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IR/PS CSR Case #07-10

ISO 14001: An analysis

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Abstract:

The 20th century saw international trade expand on a massive scale and many firms found themselves within an ever increasing matrix of global suppliers. Within corporate headquarters it soon became apparent that very little was actually known about the environmental management practices within their partnering firms who were so integral in the creation of the final product. In 1996, the International Standards Organization launched a product called ISO 14001 which outlined a standardized environmental management system that could be applied in any industry and in any location. Further, the standard called for the utilization of third party certification as a mechanism for verifying compliance to the standard at the firm level. Despite the rapidly growing popularity of ISO 14001 there have been many criticisms regarding the ability of ISO 14001 to truly illustrate the day to day practices within a firm and the authenticity of its commitment to decreasing its environmental footprint. This paper outlines in detail the history of the ISO standard and the logic of accountability as designed by the ISO 14001, the need and the major players which facilitated its creation and ultimately the criticism which threatens its legitimacy.

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I. ISO 14001 series: An Introduction

The 20th century saw the opening up of borders and the expansion of international trade on a massive scale. International firms found themselves within an ever increasing matrix of global suppliers and trading relationships which could change at a rapid pace. This complex and global network was termed the supply chain but soon it became apparent within corporate headquarters that very little knowledge was actually known about the environmental management and practices within those outside firms which were so integral in the creation of the final product. In 1987, the International Standards Organization (ISO¹), a Geneva based nongovernmental organization, whose specialty was in the creation of production standards, stepped forward with a product which systemically dismantled the idea of a ‘management system’ and created a management process standard which could be applied in any context regardless of location or the nature of the firm.

The ISO, having been the primary standard setter in the context of technology related standards since 1946, was internationally recognized not only for the quality of its products but also because the ISO is international in nature. ISO membership is comprised of not for profit or private sector national organizations/bodies. These organizations which make up the membership of the ISO include both public and private stakeholders and are therefore seen to be diverse groups which meet together to devise benchmarks and conformity assessment schemas. The process management system which was devised in 1986, known as the ISO 9000 series, was the product of all of its international members who needed a non-context specific set of best management practices. Firms needed to know that not only were their trading partners providing them with a

¹ While ISO is indeed the acronym for the International Standards Organization, they prefer the Greek definition of the word *iso* – “equal” as the definition of their philosophy. (Cascio).

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quality product but that a certain level of documented best practices and policies had gone into the creation of that product.

During the 1990's a number of voluntary 'environmental management systems' (EMS) guidelines were launched as the threat of government regulations cracking down on inefficient and polluting firms increased. Though these threats were primarily made by the governments of OECD countries, many firms also came under pressure by their consumers to verify that the good practices employed by the parent company were also followed throughout the supply chain, regardless of which countries these firms were located. However, lack of credible information about the environmentally related policies and practices of firms both at home and abroad frustrated parent firms' abilities to comply with their consumers' demands. It was during this time that the ISO's membership base, which is comprised of both government representatives and private sector representatives, began calling for the creation of an environmental management standard. This standard had to be malleable enough to be applied in any setting and encourage innovation while being severe enough to insure firm compliance with their respective government's regulations.

Commonly referred to as ISO 14001, the 14000 series used the best practices of the ISO's 9000 series and added environmental processes and policies to create a management system rooted in environmental best practices. While other voluntary, environmental guidance based standards were created and competed with ISO 14001, the 50 year history and established credibility of the ISO, in combination with the success of the 9000 series, allowed the ISO guidelines to take off quickly. Firms already familiar with the ISO 9000 series could easily understand the philosophy

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and implementation 'road map' of the 14000 series (though implementation requires a much higher level of environmental sophistication and accomplishment). Furthermore by building on the earlier 9000 series the new environmental management standard could retain the powerful history of ISO branding.

The ISO's designation as an international community of actors and stakeholders insures that every ISO standard has had a multitude of voices and inputs from around the world consult on its creation before it emerges as a final product. This is a key factor which weighs in on its global popularity. The actual details of how and why the ISO 14000 series emerged in 1996 are given below.

II. The need for a standardized and decentralized EMS

As the environmental impact of production processes becomes increasingly revealed in the media, global awareness and concern on a community level has simultaneously increased. This awareness has prompted firms to decrease their polluting habits or pay the price in their bottom line. Through a variety of media exposés over the past 15 years many firms have seen the reduction of profits and dips in stock prices when news of pollution and malpractices are made public. Recognizing their own vulnerability, or perhaps guilt, firms are increasingly taking their environmental impact seriously, or at minimum emphasizing a commitment to responsible environmental behavior in corporate rhetoric. However, independently crafting an environmental management system or set of environmental policies can be a difficult and complex process even for the most savvy of managers. The implementation of the 14000 series requires extensive documentation of carefully crafted firm policies and educational procedures for all employees in addition to the major investments that often have to be made to achieve compliance with state and

