring technical aspects of performance improvements (Gunningham, 1996). Power (1991) characterized this view by suggesting that environmental audits have a "distinct center of gravity" than quality audits that "capture, limit and distort the green discourse". Several environmental auditors[273] interviewed expressed this sentiment of distrust regarding the effectiveness of a quality auditor:

> *"If you talk to a quality auditor who has been doing ISO 9000, they say 'give me a standard, any standard and I can audit to that standard, and let me go'. And when I try to talk with these folks (…) I say:*
> *— OK, well, which sites did you check before walking into the place?*
> *— What do you mean?*
> *— Well, what is their state, county, city ordinances that you are going to audit against?*
> *— Well, I don't know that.*
> *— Well, better research that online.*

[272] *"I think that the weakness of the program is in the auditing process. (…) I feel strongly that audit teams that are sent out need to have, excuse the expression, and hard-ass environmental person who understands that industry on every thing. Who comes with the regulatory standards, you know, these are the health and safety standards that have to be met, and if they are not being met, not to ding people but to, ok, lets look at the system and see how we can help you control this piece. I think too many audit teams overlook those things in their quest to just look at the process management. Well, this is a process audit, but it deals with environmental impacts. And if you don't have someone who understands the potential environmental impacts governed by the law, then I don't think you have a good audit*" Interview with subject #0966 held on January 2 2007. "*Part of the problem is that auditors themselves have to be knowledgeable about the principles and not just the standard. They have to understand that the goal here is to shrink the environmental footprint. Because it is such a generic standard and it is so easy to get certified to, if all they are evaluating is whether you have the right clothing on, that is a totally non beneficial audit*" Interview with subject #0988 held on November 25 2006.

[273] *"Most of the auditors that I have come into contact with actually know so little about environmental performance issues, so on and so forth, that they don't have a leg to stand on when questioning an organizations methodology. You name a certification body that has QMS auditors transitioning into EMS auditors and I'll show you auditors that can't really dot the "i's" and cross the "t's" when it comes to environmental stuff. A good many (the majority I would say) just do not really have a sufficient/actual/real background in environmental technology, regulatory compliance, and all the neat stuff that makes a real environmental professional. It's not their fault....it's the system*" Retrieved November 13 2009, from the Elsmar Cove website (posted: April 6 2004): http://elsmar.com/Forums/showpost.php?p=74868&postcount=16

— Why should I have to do that?
You never have to explain that to an environmental engineer. An environmental engineer understands why you need to do that. (…) You also know your regulations backwards and forwards. And if I would be talking with someone who does not have the background, has never worked in an environmental job, and they walk in and I ask them:
— Did you check 40CFR262?
And they will say:
— Hum? What was that number?
You know, they don't even need to have a background in environmental studies, they just have to understand that they need to know what a universal waste vs. a hazardous waste vs. a non hazardous waste vs. a restricted waste is. And they don't. (…) I often say, if you audit for 9000 you look at the work bench. And if you audit for ISO 14001 you look at everything else: you look under the bench, behind the bench, what gases and chemicals are coming into the bench… but you never look at what you are actually building because you don't care. You are looking at the chemicals in, the raw materials in, and the raw materials out. So when you talk to a quality guide they are just so used to looking at the product itself that they don't understand the implications of disposal of by-products, scrap, waste strips, those kinds of things" Interview with subject #0997 held on November 29 2006.

On the other hand are the quality auditors, criticizing the environmental experts on the basis that they are just looking for potential regulatory noncompliance, ignoring the true scope, purpose, intent, responsibility and authority of the EMS audit[274] (Johnson, 1997). They focus on the management system and on bringing value to their client by identifying opportunities for improvement. Their job is not to harass an organization because of its environmental performance, but simply to attest whether their internal operational procedures meet the requirements of the ISO 14001 standard. Within that point of view, quality auditors can actually audit against many standards (from health and safety to aeronautic) without having a strong background in those specific sectors:

"*When you are doing 14001 or any of the standards that currently exist, you audit to 2 things. One, the requirements of the standard. Two, internal processes and procedures. That is it. Do the internal processes and*

[274] "*Even people that have been in the environmental area, that have been in the regulatory side of the environmental field, are not really… they know a lot of stuff, they know about regulations, they know about this and that, but they don't always understand the systemic approach and… most practitioners in this field (…) they gather all this information and they frankly don't know what to do with it. They have all these lists of objectives and targets and performance indicators and this and that, and they don't understand that all that information is gathered for the purpose of creating an environmental management program*" Interview with subject #0985 held on December 1 2006.

> *procedures meet the requirements of the standard? And are they following, one, their internal processes and procedures, or two, the requirements of the standard? That is what we audit, nothing else. Lets say for example ABC company has a superfund site. I want to see how did they incorporate that into the system, but I am not going to say 'oh my gosh!' I just want to see how the system captured that. And if the system has missed it, I would like to see what part of the system went wrong so that they missed anything else. (…) So, no we cannot audit to compliance, I will not ever audit to compliance. Now, if I see a noncompliance issue, what I do is a hold my breath, and then lets look at the process and lets look at the documentation and lets see where the gap is in the process of documentation and then write them up or not*" Interview with subject #0226 held on December 18 2006.

It is striking how these two auditors, both holding Lead Auditor Certification and working for very reputable certification bodies, who have conducted dozens of ISO 14001 audits and have been subject to the training and oversight described above, can have such distinct views of what their role as ISO 14001 auditors is. In addition, it certainly puts in perspective the effectiveness of the multiple efforts that are done to promote and ensure auditor consistency. Evidently, both views described are problematic. It is the auditor's job to determine whether there is conformance to the standard, not compliance to regulation. A systems audit is not a compliance inspection. Even though an auditor may look into compliance issues to assess whether the EMS is effectively identifying and addressing all legal requirements, it is not his role to replace the regulatory authorities and verify whether an organization is in full compliance with regulation. Similarly, it is critical that auditors are able to distinguish the forest from the trees, and go beyond a straight assessment of internal procedures. In the last revision of the ISO 14001 standard (2004), emphasis was placed on the need to verify environmental outcomes. It is not reasonable that auditors ignore the overall environmental performance of an organization under the name of the systemic approach. Finally, what is particularly troublesome is that the ISO 14001 auditor pool seems to be fractured along this dichotomy, with few auditors being able to combine the strengths of each side[275].

[275] "*I agree that one doesn't often find an auditor that is well-versed in both systems and environmental. Although the ISO 14001 certification auditor is often someone originally trained in systems, I have also encountered ISO 14001 certification auditors that were originally trained in environmental science or engineering. The best ISO14001 auditors I've encountered seem to be the ones who have a solid understanding of both areas ...although they might be rare, they are actually out there*" Retrieved November 13 2009, from the Elsmar Cove website (posted: May 17 2004): http://elsmar.com/Forums/showpost.php?p=77925&postcount=18

If different backgrounds and motivations shape different types of environmental auditors, their own personality and experience shape their auditing style and their relationship with the auditees. It has been already said that the ISO 14001 requirements are very generic, "*it is open for interpretation… almost begs interpretation*"[276], and therefore leaves room for different types of auditors' expectations. Some auditors, typically the less experienced[277] or with an engineering background[278], like to perceive ISO 14001 as a black and white, non interpretive standard. As a result, they audit against a check-list[279] just as if they were doing a compliance audit. They believe there is a proper and right way of doing something[280], and they expect the auditee to do it the 'right' way[281]. The auditor-auditee relationship is typically adversarial[282], and auditors are often accused of being "*nitpicky and too rigid, like a new cop*"[283], with no practical sensitivity. They can be overly zealous and usually act as if they have not done their job unless they find as many non-conformities as they can[284]. As a result, these auditors usually audit the trivia[285], they get too caught up on documentation requirements checking each word in each clause and loosing sight of the bigger picture[286]:

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[276] Interview with subject #0011 held on January 11 2007

[277] "*When you are a new auditor there is a risk that you become to nitpicky and too rigid like a new cop would be*" Interview with subject #0988 held on November 25 2006.

[278] "*Secondly, a lot of auditors come from an engineering background and engineers tend to see the world in very black and white shapes. (…) So when you have an environmental scientist, who is thinking the world is black and white, and they then encounter a business environment where it is nothing but shades of gray, that is a difficult transition for some*" Interview with subject #0988 held on November 25 2006. "*Sometimes there is a tendency to be prescriptive. If we hire auditors that are from the environmental engineering compliance world, we have had one like that, and she came on and clients didn't like her, and I worked with her a lot on softening her approach. And softening doesn't mean giving in, saying it is ok to throw chromates down the drain, means to understand that this standard is not black and white and that there is interpretation by the client, by the customer*" Interview with subject #0011 held on January 11 2007.

[279] Interview with subject #0011 held on January 11 2007

[280] "*I think the important point of auditing is not to audit against what you think is the proper and right way of doing something*" Interview with subject #0195 held on February 15 2007.

[281] "*I have seen a lot of bad auditors as well. You know, the guys that go in there… they may have been an executive in this last life, they come in and they want you to do it their way, and that is not your job, your job is to comment on the system*" Interview with subject #0959 held on January 1 2007.

[282] "*If you come in as an auditor and are seen as some sort of a junior policeman that the company has to fear, that's not going to result in a good audit, and I hear that from costumers all the time*" 0208

[283] "*You are going two miles over the speed limit and I am going to give you a speed limit because you are speeding*" Interview with subject #0988 held on November 25 2006.

[284] Interview with subject #0192 held on November 30 2006.

[285] "*It seems to me the thing that is most difficult is people who audit the trivia of the documents. If your only findings in an audit have to do whether all the dates are on the document control, that may be*

> *"A lot of auditors get caught up in, and spend huge amounts of time on parts of the standards that don't necessarily impact true environmental performance, like for example … they might read a document, and they see that the document has a bunch of misspelled words, and they actually write them against document control, and spend a whole bunch of time drilling these people on how they need to take better care of their documents"* Interview with subject #0228 held on December 6 2006.

On the other hand, there are those auditors whose primary concern is being esteemed[287] by the organization they are auditing by offering a valuable service[288]: "*you are not auditing for the EPA, you are not auditing for the costumer, you are auditing for the client… you are constantly looking for value added*"[289]. Typically, these auditors have a vast amount of experience working for a particular business sector. For them, management systems come in many shades of gray, and it is not their responsibility to tell clients what their EMS should look like[290]. In opposition to the nitpicky auditor described as a 'young cop', here the focus of these auditors lies on finding conformance to the standard[291], as well as opportunities for improvement:

> "*A good successful audit will identify opportunities for the company to improve, and that may be in terms of non-conformances that were identified through their systems' documentation or may be some items (…) along the line of preventive action. (…) If I go into a facility and I can't offer them an opportunity for improvement, then I haven't done my job. (…) To me a*

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reasonable because it may be a very good system, but it is probably a bit bureaucratic, more like a financial audit would be then a management systems audit" Interview with subject #0195 held on February 15 2007.

[286] Interview with subject #0011 held on January 11 2007.

[287] "*If you come in and the costumer recognizes that, you know this guy or gal is going to help us identify areas where there really could be improvements, then we're going to look forward to having that person here at the company, for a couple of days, to work with us*" Interview with subject #0228 held on December 6 2006.

[288] "*What is the intent of the standard? What is the reason for this standard? We want your system to improve. We want you to be in better control of your environmental management system. The good stuff and the bad stuff. We want you to improve, we want you to do better*" Interview with subject #0011 held on January 11 2007.

[289] Interview with subject #0988 held on November 25 2006.

[290] "*It is extremely important to allow the customer, the organization, to fully explain their interpretation and their approach, and their system, and then it is the auditor's duty to evaluate whether that approach meets the intent of the standard. So, I think flexibility, allowing for creativity, allowing for new ways, and not presupposing solutions and approaches and documents and all that, is something that I try very hard to do. And it is not as easy as check the box*" Interview with subject #0195 held on February 15 2007.

[291] "*I tell folks in the opening meeting that I am here to find conformity, nonconformity tends to find me, so I let them know that if we find a non conformity we will discuss it, we will be sure that we are truly looking at a non conformity for whatever is in it, but I am really here to find conformity to the standard, and I think that is what I am paid to do*" Interview with subject #0960 held on January 3 2007.

successful audit is where I can leave and I can provide value to my customer" Interview with subject #0008 held on December 28 2006.

Not surprisingly, these auditors strive to engage in a partnership with their auditees. The audit process is not perceived as a compliance snap-shot, but as an ongoing behavioral-change journey[292]. This practice can be considered by some as quite condemnable, if it is perceived as a disguised form of consulting. Certification auditors are mandated to assess the conformity of an EMS to a standard, and ISO auditing standards clearly prohibit any form of consulting. Nevertheless, an auditor that is driven by the need to help his client will revolve around this issue by offering advice after a 'non-consulting caveat' - "*I have seen these things, but you will have to evaluate them for yourselves to make sure that it is worthwhile*"[293]. In their defense, they claim that their clients welcome experienced auditors that are able to share some of their know-how and bring value to the auditing process[294].

Despite the efforts to encourage auditor consistency, I observed that ISO 14001 auditors form an extremely heterogeneous group. Depending on their background, motivation, experience and personality, their auditing style ranges from the 'tree-hugging inspector'

[292] *"The effectiveness truly comes from creating a partnership, (…) it is a partnership that we have with our clients. But the effectiveness comes from using us as their partner to get behavioral change where it is needed to become world class EHS performers. (…) It is about creating that partnership together… you know, companies will get certified, even working with us, as painful as change is sometimes, we tell them, you will get certified, but it is not just about that, it is the journey. So, looking at it as a journey, rather than a project maintenance mode, that to me is what effectiveness is all about*" Interview with subject #0206 held on January 17 2007.

[293] Interview with subject #0959 held on January 1 2007.

[294] *"All of us have pretty wide management experiences so we have seen better ways of doing things, and we cant share with companies, except under very strict guidelines. (…) As long as the company understood that what we were telling them were suggestions, that it is not a requirement, that they are under no obligation, I think the use of opportunities for improvement as an auditor could be expanded a little bit and you should be able to help them improving… companies really want that. They don't want us to do anything that is not ethical within the guidelines of auditing, and we don't want to do that, but I think a little more of freedom to be able to share with them when we see something… 'what you are doing meets the standard but have you ever considered looking at it in another way or using some of the tools that are out there?' I think that would probably bring more value to the auditee. They look to us for that and we give them the standard auditor disclaimer which says 'I can't tell you what I have seen in other places if you ask, but I can make suggestions and you are under no obligations…' so we give them the standard disclaimer but that discourages some folks from even asking. But most of them, when they do ask, and you tell them the things that you have seen, most of them will come to you and thank you after the audit, 'I have learned a lot', and that makes you feel good, I want to add value to the audit*" Interview with subject #0960 held on January 3 2007.

to the 'internal procedures examiner', and from the 'cold-blooded policeman' to the 'valuable expert'. They all play an important role on the conformity assessment of ISO 14001, addressing the different needs of organizations seeking certification. But as each one of them is able to satisfy its niche of clients, one must then wonder what this implies in terms of the purpose of the certification process and on the legitimacy of each certificate. The fundamental question here is, who are they providing value to? Some will say the environment, others the client. But both are likely off-base when it is the end-user of the certificate that is relying on their accredited certification to make a purchasing decision[295]. There is clearly a problem in this accountability model regarding the form of contract between the 'principal' and 'agent'[296] in the sense that there is a deficient characterization of the 'principal', that is, "who is it to whom 'agents' are to be accountable?" (Power, 1991, 34).

The lack of consistency evidenced by auditors can cause some tension in the auditor-auditee relationship, particularly when an organization is faced with harsh audit findings when they have been certified for several years without any problems[297]. But it also affects the reputation of certification bodies and ultimately of the entire certification program. A certification body is only as good as the auditors they hire, since they are the ones that go out to gage certified organizations[298]. Ultimately, what it boils down to is how good is the certification body selecting its auditors - "*does he take everybody who knocks on the door?*"[299]. Several auditors complained that certification bodies try to cut

[295] "*I mean, you have heard some auditors say, we want to provide value, well, value to whom is the response that I would have back, and if they say the client that they are auditing, that is where they are off base I think. Because it is other parts of the community, the other stakeholders that are really relying on accredited certification. Purchasers aren't doing their own supplier audits because they are relying on that accredited certification. If you are just doing what the certified client wants there is a percentage of certified clients that would love to have a deaf dumb and blind auditor*" Interview with subject #0952 held on February 5 2007.
[296] See Gray (1983) & Gray *et al.* (1988) model of accountability.
[297] "*If you follow any auditor you think has missed some really obvious stuff, it's a little frustrating because you get comments from a client that says: gee I've been registered for 4 years and no one has ever said anything about that before and now you're saying it's not okay*" Interview with subject #0108 held on January 12 2007.
[298] Interview with subject #0228 held on December 6 2006
[299] Interview with subject #0172 held on February 20 2007

costs by hiring inexperienced or inferior auditors[300]. Others suggested that the people that manage the certification bodies themselves do not understand the ISO 14001 requirements and therefore cannot ensure a consistent and accurate enforcement of the standard – "*the blind leading the blind"*[301]. For one reason or the other, the image that transpires is that there is a wide discrepancy not only in auditing styles, but also on the diligence of each certification body.

Trade journals have reported this variation in the approaches and practices of different certification bodies (ENDS, 2003f). For example, Rolls-Royce was reportedly sending corporate staff to shadow third-party auditors to confirm that they were thorough, after realizing that the assessments of the different certification bodies they hired differed greatly (ENDS, 2003e). The vast majority of auditors interviewed supported this claim, stating that they were often distressed when auditing a certified organization that was transitioning from another certification body with glaring holes on its EMS[302]. These differences between certification bodies are eloquently illustrated in this account:

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[300] *"Paying auditors very low and so bringing in about anybody who is willing to be an auditor, without good enough background, and putting them out there without good training and expecting them to do a good audit*" Interview with subject #0192 held on November 30 2006. *"I have met way too many auditors that don't know what they are doing. They just got into it because they took a course and they lied about their environmental background experience and… you know, the certification body needed some people and then they send out a bunch of idiots*" Interview with subject #0132 held on December 8 2006.

[301] *"The people that runs the recertification bodies themselves don't understand the 14001 [standard] and they don't understand what it means to audit a system like this and (…) So, you have the blind leading the blind*" Interview with subject #0985 held on December 1 2006.

[302] *"I went there and I was doing ISO 9000 and 14000, and there quality manual and their environmental manual was off. They were reviewed and approved by the certification body. This is a huge international company… huge… a huge client… and they have facilities all over the world, from North America, to Europe, to Asia, Brazil, so on and so forth…. And I went in and in the first day I reviewed the quality manual and the environmental manual, and (…) all they did was they took the standard itself and they removed the word organization and put their company's name in it. And so there was no value on that. And they passed this… (…) that was reviewed by an auditor at the certification body and approved. (…) I was doing a surveillance audit (…) on a company that had been registered for 7 years to both standard… you couldn't believe the number of auditors that have looked at that company before you. And nobody brought up the fact that the manual that they were using doesn't even meet the basic requirements of the standard. And the certification body bought it all*" Interview with subject #0073 held on December 2 2006. *"As a consultant I have been hired to come in and do internal auditors at companies that are certified and I have found things that are unbelievable. I can't believe the company got certified"* Interview with subject #0228 held on December 6 2006. *"But I know that different certification bodies interpret things in a different way.(…) Specially if you switch certification bodies: oh, I am going in and he used to be certified by XYZ and I know that XYZ was either really prescriptive or really loose, so I kind of knew what I would be walking into. And I would be rather really disappointed or shocked*" Interview with subject #0191 January 13 2007.

> "*The success of that [audit process] is really sort of driven by the individual or the teams involved, than it is by procedures and standards that are set either by the certification or by the accreditation body to make it work. So, the hidden answer in there is there is probably some inconsistency in that process. (…) In working with clients to get them registered to 14001, when we get to the point of trying to get a certification body, we will take 5 or 6 names and we will often send some sample questions out to potential certification bodies about their interpretation of various aspects of the standard. And it is always interesting to see what responses come back from 5 different organizations that are all accredited by ANAB or some other accreditation body somewhere in the world…"* Interview with subject #0227 held on December 11 2006.

Conflict of interests

Auditing, as a trust producing activity, must be conducted by auditors that are independent in order to be credible producers of trust (Power, 1991). Yet, what I have shown in the previous chapter is that the ISO 14001 conformity assessment system consists of an intricate web of interdependent accountability agents, where the auditor-auditee relationship is very similar to the seller-buyer one. A certification body (and subsequently the auditor) is paid by the same organization it certifies. A personnel accreditation body, like RABQSA, is supported by the same auditors that it certifies. And an accreditation body, like ANAB, is supported by the certification bodies that it accredits. It is not just the organization that gets certified that pays its certifier. It is the entire conformity assessment industry that is based on a model where the supervisor economically depends on the supervised:

> "*I will tell you categorically, the certification bodies are in business to make money. So who is their customer? The customer is the client that they are certifying. And what do they do? They have to bend over backwards to their customers, which is fine, I don't have a problem with that. But the integrity of the audit process is compromised and the whole management system (and I am not just talking about 14001, I am talking 9001, 22000, TS, AS, TL, every management system) is in jeopardy of adding any value when you have the auditors going in and doing a certification audit on a company and they realize that for them to be invited back, as an auditor, to make 5 or 6 hundred dollars a day, that they have to have a happy client. And it is terrible. It is a terrible thing"* Interview with subject #0073 held on December 2 2006.

Even though the majority of auditors claim to be fully supported by their certification bodies to conduct thorough audits[303], there is still a small number that acknowledged feeling pressured by their certification bodies to make their clients happy[304]. The argument is very simple: the organization seeking certification is paying the bill and they can buy the same service from another certification body[305]. Therefore, the auditor needs to walk a very fine line between giving the client a sense of value for the money they pay, and being able to identify problems on their management practices[306]. Unless the auditor does a good job explaining the client the non-conformities identified, or the organization will not be satisfied with his findings. Although uncommon, an organization can easily suggest that if they do not like the audit findings, they can try to buy the auditor[307] or simply hire somebody else[308]. And when that happens it is likely that the auditor is not going to be invited back. In a sense, the auditor works with a double-edge sword above his head: either the certification body is replaced by the certified organization[309], or the individual auditor is replaced by the certification body[310].

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[303] "*No one with integrity would participate in that process if that were the case. I never had any suggestion from the people that I work for that my continued tenure with the company would be improved or enhanced in any way, shape or form, by being easy. In fact, one of the companies I work for has been encouraging its auditors to eliminate what they call soft grading*" Interview with subject #0220 held on December 13 2006.

[304] "*I think there is a lot of pressure from the certification body you work for to make the clients happy*" Interview with subject #0191 held on January 13 2007.

[305] "*They are paying the bills and they can go somewhere else for the same service*" Interview with subject #0185 held on December 7 2006.

[306] Interview with subject #0185 held on December 7 2006.

[307] "*I have also been offered bribes by companies which I have turned down… 'what would it take financially for us to get certified from you today?'*" Interview with subject #0191 held on January 13 2007.

[308] "*In one case I had the consultant of the registered organization call me (…) and he said 'you know, they're talking about possibly letting their certification lapse' (…) It was clear that he was threatening, that he was saying 'you know, you should listen to what the client is saying because they may hire somebody else'*" Interview with subject #0198 held on January 12 2007.

[309] "*Some people [certification bodies] work so hard on developing an account and getting it. Maybe they have been working with that customer for 2 or 3 years, they got 1 plant and then they got 2 or 3 more associated with that, and they are hoping to get the whole package. And then you go there and you irritate the people. They are thinking I am going to loose all 5 accounts, they are going to go to another certification body*" Interview with subject #0132 held on December 8 2006.

[310] "*The certification body, in most cases I bet, would support the customer rather than the auditor, if there was an appeal. The auditor is much easier to replace, and besides, the revenue comes from the customer*" Retrieved November 13 2009, from the Elsmar Cove website (posted: January 23 2006): http://elsmar.com/Forums/showpost.php?p=135562&postcount=53. "*There have been auditors who have been fired because they wouldn't… you talked about integrity… some auditors have extremely high integrity, and will not change… [and they were fired?] yeah… or they were told to change, or the management overruled their decision… and then they just quit*" Interview with subject #0106 held on December 14 2006. "*The closing meetings, a number of times they can get pretty contentious. You say,' here is what I found, this is the standard I am quoting from, the requirements…', and they will argue with*

Despite the high standards of competence and integrity shown by the large majority of auditors and certification body managers, it is critical that we understand that they are driven by "*the same reason that (…) businesses are driven to be in business, and that is to make money*"[311]. An auditor's income, or an accreditation body's revenue, is directly proportional to the number of clients it has[312]. Again, this conflict of interests goes beyond the auditor-auditee relationship, as it extends to the higher branches of this conformity assessment structure. Auditors and assessors, certification bodies and accreditation bodies, all depend economically on the entities that they supervise. In light of that, in order for auditors or assessors to do their job the way it is intended to be done, and in order for this conformance system to be credible, there needs to be a critical change in the way that their work is assigned. As it is, the system is fundamentally flawed because each individual and each organization's revenue stream is proportional to how much the organizations they audit appreciates their work[313].

Soft grading

In a time of economic crisis, certification bodies are struggling like most industry sectors to maintain their revenues. During the 1990s, with the release of ISO 9001 and 14001, the certification industry grew very rapidly, with 10 to 20% new clients every year. Yet, in 2000 the number of new certificates issued started to level, and particularly since 9/11, certification bodies started to have to compete for the same clients, "*in some degree, raiding each other*"[314]. Currently, the crisis in the automobile industry poses an enormous threat to the survival of the certification industry, and in order for them to stay competitive, they have to differentiate themselves. One strategy that is commonly used is

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you, and argue and argue, and at times we have to say 'ok, I have heard your point, I don't agree, you have the opportunity through your certification body to appeal this decision but I am going forward with it'. It is a tough situation, (…) they get a bad review and there have been some auditors that have been terminated by the certification body" Interview with subject #0948 held on February 13 2007.

[311] Interview with subject #0073 held on December 2 2006.

[312] "*The basic auditor pool is driven by money, and their income is directly proportional to the amount of clients they have. (…) I tell you, all the auditors out there are driven monetarily, but also, they would love… 95% of them would love it if they could go in and do their job the way it is intended to do. But they also realize they have to pay the bills and put food on the table, so they compromise their integrity for the sake of the mighty dollar*" Interview with subject #0073 held on December 2 2006.

[313] "*Because as an auditor, my revenue stream is tied to how much the company I go in and review, likes me*" Interview with subject #0073 held on December 2 2006.

[314] Interview with subject #0952 held on February 5 2007.

to cut audit duration, which evidently affects the capacity to conduct an effective audit[315]. So far the certification industry as a whole has not been able to come to terms in regards to the issue of audit duration[316], and therefore, most complaints revolve around certification bodies blaming their competitors for issuing quotes based on fewer audit days:

> *"They are shortcutting time. If it takes 3 days to do an audit they will say that they can do it in two and a half. (…) What ever they can do to shortcut the grey areas of Guide 66. (…) And then they just walk in with a discount price. Price sells. We are 1800 bucks a day. Some of the other people might go 1000 bucks a day. Who are you going to hire? All you want is the certificate right?"* Interview with subject #0132 held on December 8 2006.

But the pressure to maintain the market share does not end with reduced audit days and discount prices. Acknowledging that the ISO standards offer wide latitude for interpretation and judgment, a subsequent credibility threat surfaces when auditors and certification bodies differentiate themselves based on the strictness of their judgments. There are different reasons for this dynamic of soft grading to occur. The more malicious form occurs when, conscientiously, certification bodies balance client satisfaction with the pride on their certificate[317]. Some auditors stated that when the industry became more competitive, certification bodies had to adjust their interpretation of the standard[318], relax their auditing approach in order to avoid complaints[319], overwrite their auditors[320], and

[315] *"I think it has to do with the low cost provider. Basically trying to do a complex job without providing adequate resources*" Interview with subject #0195 held on February 15 2007.
[316] Interview with subject #0952 held on February 5 2007.
[317] "*I think it is a competitive business and there is a number of certification bodies out there that are competing for clients, and based on that, sometimes it gets skewed to where, lets just make the client happy*" Interview with subject #0079 held on December 13 2006.
[318] *"My company [certification body] has since stepped back dramatically in the last few years, (…) allowing all sorts of things.* [*Did they tell you that you need to interpret the standard differently?] Yes! Yes! We were being too tough on our interpretations. We are going to loosen that up. We are going to allow it to be easier*" Interview with subject #0191 held on January 13 2007.
[319] *"My goodness this is a competitive business, we can't have clients complain… we lost some clients that I audited, but the certification body: oh no, we were too tough, they can find somebody where they wouldn't have to do this requirement*" Interview with subject #0191 held on January 13 2007.
[320] "*When the certification body wants to keep the client base up and they don't want to offend anybody, what they do is have the auditors go easy, and if the auditors don't go easy they overwrite the auditors*" Interview with subject #0106 held on December 14 2006.

ultimately, remove auditors after an impartial and thorough job just to please their clients[321].

Sometimes, soft grading occurs simply because an auditor that fears for his job adopts a friendlier attitude. Power (2003) called them 'timid auditors' - the watchdogs that never barked - who rather than writing as many nonconformities as they could find, will choose the ones that are more important and that will generate more results[322]. Some[323] argued that auditors do not have high expectations and tend to overlook things, allowing organizations to become certified even though they had nonconformances that were simply not documented:

> *"Most of them [auditors] don't write any findings. I was at a meeting with a certification body one time and I upset everyone because I asked how many of you have written a nonconformance in the last 6 months? None. How many have written a nonconformance in the last year? I had 2 people raise their hands. And how many of you have written 5 opportunities for improvement in the last 6 months? 3 people raised their hands. They are basically not adding any value to the Management System. It is just terrible and it is because of the structure the way the system is set up"* Interview with subject #0073 held on December 2 2006.

Another explanation for soft grading to occur is simply because a thorough audit where several nonconformances are identified ends up representing more work for the auditor, usually with no extra-pay. Part of the auditor's responsibilities after conducting an audit

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[321] *"I think there is a potential conflict of interest for the certification body who wants customer satisfaction, wants the client to be satisfied and then might yank an auditor off that job when in fact the auditor may have done a very good job and they just didn't like the thoroughness*" Interview with subject #0108 held on January 12 2007.

[322] *"Since I have been fired twice I figured that maybe I need to have a little bit more friendly attitude. So, I don't write as many nonconformities as I could, I just write the ones that are probably more important and that would generate the most results, in order not to piss them off. But, you know, I will avoid the little quick picks, fix a document, change a document, those things, and focus on the monitoring and measurement issues*" Interview with subject #0132 held on December 8 2006.

[323] *"It is not so much what they are doing it is what they are not doing. They are not… they are basically allowing companies to become registered even though they have major and minor nonconformances but they are simply not documenting them. So basically, (…) they are letting them slide*" Interview with subject #0106 held on December 14 2006.

"*They just overlook things and let companies get by. They don't have high expectations of companies and don't demand that the company demonstrates marked improved in performance and fulfill the standard to its full intent*" Interview with subject #0228 held on December 6 2006.

"*I think auditors can do a pretty good job identifying non conformances but I am not sure that they are always… I think that they are almost maybe too quick to want to dispose of the non conformity by accepting mediocre responses" Interview with subject #*0952 held on February 5 2007.

is to review the corrective action submitted by the certified organization, in order to close any nonconformance. Evidently, this is a disincentive for being strict as the fewer the nonconformities identified, the easier it is to write the report and the less follow-up there is[324]. Soft grading can also occur for more benign reasons. Sometimes, an auditor that is working on a continual basis with the same organization may develop a sentiment of trust. For example, if an auditor has the confidence that "*when people say that they will take care of something they will*"[325], it is likely than some issues may be discussed orally and not documented on the audit report[326]. Likewise, when a nonconformity is identified, the auditor may try to soften it by reporting just an observation or an opportunity for improvement[327]:

> *"ANAB doesn't want that to happen… you aren't supposed to… you are supposed to write nonconformances for everything that you can't verify conformed. But I would have to say that most auditors I know, including myself, if they think they're getting good cooperation from a client might soften a little bit and sometimes give them the benefit of the doubt, as opposed to writing of nonconformance"*. Interview with subject #0108 held on January 12 2007.

Integrity

The concept of honesty is very close to the heart of auditors. They are at the forefront of an industry that aims to ensure confidence and trust to its clients, while standing strongly

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[324] "*When you write nonconformances, at least for the certification body I work for, part of your audit responsibilities are reviewing the submitted corrective action later on, you know, to close a nonconformance. (…) For some people the little time to review their corrective actions might be a disincentive also to write nonconformances. (…) The fewer things you find wrong the easier it is to write the report and the less follow up there is, and I suppose for some people that could be a disincentive to be too strict along with the other mention of the client being happy*" Interview with subject #0108 held on January 12 2007.

[325] Interview with subject #0952 held on February 5 2007.

[326] "*They might have developed confidence that when people say that they will take care of something they will, so they might have a tendency to raise it to them orally but not documented and those kinds of things. (…) I don't think it is a malicious kind of thing, I think it is just a characteristic of auditing*" Interview with subject #0952 held on February 5 2007.
"*I have also been privy to many conversations where the internal auditor admits that s/he 'didn't find problems' in large part due to personal connections with one or more of the folks being audited. 'John's group is under the gun and I saw no reason to complicate matters' is not at all uncommon*" Retrieved November 13 2009, from the Elsmar Cove website (posted: February 27 1999): http://elsmar.com/Forums/showpost.php?p=9001&postcount=13

[327] "*I don't think you change your style a lot but I have to say that sometimes you know it could lead to someone getting kind of a…an observation if you will, an opportunity for improvement in an audit versus a nonconformance*" Interview with subject #0108 held on January 12 2006.

on individual integrity. Because of that, any rumor of a scam or misconduct tends to spread feverishly across the industry, raising a constant cloud of suspicion over all its members. Before getting into this topic in more detail, I should, first and foremost, state very clearly that I do not believe the auditing industry as a whole to be fraudulent, corrupt or simply dishonest. That said, I believe that there is so much smoke revolving around this issue that it should not be ignored.

The ISO 14001 standard has been under scrutiny for now over a decade. The consistency and credibility of the certification process in particular has been questioned by environmental groups (e.g. Morrison *et al*. 2000), scholars (e.g. Krut & Gleckman, 1998; NAPA, 2001; Paterson, 2002; Switzer & Ehrenfeld, 1999), government agencies (Council of the European Union, 2008; ENDS 2003d, 2003f , 2005b), and even by the auditing industry itself (Thione, 2006; ENDS 2003c, 2003e). Throughout this chapter I discussed several justifications for the lack of consistency that affects the conformity assessment of ISO 14001. Moreover, there are public reports of practices that sustain my argument, and that expose the lack of credibility of the entire certification industry. For example, on an auditor's internet forum[328], there are multiple accounts of environmental auditors and managers' that reflect their disbelief and anger toward the practices of some certification bodies[329] and certified organizations[330]:

[328] The Elsmar Cove Forum (www.elsmarforums.com).
[329] "*I am at a new client facility this week, [name of certification body] certification last fall I have to laugh at. No way they were compliant at the time of the audit and they're far from it now*" Retrieved November 13 2009, from the Elsmar Cove website (posted: February 27 1999): http://elsmar.com/Forums/showpost.php?p=9001&postcount=13
"*I know of 3 companies who have been audited by [name of certification body] which had glaring wholes in the system. In each case the auditor just turned their head and looked the other way*" Retrieved November 13 2009, from the Elsmar Cove website (posted: February 27 1999): http://elsmar.com/Forums/showpost.php?p=9001&postcount=13
"*There are some overseas that I have seen that are just terrible, they are certificate shops. The auditors have 2 or 3 page reports with check boxes, they don't tell you anything, they say everything is fine*" Interview with subject #0958 held on January 2 2007.
[330] "*I have been into companies who have a certification on their wall that are so far from conforming with EMS 14,001 it's startling*" Interview with subject #0969 held on January 5 2007.
"*Upon questioning the owner, he admitted to me that he had a forged ISO 9001 certificate because many of his competitors are doing it*" Retrieved November 13 2009, from the Elsmar Cove website (posted: May 26 2008): http://elsmar.com/Forums/showpost.php?p=250890&postcount=4
"*I just audited a supplier in Shenzhen, certified to ISO9001 by [name of certification body] and it was the worst audit ever. (…)They had nothing! Their system consisted of a few scribbled documents for*

> "*I have dealt with and disparaged [name of certification body] for years now (as many others have) and now have the pleasure of knowing that a past employer has finally found that they cannot buy the certificate forever. I feel I have been vindicated*"[331]

Despite these compelling (yet anecdotal) evidences of dishonest certification procedures, during my interviews with environmental auditors and certification managers, I sensed that often what was discussed as unethical or dishonest was mostly rumors spread by word of mouth[332]. It was particularly perceptible how the vast majority of auditors[333] expressed very hard feelings against a particular certification body, often without any real evidences:

> "*I've heard stories or phrases like 'well, you know that company just bought their certification because they used company XYZ and all they had to do was pay them some money and come out and get them passed'. I've always said, I don't know how much truth there is to that because I don't have direct experience with that. I suspect there's some truth to that. How far that goes, I really don't know*" Interview with subject #0108 held on January 12 2007.

Even though some auditors may have hands-on experience with certification bodies being too lenient (when auditing a client that transferred from another certification body[334] or working as consultants[335]), it may not necessarily proof that there is a fraudulent scheme behind it. First, because management systems' auditing is based on sampling strategies

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'procedures' that no one knows about." Retrieved November 13 2009, from the Elsmar Cove website (posted: May 26 2008): http://elsmar.com/Forums/showpost.php?p=250875&postcount=1

[331] Retrieved November 13 2009, from the Elsmar Cove website (posted: April 12 2003): http://elsmar.com/Forums/showpost.php?p=48226&postcount=7

[332] "*That is gossip, to be perfectly honest, the certification body is just as good as the auditor, everybody has a gossip about one certification body, everywhere I go there is one certification body.…*" Interview with subject #0226 held on December 18 2006.
"*I hear stories of auditors who come and sit around and drink coffee and go to lunch, and in general have a social visit and a couple of days later they re-issue a new certificate…*" Interview with subject #0185 held on December 7 2006.

[333] "*Because I know that there are other companies that have more of a reputation of pay us the money and we will give you your certificate, and I find that somewhat difficult to understand*" Interview with subject #0195 held on February 15 2007. "*And you find certification bodies, they are the same way, there are some certification bodies that have a horrible reputation in the industry. You want a banner? You go to them*" Interview with subject #0959 held on January 1 2007.

[334] "*I have audited behind some of those companies before and I truly think that they have not done a responsible service because they have been too easy*" Interview with subject #0960 held on January 3 2007

[335] "*(…) they [certification body] would come in to our facility and they did a table top audit, they didn't do other interviews, they didn't go out to talk to people, they didn't… they were really there to eat lunch and then go out at night [laughs]. That company surprised me because that was not the organization that typically comes up on your screen*" Interview with subject #0960 held on January 3 2007

and it is possible for two auditors to come up with different findings when auditing the same organization. Second, and more importantly, I showed before that every auditor (and every certification body) has his own interpretation of the requirements of the standard and its own auditing approach. As a result, just like in any other competitive business, the actors in this industry have a tendency to "*not necessarily comment positively about their competitors*"[336]. It is striking how each single auditor thinks he has the right interpretation of what the standard requires and the perfect auditing style, and as a result, "*they all think they are doing a great job but they question what everybody else is doing*"[337].

In fact, auditors and certification managers are often their own worst enemies. Without a doubt, there are differences among them. And there are certainly enough allegations of misconduct for the entire system to deserve a thorough investigation. But the debate on whether certification bodies are honest or not is somewhat questionable. In my opinion, certification bodies probably range between good and fair ones. Those accused of being dishonest have their business model based on "*cheapening the whole process a notch*"[338]. For example, hiring less experienced auditors, quoting fewer days, being more flexible regarding some requirements of the standard and having low expectations regarding the outcomes of the management system. One auditor portrayed these certification bodies as the auto shops where everyone knows you can get an inspection sticker without any hassle[339]. Like any other business they promote and sell their services, sometimes with a fair amount of success. Many organizations expect their auditors to be thorough and to help them identify opportunities for improvement[340]. Others just want to have a certificate because someone told them to. The flexibility granted by the ISO systems

[336] Interview with subject #0952 held on February 5 2007.
[337] Interview with subject #0952 held on February 5 2007.
[338] Retrieved November 13 2009, from the Elsmar Cove website (posted: October 23 2006): http://elsmar.com/Forums/showpost.php?p=169944&postcount=19
[339] "*When you drive your car there are places you can bring it where even if your head lights are not lined up and your brakes don't work you can still get an inspection sticker, so there is always going to be people who provide that certification and people that are going to seek that certification*" Interview with subject #0997 held on November 29 2006.
[340] "*I heard stories from other auditors and from the certification body that there are companies that get unhappy if there aren't more nonconformance s found, ok?*" Interview with subject #0228 December 6 2006.

standards, for better and for worse, allows this disparity to occur and foster the differentiation of certification bodies in terms of their stringency in face of the different motivations that organizations have to get certified. If the issue of ISO 14001 lack of credibility is to be properly tackled, the question that needs to be answered do not regard the honesty of the conformance assessment actors[341], but whether certified organizations and the end users of the certificates truly understand the goals of ISO 14001.

Discussion

Following the creation and approval of the ISO 14001 EMS standard, Roth-Arriaza (1997, pp. 299) warned that "*the credibility of ISO 14001 (…) hinges on the credibility of the certification. If certifiers are seen merely as ratifying an empty exercise, the scheme will quickly lose value both in the market and in the eyes of regulators*". Without surprise, one decade after the standard was released, government and private sector are looking with increased suspicion at the certification/accreditation process associated with ISO 14001.

The US EPA and the European Union Environmental Agency have cautiously maintained a safe distance from the ISO 14001 certification process. Even though they have encouraged the implementation of EMSs following the ISO 14001 guidelines (EPA, 2006), they have never endorsed ISO 14001 certification, rather promoting the adoption of their own certification programs, Performance Track and EMAS. These certification programs, and many others sponsored by US Environmental State Agencies[342], are characterized by much stringent requirements in terms of regulatory compliance, public reporting and environmental outcomes than ISO 14001. In addition, in regard to the

[341] *"I think that the issue of the CB's being honest or not is somewhat moot. They have a business model that seems to be working. And like all business their job is to sell or promote their service. There are suckers out there that get the certificate because they think they have to others get it because they were told to and some do it because they see benefit to it. The issue is more along the lines of several other discussions already had here on the cove. That is if ISO in it's various forms is effective in bringing standardization to the various industries subscribing to them, and if those companies that are registered or moving toward certification truly understand the standard and it's benefits and requirements. The real question is do the buyers understand what they are getting*" Retrieved November 13 2009, from the Elsmar Cove website (posted: October 23 2006):
http://elsmar.com/Forums/showpost.php?p=169898&postcount=14

[342] See, for example, the Virginia Environmental Excellence Program or the Clean Texas Initiative.

accreditation of ISO 14001 certification bodies, even though the US government has never tried to interfere with the current conformity assessment system, the European Union is about to release new regulation under which accreditation services will be regarded as a public authority activity. The worldwide impact of this measure is uncertain, but at a minimum, the European Union is sending a very clear signal that the current accreditation system is failing, and that each country should bear the responsibility of having a single national accreditation body.

The skepticism towards ISO 14001 certification has also spread through the private sector. Despite the initial enthusiasm promoted mostly by the automobile industry, several industry sectors have questioned the relevance of the existing third-party certification and accreditation system. In the aerospace sector, BOEING for example, is now conducting their own validation audits, to develop a sense of confidence that the certification bodies are doing an effective job[343]. Similarly, the Air Force (like many other governmental organizations[344]) has decided to conduct self assessments of their ISO 14001 EMSs, relying on their own auditors rather than hiring third-party certification bodies[345]. But the most paradigmatic example comes from the automobile industry itself. Because of the problems experienced with ISO 9000 certification, the automotive sector decided to bypass the accreditation bodies and monitor directly the sector specific TS-16949 certification[346]. They now rely on a second-party process, where the certification

[343] *"There is a concept of validation audits which is (…) assessors would go to a plant without the certification body and not do a full fledge audit but just an audit to develop a sense of confidence that yes, there was a system in place and it is being operated. As kind of an independent validation that the certification body chain is doing what it is supposed to. BOEING does that in the aerospace arena right now, and if they find problems, they work with the certification body to address the problems directly, but if they run into any delays in the certification body responding then they escalate it and bring it to ANAB's attention*" Interview with subject #0952 held on February 5 2007.

[344] Executive Order No. 13423, "Strengthening Federal Environmental, Energy, and Transportation Management," directs Federal agencies to implement EMSs at all appropriate organizational levels.

[345] *"Air Force put out a letter that they would self assess to 14000 and would not allow a third party certification since the philosophy being that there was adequate talent within the Air Force to do their own assessment to 14000 and so we never did either declare the 14000 or have a third party auditor come into 14000*" Interview with subject #0973 held on December 15 2006

[346] *"The biggest lesson that the accreditation bodies can learn from the Automotive Sector is the fact that they were blatantly bypassed for the TS certification program. The Automotive OEMs got fed up with the accreditation process dysfunctions experienced during the QS-9000 experiment*" Retrieved November 13 2009, from the Elsmar Cove website (posted: May 23 2007): http://elsmar.com/Forums/showpost.php?p=196666&postcount=9

bodies report directly to the Big-3 automakers, the real users of the certificates awarded[347].

The reasons for all the suspicion that revolves around EMS certification has been fairly discussed throughout this chapter. Roth-Arriaza (1997) was primarily concerned with the Asian certification market and the threat that ISO 14001 could be used to expand export opportunities. The pressure over the certifiers not to deny certification to any national firm could trigger a race to the bottom in terms of auditing stringency, "*in which the least demanding certifiers gamer the most business and those states that encourage less-than-thorough certification obtain the greatest number of certified companies with the accompanying export advantage*" (Roth-Arriaza, 1997, pp 299). In my opinion, the crisis in the credibility of the ISO 14001 certification process did not occur because of global market strategies as suggested by Roth-Arriaza (1997), but at a micro level. Nevertheless, the rationale presented by Roth-Arriaza (1997) is still valid. A systematic decline in auditing standards[348] (race to the bottom) occurred because of the problematic auditor-auditee relationship, but it grew from the individual level to the top branches of the accountability network, rather than the other way around.

I believe that the major limitation of ISO 1401 certification in terms of its capacity to promote self-regulatory powers is not dishonest or unethical acts practiced by a few, like many auditors want to believe in[349]. The problem is congenital and results from the conjugation of three factors. First, the fact that ISO 14001 was designed as a regulatory instrument for voluntary adoption, when in reality there is currently nothing voluntary about ISO 14001 certification. Second, the non-prescriptive nature of the ISO 14001

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[347] "*Now, with the automotive industry, at least on the QMS side, they went back to more or less a second party process. The certification bodies report directly to the big three*" Interview with subject #0952 held on February 5 2007.

[348] *"I think we were one the best, and while we have relaxed our standards I don't think we were worse than anybody else. I think there are still some that were much worse than we were. But for all, the quality definitely decreased over time*" Interview with subject #0191 held on January 13 2007.

[349] "*One of the problems with the accredited certification process is that many players are willing to commit unethical, immoral, fraudulent acts, but they are not illegal. If such acts become illegal, due to market regulation, the consequences would be direr for the transgressors*" Retrieved November 13 2009, from the Elsmar Cove website (posted: May 30 2008): http://elsmar.com/Forums/showpost.php?p=251674&postcount=51

standard and the flexibility it grants, allowing organizations to specify their own objectives and procedures. And third, the conflict of interest that characterizes ISO 14001 conformity assessment, limiting the auditors' capacity to push certified facilities to impose rigorous management systems and improve their overall performance. These three pillars that are the foundation of ISO 14001 certification are certainly sufficiently strong to help organizations that have an intrinsic motivation to actually implement an effective EMS and improve the way they control their environmental impacts. The proof of that is that there are hundreds of organizations that have been able to successfully implement an EMS and contribute toward environmental protection, despite the significance of the certificate that they were awarded. The real problem lies when, one by one, the ISO 14001 foundations are destroyed.

When industry certification mandates are imposed, the voluntary nature of the standard is ignored and the first pillar of ISO 14001 is in jeopardy. Then, when owning a certificate becomes a condition to maintain a client (sometimes the only one as is the case with many auto suppliers), environmental concerns are often reduced to 'getting a box checked' at the lowest cost and with the greatest certainty, by turning business as usual into minimal environmental objectives. Finally, when one is forced to obtain a certificate, shows no interest in implementing an effective EMS, and selectively picks an auditor/certification body whose revenue is proportional to how much the organizations they audit appreciate their work, then the three pillars that sustain ISO 14001 are standing in a very fragile position and conditions are set for all kinds of abuses to occur, contributing to the decreasing credibility of the ISO 14001 the certification process.

Without a doubt, ISO 14001 certification and the auditing industry as a whole are facing threatening times. Many auditors[350] fear for the eminent meaningless of the entire system and shout for more diligence among auditors, competent assessors, and stricter surveillance, in order to "*weed out the auditors and certification bodies that let the whole*

[350] "*I believe as EMS professionals we need to be diligent and try to prevent the proliferation of that sentiment. If we fail it is likely that an ISO 14001 will become meaningless*" Retrieved November 13 2009, from the Elsmar Cove website (posted: November 27 2001): http://elsmar.com/Forums/showpost.php?p=22130&postcount=46

process down"[351]. But they ignore that auditors and assessors, certification and accreditation bodies, are all caught in the same competitive arena and harnessed by the flexibility granted by the ISO standards. As this system is on the verge of collapsing, it is important to revisit the findings of Chapter IV and remind the potential of the ISO 14001 standard helping organizations regulate their impacts on the environment, to realize the importance of enhancing the image of the EMS standard itself. In order for that to happen, the credibility of the certification/accreditation system must be restored. I believe that can only occur through a profound structural transformation in the way the system is set up. ISO 14001 was designed as an instrument of self-regulation, which somehow evolved into an enforced self-regulatory strategy without the necessary adjustment in terms of its enforcement arm. As suggested by Ayres & Braithwaite (1992), a range of enforcement strategies needs to be adjusted to the different realities of organizations that seek ISO 14001 certification. It is my belief that a new paradigm in terms of auditor's independence, disclosure of information, data analysis and environmental performance benchmarking needs to be established, in order for ISO 14001 to unleash its real potential. In addition, the necessary trust and confidence on the value of the certificate will only occur when the end users of the certificates become involved in its conformity assessment structure.

[351] Retrieved November 13 2009, from the Elsmar Cove website (posted: May 27 2008): http://elsmar.com/Forums/showpost.php?p=251023&postcount=25

Chapter IX
Conclusion

Introduction

The ISO 14001 EMS standard recently completed its 15th anniversary, and during this decade it proved to be as controversial as it was successful. Despite the remarkable number of ISO 14001 certified organizations spread around the world, it is striking the lack of understanding that exists today regarding the purpose and the outcomes of the standard. First of all, there has been some confusion regarding the intent of ISO 14001, which make difficult a fair assessment of the impact of this standard. Second, there is such heterogeneity in the motivations and ambitions of certified organizations, that it is practically impossible to generalize any findings regarding how the adoption of the standard affects corporate behavior. On Part I of this dissertation I tried to clarify the original intent and the requirements of the ISO 14001 standard, evaluate how the adoption of an ISO 14001 EMS enables organizations to self-regulate their environmental impacts, and discuss how that translates in terms of meaningful environmental protection. Part II focused on the certification side of ISO 14001, where I described the conformity assessment structure responsible for the certification process, and explored the threats that endanger its capacity to ensure effective accountability and transparency. In this final chapter, I review the main findings of this project and discuss the necessary transformation that ISO 14001 certification will have to go through in order to reach its full potential as an effective regulatory instrument.

The Expectation Gap

The ISO 14001 certification flags that now embellish dozens of thousands of facilities have conveyed a false notion of the 'greening of industry', that cloud both public and private perceptions on the value of ISO 14001 EMS certification. Regulators, environmentalist, academics, corporations, and the public in general, have demonstrated conflicting and, in some cases, inappropriate expectations regarding the role of the standard. According to NAPA (2001) many organizations have adopted an ISO 14001 EMS expecting that government agencies will use public policies to recognize and reward them. Likewise, some regulators see ISO 14001 as a basis for easing regulatory

burdens and as an opportunity to shift enforcement resources to low-performing businesses. Environmental groups, on the other hand, expect EMS certification to assure not just better management for the sake of business, but also regulatory compliance and improved environmental performance, as a result, they tend to perceive ISO 14001 as a public-relations ploy. In addition, some interviewees[352] involved in the draft of the ISO 14001 standard expressed their discontentment regarding the ignorance revealed by our society about ISO 14001. That lack of knowledge, they add, even extends to the auditing community, with auditors and certification managers failing to understand the intent and the requirements of the standard. Overall, considering these divergent expectations, it really should be no surprise that ISO 14001 third-party certification has been surrounded by so much controversy.

The fact that ISO 14001 raises such interest (and concern) among private and public sectors, and the important role that it indisputably plays in public policy, demands an unequivocal clarification of the intent of the certification process and warns against the possible misconstructions that have been built on top of other management systems standards. The ISO 14001 EMS standard is not an industry plot or an environmental smokescreen, neither is it a sign of superior environmental performance and regulatory compliance. ISO 14001 is just an EMS framework. It is a business tool (among many other business tools), that promotes better management, but where people are still responsible for all the inputs and outputs. One environmental auditor compared it to a treadmill, that we can either have sitting on the garage, or that we can use to work out fifteen minutes a day, one hour a day, or four hours a day[353]. An ISO 14001 EMS, like any piece of gym equipment, may work well for some people and not for others:

> "*I have seen it do great things and I have also seen it be an incredible waste of resources, time, money and effort*" Interview with subject #0191 held on January 13 2007.

[352] Interview with subject #0985 held on December 1 2006.
[353] Interview with subject #0988 held on November 25 2006.

Accepting that ISO 14001 is just a business instrument, there are several misconceptions about its certification program that explain the heterogeneity demonstrated by ISO 14001 certified organizations and justify the controversy that surrounds the standard.

Myth #1: A Voluntary Program

One of the most important myths about ISO 14001 is that it is a voluntary certification program. In the US, that is hardly true. According to the perspective of environmental auditors, the vast majority of organizations seeking certification are being mandated by their clients or by their parent corporations. Some are even seeking certification as part of enforcement settlements resulting from outstanding compliance problems. What this represents is that there is just but a handful of organizations that has the necessary intrinsic motivation to actually improve the way they manage their environmental aspects. Going back to the treadmill metaphor, if the US government would mandate every family to buy a treadmill would that lead to a reduction in obesity rates? It really depends… perhaps some people were not obese to start with and they hate the fact that they have a treadmill taking space in the family room. Others do not have the time or the energy to actually exercise and therefore they hate the fact that they had to buy a treadmill and they do absolutely all they can not to even look at it. Perhaps some will think that if they really have to own one, might as well use it and they will start seeing some benefits from exercising more frequently. Similarly, some organizations (the 'Reluctant Compliers') that are forced to obtain ISO 14001 certification will do the bare minimum to have the certificate on the wall, while others (the 'Committed Compliers') will try to make the best out of this process and use their EMS to effectively improve their management practices.

Even though most organizations initiate the ISO 14001 certification process as 'Reluctant Compliers', auditors believe that this is an evolutionary process, where the organizations' enthusiasm and commitment will grow as they perceive the benefits associated with the implementation of an EMS. That maturity process may take one or two auditing cycles (or it may simply never occur), and is substantially influenced by three factors: first, top-management commitment, evidenced, by how much support is given to the EMS

implementation in terms of visibility and resources provided, and in promoting a cultural change of shared responsibility across the entire workforce; second, the institutionalization of environmental accounting practices, in order to measure the economical outcomes of the environmental programs and to foster management buy-in; and third, the appropriate use of external experts, avoiding consultants that want to implement their own 'cookie cutter' EMSs, in detriment of a more critical approach where they contribute through a sound training program that promotes environmental awareness and leaves the implementation of the EMS to the employees that deal with it on a daily basis.

Myth #2: Environmental Excellence

Environmental auditors agreed that although most organizations start out as 'Reluctant Compliers', worried about the cost of certification and with no hopes of getting any benefits, after a few auditing cycles, most will eventually see the value of the EMS implementation process and become 'Committed Compliers'. These are the organizations that take their responsibilities seriously, and use the standard to help them stay in compliance with regulatory requirements and to identify improvement opportunities. They are indeed able to see benefits in their bottom line by reducing costs associated with waste disposal and energy consumption. In addition, the most significant outcomes come unexpected, in the form of intangible benefits such as increased environmental awareness, reduced risk and liability, better housekeeping and loyalty to the organization. More importantly, from a policy standpoint, is the fact that the environmental function gets elevated within the business culture, and from each employee it transpires to the exterior of the organization.

Despite that most organizations are indeed seeing some value from adopting an EMS, it is the auditors' perception that the majority of them are not taking ISO 14001 to its fullest advantage. By looking at the most common objectives and targets set by certified organizations, one could easily figure that they are picking the low hanging fruit. Organizations are setting environmental programs with minimal investments and quick pay back periods, often associated with recycling projects and more efficient lighting. It

seems like only a handful has been able to critically look at their processes and, as 'Environmental Strategists', have a more holistic and long term conception of their environmental objectives. It seems that the fact that ISO 14001 is a non-prescriptive standard that allows organizations to set their own objectives and targets is one of its major strengths but also one of its major weaknesses. For some, the flexibility granted by the standard is essential because it allows any type of organization to implement an effective EMS. But on the other hand, the fact that an organization may be certified while doing little more than business as usual is a critical vulnerability of the standard and the primary reason for the its lack of credibility[354].

Myth #3: Independent Conformity Assessment

Despite the recent discrediting events in the auditing community that contributed to one of the world's largest economic crisis, it is noteworthy how the accountability structure responsible for the conformity assessment of ISO 14001 certification has been practically ignored. Curiously, even members of the auditing community demonstrate a profound lack of understanding regarding the role of several organizations that compose this accountability structure. Nevertheless, it is disconcerting how a system that supervises more than one hundred thousand organizations worldwide (for EMS certification alone), whose goal is essentially to provide trust, composed by multiple layers of oversight and governed by numerous norms, standards and guidelines, can have such profound limitations.

Several authors (e.g. Brockway, 1997; Karapetrovic & Willborn, 2000a; Power, 1994, 1999; Switzer & Ehrenfeld, 1999) have suggested a set of principles for an effective auditing program, which include: competence, consistency, objectivity and independence. On the previous chapter I described several limitations of the ISO 14001 third-party certification that infringe each of these auditing principles. First, the inconsistency evidenced by environmental auditors, with many showing conflicting views regarding

[354] "*You get this issue of 'does just having an EMS mean you have better environmental performance?' Right now that is probably only true for some percentage of the companies that have EMSs. Because there are people out there who have certificates that I would say don't deserve them and for that reason, you know, there's still a lot of questions*" Interview with subject #0969 held on January 5 2007.

their role as auditors depending on their professional background and environmental expertise. Second, the narrow definition of accountability, based on assessments of competence rather than the quality of the results delivered, and the minimal oversight that characterize the entire assessment structure. And third, the lack of independence in the auditor/auditee relationship, raising a potential conflict of interest that obstructs impartiality, promotes 'soft-grading' strategies and an overall 'race to the bottom' in terms of auditing strictness. Against many auditors' discontentment, the existing ISO 14001 conformity assessment system, does not grant them the necessary independence, sanctioning power, and capacity to foster performance values, essential for the auditor to provide trust to the public and value to the auditee. On the contrary, the limitations of this system slowly corrode its foundations and endanger the credibility of the standard itself.

A Regulatory Instrument or an Environmental Certificate?

The misconceptions that have been associated with ISO 14001 certification since its turbulent birth, have one fundamental explanation: ISO 14001 is generally perceived as a labeling program unable to distinguish 'environmental leaders' from 'environmental laggards'. The reasoning for this was illustrated above and regards the fact that ISO 14001 does not recognize organizations based on their level of environmental performance, but rather on whether they have implemented a system for the continual improvement of their management practices. Even though the public recognition of poor environmental performers may seem socially unacceptable, that should not be a motive to deter any organization to implement an EMS. This process is actually particularly relevant for organizations with significant environmental aspects and regulatory compliance problems.

I recall the findings of Chapter V and emphasize that, according to environmental auditors, committed organizations were generically able not just to improve their environmental performance and reduce their bottom line, but more importantly, to promote environmental awareness and their self-regulatory powers. Yet, it seems like those benefits are somewhat shadowed by the pressure that most organizations face to obtain a certificate. Since most are mandated (by their suppliers or headquarters) to

obtain certification, their primary motivation is to implement an EMS at the lowest cost, failing to use it as an instrument for continual improvement. In that regard, the ISO 14001 certification process, rather than promoting self-regulatory powers and overall improvements in environmental protection, may in fact contribute solely to foster the rise of 'auditee mentalities' and associated decline of organizational trust and adversarialism. There is also a second unintended consequence of this lack of intrinsic motivation, which is the subversion of the conformity assessment system. Uncommitted organizations can easily take advantage of the lack of prescriptive requirements of the ISO standards, as well as an apparent leniency by the conformity assessment system, in order to free-ride ISO 14001. Not only this is a waste of resources but, more importantly, it contributes to lower the strictness of the enforcement mechanism and to the growing discredit of the standard:

> "*As long as accreditation and certification are perceived as attributes and the users do not differentiate the players, a good chunk of the certification market will just be a façade: You pretend to implement a management system, someone pretend to audit the system, but the certificate is 'real' with all the fancy official logos on it*"[355]

Several claims have been made (e.g. Arimura *et al.*2011; Delmas, 2007; Switzer *et al*. 2000) that suggest that certification mandates along the supply chain could lead to revolutionary gains in environmental performance. The ISO 14001 standard is, without a doubt, an extraordinary tool to help organizations control their environmental impacts. Despite its limitations, environmental auditors talk proudly about the dozens of organizations that have reduced risk and improved performance, while reducing their bottom line. Nevertheless, I would refrain some enthusiasm around any attempt to externally drive organizations to seek ISO 14001 certification, because of the consequences associated with the lack of intrinsic motivations that most companies have regarding the adoption of an EMS:

> "*The extortion tactics of some customers to require formal certification by their suppliers as a condition of doing business is absolutely deplorable*.

[355] Retrieved November 13 2009, from the Elsmar Cove website (posted: 20 January 2006): http://elsmar.com/Forums/showpost.php?p=135461&postcount=47

Worse, the formal certification doesn't guarantee a better supplier, only a bitter one"[356]

Understanding the enormous potential (and limitations) of ISO 14001, caution should be used when discussing the efficacy of market mandates or policy incentives, as they may simply contribute to a 'certificate rush'. More emphasis should be given to recognize and reward those organizations that are indeed using their EMSs effectively, while eliminating the actors that have a negative impact on the reputation of the standard. As suggested by Power (1994) and O'Neill (2002), what I found is that the pressure to obtain a certificate (jumping through the auditing loops) has distracted organizations from the essence of the problem. The majority of the organizations seeking ISO 14001 certification are looking just for the banner, 'the certificate on the wall'. As the EMS standard does not require specific levels of performance, one must then wonder what is the value of the certification process as a trust production function when it simply validates the existence of an internal management tool.

Careful consideration must be given to the fact that the flexibility of the ISO 14001 EMS standard makes it a socially unacceptable certification system, and that certification mandates turn the implementation of an EMS into a mere formality without meaningful results. The way it is currently set up, ISO 14001 is somewhat of a double edge regulatory instrument that serves a dual purpose: on one side it is an instrument that seeks to promote self-regulatory powers, and on the other, it functions as a market signaling agent. The problem lies in the fact that these two facets of the standard, rather than being symbiotic are actually detrimental to each other. If the purpose of the standard is to force uncommitted organizations to implement an EMS, it is essential to change the non-prescriptive nature of the standard and, above all, strengthen its accountability mechanism. If the intent is simply to help organizations improve the way they manage their environmental aspects, then we have to question the usefulness of the certification process.

[356] Retrieved November 13 2009, from the Elsmar Cove website (posted: April 2 2004): http://elsmar.com/Forums/showpost.php?p=74700&postcount=6

I believe that the solution to this conflict between 'incompetent' certification bodies and 'incompetent' organizations (Thione, 2006), lies in the original intent of the standard. Currently, the auditing industry is looking up exclusively for its own best interest, taking ISO 14001 as another source of revenue - one more standard to audit against - losing site of why the standard exists in the first place[357]. Yet, it is perpetuating a self-destructive cycle that will eventually culminate in the discredit of the standard and of the auditing community itself. It is very likely that, in order for the ISO 14001 standard to survive, that it will have to re-focus on its role as a self-regulatory instrument, and disconnect from the existing third-party certification process.

The Future of ISO 14001

The ISO 14001 certification is currently facing a deep crisis of confidence. The reason for this is because the third-party certification system is not adjusted to the character of the organizations that seek an ISO 14001 certificate. Simply put, this system is failing to deliver its promised value and it is increasingly becoming unsustainable. In order for ISO 14001 to become a long term successful regulatory instrument, it will have to dramatically evolve, otherwise, it faces the serious risk of disappearing:

> "*Personally, I am much less concerned with certification growth than certification credibility. The growth of a non-credible certification scheme is non-value added. Measures taken to promote credibility of management system certificates is IMPERATIVE, in my estimation. Failure to do so will accelerate the demise of the whole concept. Certification of management systems has been trivialized, cheated upon and all the rest. It is time to revert the trend*"[358].

Throughout this dissertation I mentioned repeatedly the wishes of certified facilities (minimal interference in their operations and forgiving certification bodies), but seldom mentioned the objectives of the end users of the certificates. These would like certification bodies "*to be tough, thorough, [and] demanding*"[359] so that they can have confidence in their supplier's capacities. In order for ISO 14001 to recover its credibility

[357] Interview with subject #0947 held on February 20 2007.
[358] Retrieved November 13 2009, from the Elsmar Cove website (posted: March 11 2004): http://elsmar.com/Forums/showpost.php?p=73123&postcount=27
[359] Retrieved November 13 2009, from the Elsmar Cove website (posted: July 16 2004): http://elsmar.com/Forums/showpost.php?p=82476&postcount=13

and meaningfulness, it is then essential to satisfy the requirements of these two stakeholders. For certified organizations, third-party audits would have to become a much more meaningful and value-added process, that actually helps organizations become more effective and efficient. For that to happen, the certification industry (led by IAF) would have to update their non-consulting policy and allow, under strict guidelines, third-party auditors to develop a constructive relationship with audited organizations and to contribute in the identification of opportunities for improvement. More important, it would be necessary to improve auditor competence and demand real knowledge of the technical and managerial issues concerning the business sectors where the audited organization operates, as well as the capacity to conduct process oriented audits (Thione, 2006). That would entail a dramatic change in the way auditor training and auditor certification is currently established, and require the development of new methodologies to assess auditor competence.

As for the end users of the certificates, it is absolutely essential that accreditation/certification bodies become much more accountable for the performance of the systems that they certify[360]. In my opinion, that may be achieved in two ways. The most revolutionary approach would be to dismantle the blatant conflict of interest in the auditor/auditee relationship by 'nationalizing' the auditing practice through the creation of a 'clearing house for auditors' that would deem irrelevant accreditation/certification bodies and ensure the independence of environmental auditors[361]. In alternative, if the auditors were to remain financially dependent of the auditee, the solution would be to dramatically strengthen the enforcement of accountability throughout the entire conformity assessment structure. That would require systems standards to become more prescriptive, the application of severe sanctioning measures for wrongdoers, and above all, intense surveillance. At the highest level, "*the IAF needs to be more than a club and*

[360] "*The archaic accreditation/certification protocols need to be modernized and transparency and confidentiality have to be better balanced*" Retrieved November 13 2009, from the Elsmar Cove website (posted: July 16 2004): http://elsmar.com/Forums/showpost.php?p=82476&postcount=13

[361] "*I would not allow, I would normalize the certification bodies, make them charge one price, I would standardize costing, I would standardize the audit planning, audit mechanics, and I would not have auditors employed by the certification bodies. I would have the certification bodies go through a clearing house for auditors and randomize audit selection*" Interview with subject #0073 held on December 2 2006.

get to grips with variation between accreditation bodies in the different countries"[362]. Accreditation bodies would also have to strengthen their surveillance mechanisms and go beyond witness audits of certification bodies, to assess the real status of certified organizations and the effectiveness of the certified EMSs (Thione, 2006). Accreditation bodies could then collect metrics in order to correlate the performance of certified organizations with particular auditors and certification bodies, and identify the lower denominators. As a result, certification bodies would have to "*stop sticking their heads in the sand*"[363], and effectively monitor and improve their auditing processes through the selection of the most competent auditors.

Whether the certification industry will be able to make the fundamental changes necessary to make the conformance assessment of ISO 14001 credible and meaningful is highly questionable[364]. The reason for that is because the certification process is not controlled by the users of the certificates, but instead, by accreditation/certification bodies (and associations like IAF) who do not have a particular interest in dramatically changing the way the system functions: "*the people who created the accredited certification box we currently inhabit have shown over and over again they can not take us out of the present paradigm*"[365]. Up until now, they have only been able to come up with 'patches' that only hide the existing structural problems[366], and as a result, it is probable that the credibility of ISO 14001 will continue in a downward spiral. Most likely, alternatives to ISO 14001 certification will emerge where the real users of the certificates can play a much stronger role on the inner aspects of the conformity

[362] Retrieved November 13 2009, from the Elsmar Cove website (posted: February 23 2006): http://elsmar.com/Forums/showpost.php?p=139779&postcount=51
[363] Retrieved November 13 2009, from the Elsmar Cove website (posted: February 23 2006): http://elsmar.com/Forums/showpost.php?p=139779&postcount=51
[364] *"Personally, I am not sure if we will ever be able to make the fundamental changes to the certification process, that are necessary to make it added value, meaningful to ALL stakeholders and sustainable, but I have little doubt that, if changes are not made, the downward spiral I have been talking about since 1994 will not be reverted*" Retrieved November 13 2009, from the Elsmar Cove website (posted: July 16 2004): http://elsmar.com/Forums/showpost.php?p=82476&postcount=13
[365] Retrieved November 13 2009, from the Elsmar Cove website (posted: 27th May 2008): http://elsmar.com/Forums/showpost.php?p=251024&postcount=26
[366] Retrieved November 13 2009, from the Elsmar Cove website (posted: May 30 2007): http://elsmar.com/Forums/showpost.php?p=197644&postcount=11

assessment. In fact, EMS certification seems to be following the typical evolution of most standards, and will not come to an end with ISO 14001[367].

Traditionally, this process begins with the initiative of one particular country that identifies the need for a specific standard. With EMS certification, it was the UK that first developed the BS 7750 EMS standard. Then, other countries will follow this lead and develop their own standards. The European Union created EMAS and in the US, the former National Sanitation Foundation (now NSF Int.) was in the process of releasing NSF 110 as its own EMS standard. With the publication of several country specific standards, there is usually a concern that these may become trade barriers. As a result, ISO is normally asked to intervene and develop a globally accepted international standard (as they did with ISO 14001). Yet, the standards' evolution does not end with the publication of an international standard. After an ISO standard is released, there are trade groups that will get involved and say "*this is not specific enough for us*"[368] and promote the creation of tailored guidance documents. This process is slowly taking place with ISO 14001, as several regulatory agencies and industry associations are beginning to use the ISO 14001 EMS standard as the foundation of more comprehensive certification programs.

ISO 14001 Plus Programs

A consensual opinion across the environmental auditors interviewed is the value of the ISO 14001 standard. In fact, auditors' enthusiasm about the quality of the standard seems to be proportional to their frustration regarding its certification system[369]. One sign of that decline in the credibility of ISO 14001 certification is the relatively small number of certified facilities in the US (compared to the initial expectations)[370], and the growing

[367] Interview with subject #0974 held on December 20 2006.
[368] Interview with subject #0974 held on December 20 2006.
[369] "*The bottom line is that the ISO MS standards are good tools to help companies change and become world class whether it is environmental or business management,. However, the way the structure is set up, the way the auditors are compensated and the way the audit pool is managed, unless that changes, we are not going to see the value. And we have companies out there and we have auditors that in order to make a buck they have to go back to the same client. There is just not enough clients to register and there are so many lead auditors out there*" Interview with subject #0073 held on December 2 2006.
[370] "*I don't believe, except for a very few small percentage, that 14001 has taken a hold in this country as we thought it would*" Interview with subject #0073 held on December 2 2006.

number of organizations that is currently implementing EMSs following the ISO 14001 requirements without seeking any form of certification[371]. The question that now stands for policymakers and industry leaders is how to promote the adoption of self-regulatory instruments (such as EMSs) and simultaneously provide a trust function service that assures the capacity of organizations? The latest trend suggests that there are other viable models of encouraging the adoption of EMSs besides mandates for third-party certification[372]. Several industry sectors[373] began to realize the weaknesses of the third-party certification process and started demanding increased accountability from certified organizations as well as certification bodies, through an enhanced second-party audit process. In addition, a new generation of certification programs has recently emerged, building upon the ISO 14001 standard by adding an extra layer of requirements on top of the EMS, while offering several benefits to certified organizations.

Certification programs that partially require the adoption of an EMS are commonly known as ISO 14001 Plus, and have been popularized by both regulatory agencies and industry associations. One of the first and most popular government initiatives was EPA's National Environmental Performance Track. Initiated in 2000, it had more than 500 participants that were required to: (1) have an independently assessed EMS; (2) have a record of sustained regulatory compliance; (3) demonstrate objective environmental achievements that go beyond compliance; and (4) provide information to the local community on their environmental activities. EPA's Performance Track was an innovative regulatory strategy that combined aspects of management-based regulation,

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[371] *"There is a lot more people developing EMSs than are certifying. And I don't think it is a bad thing. (…) I have had people come to me and tell me 'I want to put an EMS in place and certify with 14001' and I say 'stop, lets talk first about why you want an EMS, lets get an EMS in place, lets see what the real benefits are to the organization (which will be plenty) and then lets look and see if you have a real reason to certify'. Because I don't really think a company in the US needs to certify to 14001 unless there is a reason*" Interview with subject #0969 held on January 5 2007. "*At the federal government level we are now on our way to about 2500 EMSs*" Interview with subject #0953 held on February 20 2007.

[372] Retrieved November 13 2009, from the Elsmar Cove website (posted: 12th November 2002): http://elsmar.com/Forums/showpost.php?p=41315&postcount=4

[373] *"A few Sectors, realizing the weaknesses of the process, try to boost their controls, such the Automotive Sector bypassing the accreditation process and policing certification bodies' conduct and performance directly thru the IATF (IAOB, etc.). Another example is the Aerospace Sector, trough an enhanced accreditation Industry Controlled Oversight Process (ICOP)"* Retrieved November 13 2009, from the Elsmar Cove website (posted: July 16 2004): http://elsmar.com/Forums/showpost.php?p=82476&postcount=13

with performance requirements and public reporting. Established as a voluntary program, EPA staff was responsibly for supervising all program participants. In return for their commitment, participants benefited from administrative flexibility, public recognition, and participation in several learning networks.

Even though this program was recently discontinued, more than twenty US States have followed Performance Track's footsteps and created their own environmental certification programs. According to Coglianese *et al.* (2008), there are currently at least 12 State programs that, among other things, require their participants to implement an EMS. In addition, program participants are usually required to comply with environmental regulation, set environmental performance goals that go beyond regulation, as well as demonstrate effective improvement in unregulated areas such as energy use, water use, or solid waste generated. In addition, organizations are required to share performance information with State agencies and other stakeholders. In return for meeting these requirements, State agencies will publicly recognize program participants and, in some cases, offer additional benefits such as administrative or regulatory flexibility, and low frequency inspections.

Some of these programs[374] are particularly remarkable in the sense that they establish different tiers of participation with increasingly demanding requirements. For example, the Virginia Environmental Excellence Program (VEEP) has close to 400 participants distributed through three levels of participation. The entrance level requires participants to demonstrate sustained compliance with regulation and then some simple elements of a management system like a policy statement, a review of environmental impacts and some pollution prevention programs[375]. In the intermediate level, participants must implement a more robust EMS, very similar to the requirements of the ISO 14001 standard. And at the top level, participants are actually required to conduct a third-party certification of the EMS and demonstrate a commitment to community and sustainable improvements. What

[374] For example, in the US: the Colorado Environmental Leadership Program, the Partnership for a Sustainable Georgia, the North Carolina Environmental Stewardship Initiative, the Tennessee Pollution Prevention Partnership, and the Clean Texas program. In Europe: EMAS, Eco-lighthouse, Green Network, PREMA, Eco-profit (Heras & Arana, 2010)

[375] Interview with subject #0951 held on February 8 2007.

is particularly remarkable about VEEP is the fact that the incentives offered are also adjusted for each level, with the first tier participants receiving some form of public recognition for their decision to become more environmentally responsible, and the top tier participants benefit from interesting administrative and regulatory incentives. From a regulatory standpoint, this multi-layer strategy is an interesting example of the responsive regulation model proposed by Ayres & Braithwaite (1992), in which different regulatory strategies are used (traditional command-and-control, economic, management-based, and performance-based instruments), and depending on which are employed, distinct surveillance and enforcement strategies (from office audits to site visits) and incentives are used.

Besides the growing popularity of State sponsored environmental certification programs, several industry associations have also played an important role in the development of some notable ISO 14001 Plus programs. For example, the International Council of Chemical Associations (ICCA), in response to the Bhopal incident in 1984, developed the Responsible Care program with the goal of promoting continuous improvement in environment, health and safety throughout the chemical industry. Responsible Care is probably the most popular example of a voluntary program sponsored by an industry association and is currently implemented in 52 countries. In the US, Responsible Care participation is mandatory for all American Chemistry Council (ACC) members, who have to implement and independently certify a Responsible Care Management System (RCMS) and report several performance metrics. Basically, an RCMS is a management system based on a plan-do-check-act management process that goes beyond pollution prevention to include health and safety, product stewardship, security, and transportation safety requirements. In addition, for facilities that are also ISO 14001 certified, the ACC created an RC 14001 standard that adds to the ISO requirements 27 additional clauses pertaining to the areas described above[376]. Basically, RCMS and RC 14001 are two standards for Integrated Management Systems (an EHS and Security standard) specifically designed for the particular characteristics of the chemical industry. In what regards the conformity assessment structure of Responsible Care, the process is very

[376] Interview with subject #0950 held on February 9 2008.

similar to ISO 14001 with the difference that RC certification bodies and auditors are required to have additional training and demonstrate competence in the chemical industry. On top of that, the ACC has a Technical Oversight Board (TOB) composed by multiple stakeholders that evaluates the certification process on a regular basis[377].

Following the success of the Responsible Care program, many other industries now have their own environmental standards modeled after ISO 14001. Automakers, meat and dairy industries, metal-finishing and ports, all have their own ISO 14001 implementation guides[378]. Clearly, even though ISO 14001 is a 'one size fits all' standard, many industries feel ISO 14001 is too broad to meet their specific requirements[379]. One example that has been quite notorious is the National Biosolids Standard (NBP) certification program, which took ISO 14001 as a building block and then added more meaningful requirements in terms of public participation[380] and actual performance improvements in regulatory compliance, quality production and environmental performance. NBP was considered by several auditors[381] as a very ambitious and carefully thought out standard that not only requires the implementation of internal management procedures, but it also lays out very clearly additional requirements for participants. In addition, NBP program managers provide substantial technical assistance to the participating municipalities.

The New Hybrid Auditor

All of these ISO 14001 Plus programs, to a certain degree, address some of the limitations that have been pointed to the ISO 14001 certification program. For example, industry specific programs do not allow the flexibility granted by ISO 14001, as they add

[377] Interview with subject #0950 held on February 9 2008.
[378] Interview with subject #0974 held on December 20 2006.
[379] Interview with subject #0191 held on January 13 2007.
[380] *"You have to have proactive programs that go out into the neighborhoods, into the public, into the service area and get input from them on setting up your goals and objectives and targets. They have some incredibly great programs for public involvement and public participation, getting information out there, they are required to distribute their annual report to the public, send it out to all interested parties, to have it posted on their website the report of the audit itself, everything is public disclosure. So, it is a very aggressive in that area"* Interview with subject #0106 held on December 14 2006.
[381] Interview with subject #0106 held on December 14 2006. Interview with subject #0974 held on December 20 2006.

requirements that are specific and relevant to that particular sector, and that demand objective performance improvements that allow a differentiation between bottom and top performers. Moreover, they seem to follow the trend toward greater systems integration in the sense that they often transcend the environment realm and add requirements pertaining to quality, health and safety, product stewardship, security, social responsibility or sustainability[382]. State sponsored programs, in addition, have typically stronger emphasis on public outreach requirements, and have the uniqueness of providing a different range of administrative incentives and technical assistance depending on the performance evidenced by program participants.

Finally, the last argument of this dissertation goes back to the core of this research, the auditor and the auditing practice. I believe that it is important to discuss the role of the auditing community and how it will have to adapt to the emerging forms of environmental certification. It seems unquestionable that the current approach of control of control will have to evolve towards a more independent, transparent and meaningful assessment system. I have suggested that the current conformity assessment is fundamentally flawed, as its entire structure is based on auditors auditing their clients. In my opinion, it will be relatively difficult to actually modify this principle considering how well established it is, and the consequences that it would take to completely nationalize auditing services in order to confer them the necessary independence. Most likely, the reputation of the inferior certification and accreditation bodies will soon be sufficiently evident for the end users of the certificates to demand changes. That is perceptible in some ISO 14001 Plus programs where only a small number of certification bodies and auditors are accredited after a careful competence assessment. Even the DOJ works only with 'court appointed auditors' that are known in the industry for their competence[383]. In addition, there will be a growing tendency by the purveyors and the end users of the certificates (whether they are governmental agencies, industry associations or the public) to demand a wider participation and stricter surveillance throughout the entire accountability structure, as is the case with Responsible Care.

[382] Interview with subject #0969 held on January 5 2007.
[383] Interview with subject #0954 held on January 18 2007.

Associated with this new generation of certification programs, there will be a need for a new generation of environmental auditors. The new auditor, the hybrid auditor, will have to balance his role as a trust provider and as a value to his clients. In order to do that, it is my belief that the hybrid auditor will have to narrow the scope of his auditing field and broaden the scope of his auditing skills. What that means is that the auditors will have to, first, become an unquestionable authority on a single industry sector, whose undisputable know-how will provide the much needed trust and be a valuable asset for audited organizations. The new auditor will have to be perceived as a highly respected peer analyst, whose independence (of a third-party auditor) and competence (of a second-party auditor) will make it a strong motivator for organizational change[384]. Second, the new hybrid auditor will have to broaden the scope of his audits and be able to integrate environment, quality, security, health and safety, social responsibility, sustainability, as well as other emerging system-based standards to his portfolio. The focus of the hybrid auditor is no longer just to assess conformance to a management standard, but to foster performance improvements and efficiency through sound integrated management systems.

Future Research

Throughout this dissertation I pointed several limitations of ISO 14001 and tried to demonstrate that many of the held beliefs that surround this standard are inaccurate. The most important, that ISO 14001 certified organizations should not be perceived as top environmental performers. That said, I want to emphasize once again that the role of ISO 14001 as an instrument for enhanced environmental self-regulation should not be confused with its role as a market signaling agent: it is one thing to discuss the impact of the implementation of an EMS, and another to discuss the value of an ISO 14001 certificate. In that regard, I am convinced that ISO 14001 is, and should remain, a fundamental tool of environmental management, whose adoption should be widely promoted, particularly among organizations that reflect a structural difficulty to ensure

[384] "*If someone you highly respect from another facility and says 'hey man, you are really missing the boat' that is a much more powerful motivator for performance*" Interview with subject #0953 held on February 20 2007.

regulatory compliance. Yet, with the growing decline in the credibility of ISO 14001 certification, it is likely that the adoption of the ISO 14001 standard will tend to fade. As a result, it is critical to discuss how the adoption of meaningful EMSs can be encouraged. It is my belief that ISO 14001 certification will be replaced by other certification programs. Likely, industry associations will develop programs that promote greater systems integration, and rely on more prescriptive requirements and stricter surveillance. In addition, governmental agencies will create their own certificates that will serve both to reward environmental leaders and to persuade laggards toward increased responsibility. With the growing popularity of ISO 14001 Plus programs, there seems to be a tendency to look at EMSs as just one element of a broader range of instruments that put more substance around the management system: for example, performance requirements, pollution prevention, product design, risk management, life-cycle assessments, or public reporting.

The development of ISO 14001 Plus programs in recent years opened dozens of new perspectives for future research. It would be extremely interesting to explore how these new programs are combining EMS implementation with other requirements to promote corporate responsibility. In that realm, there are several lines of inquiry that are worth investigating. What are the goals of these programs and how are they transplanted in terms of program requirements? Who participates and what is their motivation to do so? What type of information is collected about the outcomes of participation? Is that information credible and how is oversight established? What types of incentives or technical support is offered to participants? And how does participation influence the self-regulatory capacity of organizations and impact overall environmental protection? In what regards ISO 14001 in particular, I think that there are endless opportunities exploring the thousands of organizations that have implemented an ISO 14001 EMS without seeking certification. It is very important to explore the drivers for those organizations in order to investigate the incentives that are needed to encourage more organizations to adopt internal mechanisms of control. In addition, it would be very interesting to study the accountability structures that were set up by those organizations, and assess how they promote a stronger commitment and transparency.

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Appendices

Appendix A

Invitation Letter A

Dear Mr. Smith

My name is Joao Mil-Homens and I am doctoral student at Virginia Tech. I found your contact information in the RAB website and I would like to invite you to be part of the research project that I am conducting. The goal of my dissertation is to explore some of the accomplishments and limitations of ISO 14001, through the perspective of environmental auditors and consultants.

As you are probably aware, although there is plenty of academic interest in ISO 14001, there is very little empirical knowledge on its outcomes. Moreover, no one has ever thought of asking the 'real-life experts' on ISO 14001 - environmental auditors and consultants - their perceptions on the adoption of the standard.

My research aims to address this issue and give voice to environmental auditors and consultants in the US. I am particularly interested in the perspective of recently accredited auditors. I saw that you were accredited as a Lead Environmental Auditor in 2004 and therefore your participation in this study is very important.

I would like to invite you to take part in a short interview consisting of 15 questions that should take approximately 45 minutes. Your participation will be strictly confidential. I will use pseudonyms to protect all individuals and organizations referred in this study.

If you would like further information, please do not hesitate to contact me at joao@vt.edu or at (540) 808 8740. You can find more information about my study on my personal website at www.mil-homens.com including the interview protocol and questionnaire, and the contacts of my research advisors. Participants will receive an electronic copy of the final report once it is completed. I look forward to your response.

Best regards,
Joao

Joao Mil-Homens
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Appendix B

Invitation Letter B

Dear Mr. Smith

My name is Joao Mil-Homens and I am doctoral student at Virginia Tech. I saw on the Elsmar Cove that you are an accreddited LEA and a frequent participant on the ISO 14001 forum. I would like to invite you to be part of the research project that I am conducting. The goal of my dissertation is to explore some of the accomplishments and limitations of ISO 14001, through the perspective of environmental auditors and consultants.

As you are probably aware, although there is plenty of academic interest in ISO 14001, there is very little empirical knowledge on its outcomes. Moreover, no one has ever thought of asking the 'real-life experts' on ISO 14001 - environmental auditors and consultants - their perceptions on the adoption of the standard.

My research aims to address this issue and give voice to the most experienced environmental auditors and consultants in the US. Based on your experience as an accredited auditor and your considerable involvement in the Elsmar Cove Forums your participation in this study is very important.

I would like to invite you to take part in a short interview consisting of 15 questions that should take approximately 45 minutes. Your participation will be strictly confidential. I will use pseudonyms to protect all individuals and organizations referred in this study.

If you would like further information, please do not hesitate to contact me at joao@vt.edu or at (540) 808 8740. You can find more information about my study on my personal website at www.mil-homens.com including the interview protocol and questionnaire, and the contacts of my research advisors. Participants will receive an electronic copy of the final report once it is completed. I look forward to your response.

Best regards,
Joao

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Appendix C

Thank you message

Dear Mr. Smith,

As promised, I am attaching the transcript of our conversation. Please feel free to take a look at it and comment or edit anything that you would like.

Again, I sincerely appreciate your interest in my work and I thank you very much for the excellent interview.

Best regards,
Joao

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Appendix D

Research website

Appendix E

Interview Guide

1. How did you happen to become an ISO14001 auditor?

2. In your opinion, what is/are the goals of ISO14001?

3. In order to accomplish those goals, what are the most important requirements of ISO 14001?

4. What motivates a company to become ISO 14001certified?

5. In your opinion, what are some of the positive effects of adopting and certifying an ISO 14001 EMS?

6. And what would be some of the shortcomings of certification?

7. What makes some companies have good results and others not as such?

8. We just talked about some claims [*mention some*] that have been put forward about ISO14001, based on what you just told me and on your experience, are those claims justified?

9. What is the difference between a successful and unsuccessful audit?

10. What kind of barriers get in the way of a well-done audit?

11. What mechanisms are in place to ensure that auditors and registrars maintain high standards of integrity?

12. We all know that in any business there are good and bad people. What are some of the bad people doing that puts in risk the reputation of the program?

13. How effective is the industry dealing with these issues?

14. What is your overall impression about ISO14001?

15. In your opinion, what steps could be taken to improve the system's overall effectiveness?

Appendix F

- Consent Form -

The Value of an ISO 14001 Certificate: an Auditors' Perspective

You are invited to be part of this research study on Environmental Management Systems' certification. You were chosen as a possible participant because this research aims to give voice to experienced environmental auditors and consultants regarding their perceptions about ISO 14001 certification. I encourage you to read this document and ask any questions you may have before agreeing to participate in this study.
This research is being conducted by Joao Mil-Homens in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Environmental Design and Planning at the Virginia Polytechnic Institute and State University.

Background Information
The purpose of this research is to promote a better understanding of the value of an ISO 14001 certificate. As several studies have attempted to evaluate the outcomes of ISO 14001, the uniqueness of this research lays on the insiders' perspective of US environmental auditors. Questions focus on auditors' interpretations of the goals and requirements of ISO 14001, their perceptions on the major accomplishments and limitations of certification, and their opinion regarding the threats to the integrity of the certification process.

Procedures
Participants will be asked to engage in one interview. Interviews will be scheduled at a time convenient to the participant and should last approximately forty-five minutes. Interviews will take place over the phone or in a location suitable to the participant. Upon participant's permission, interviews will be audio recorded. The principal investigator will be responsible for the transcription of the interview, after which the audio recording will be destroyed and the transcript shared with the participant.

Risks and Benefits for Participants
This research will involve no more than minimal risk to the participants. This study focuses on participants' perceptions regarding industry's adoption of environmental management standards and in any way does it look for personal information regarding participants' actions or behaviors. Nevertheless, confidentiality is assured to all participants. Pseudonyms will be assigned to protect their identity, as well as organizations they may be associated with.
This research will benefit the field of environmental management by enhancing our understanding of certification instruments. This research can be particularly beneficial for its participants as it will provide a venue for them to share their 'real life experience' regarding industry's adoption of environmental certificates across the environmental policy community.
Subjects will not be compensated for their participation. If they so desire, they will be offered a copy of the final report.

Confidentiality
Confidentiality is assured to all participants. Only the principal investigator will have access to the audio recordings, that will be kept in a locked cabinet in the investigator's house. As soon as interviews are transcribed, audio recordings will be immediately destroyed. The transcripts (as well as any publications associated with this study) will omit any references that may allow the identification of the participants. Pseudonyms will mask the identity of individuals and organizations where necessary. A code-sheet matching real names with pseudonyms used will be kept in a locked cabinet in the investigator's home. It is possible that the Institutional Review Board (IRB) may view this study's collected data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

Voluntary Nature of the Study
Subjects that agree to participate in this study are free to withdraw at any time without any repercussions. Participants also have the right to refuse to answer any questions that are asked during interviews.

Statement of Consent
I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent to participate in this study.

Signature _____ Signature of Investigator _____

Date _____ Date _____

Should you have any questions about this research or its conduct, and research subjects' rights, you may contact:

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