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national regulations. Thus the ISO 14000 series is incredibly attractive to firm managers because it is in fact a structured approach to environmental management processes. The ISO 14000 builds on the 'best practices' 9000 series to help firms understand governmental and local regulations while emphasizing policies concerning environmental targets and also the training of staff within the work place, in a way which is independent of firm location. The ISO was designed with universal characteristics which, if implemented correctly, insure that firms all over the world are operating with the same environmental outlook while consistently increasing their corporate environmental targets. This is very attractive to firms with extensive, complicated supply chains or those who change vendors and trading partners often, who do not have the luxury of being able to visit each production floor. The major attraction, and perhaps it could be argued, the underlying theory, of the ISO 14001 is the reduction of asymmetrical information about individual firm practices relating to environment impact reduction.

The creation of the 14000 series was widely supported by the governments of OECD countries. As pollution levels increase and environmental degradation becomes increasingly more of an issue governments are increasingly under pressure from their constituents to institute lawful regulations which will force firms to cut back. Not only is the design of such regulations incredibly complex and heatedly debated the implementation and compliance mechanisms are incredibly expensive and a drain on public funding². Therefore many governments, including the United States, vigorously supported the creation of a voluntary standard which had real bite to it. The more popular the standard became the more firms would voluntarily cut back on their polluting habits

² Michael Porter and Mark Kramer, "Strategy and Society: The Link between Competitive advantage and Corporate Social Responsibility," Harvard Business Review, December 2006

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and inefficient waste of resources which would reduce the need for government intervention. Though governments do not have committees which are members of the ISO, individual public sector officials are members their nation's ISO membership body and provide feedback from the government's point of view. The membership structure of the ISO will be detailed below.

Given that ISO 14001 voluntary conformity and certification actually does signal adherence to a basic set of standards, corollary firm compliance to the standardized environmental management system allows multinationals a guarantee of management and environmental practices within their supply chain without having to investigate or determine a benchmark themselves. Effectually, a trading partner's adherence to ISO 14000 allows a firm a degree insurance against market pressure, stakeholder pressure and public relations problems. This has become a major feature of attraction of the ISO 14001 and arguably, the reduction in risk from stakeholders and consumers can be considered part of the 'need' for the standard. However the appeal of a standard that allows a firm seeking environmentally conscious trading partners to have proof of daily management practices without individually verifying themselves is simultaneously the source of its primary criticism. Though appealing in theory, the ability of a certification scheme to convey information about the daily practices of a firm involves a lot of trust. Trust, which perhaps is not be warranted considering many firms have the incentive to convey an appearance of conformity, rather than authentic conformity, to the standard. In essence, the standard, while it attempts to increase accountability and documented policy changes, is still voluntary and non-binding in a judicial sense, although trading partners are relying on its authenticity.

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Just as there are firms who will require the use of the ISO 14001 for its benefits without truly caring about the actual results, there are also firms with the growing sense that the act of requiring trading partners to adhere to the ISO 14001 standard (which in its most basic application requires strict adherence to each firm's respective government laws and regulations) actually transfers best practices to the exporting countries. Therefore an ISO 14001 stipulation in a trading contract has the effect of increasing the rate of a partnering firm's adherence to their respective government standards (in those countries where government regulations do exist). This was dubbed the 'California Effect' by David Vogel in 1995 when the ISO 14001 series was initially being drafted³.

ISO 14001 has been increasingly adopted by firms in developing countries despite the fact that design and implementation can be exceptionally costly for those firms. Thus, these firms require a standardized environmental management system as well that is both known for quality and also globally recognized. There would be less credibility in instituting their own version or using a little known standardized EMS from their own country. There would be low incentives for parent firms seeking trading partners to take the time to investigate a foreign system and have faith in its authenticity when they can partner with firms who have implemented the same system they have in their own processes. Therefore, for firms in developing countries the firms the payoff is the competitive advantage they receive over similar firms when competing for, or maintaining, international trading contracts. Specifically, for multinationals looking to outsource an item in the supply chain, 14001 certification signals an organized, documented approach to corporate

³ Prakash, Aseem and Matthew Potoski. "Racing to the Bottom? Trade, Environment, Governance, and ISO 14001." *American Journal of Political Science*. Vol.50. No. 2. April 2006. pg. 351.

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environmental responsiveness and is thus an attractive quality in firms they contract with. Certification, which will be discussed in detail below, provides an added layer of accountability, as certification is performed by a third party consultant, also detailed in a later section, who is knowledgeable in the ISO behavioral benchmarks, methods for documentation, implementation, and also individual country regulations. To understand this more accurately, the individual components and the nature of the standard itself must be analyzed.

III. Components to the ISO EMS

The ISO 14001 series guides organizations in the creation environmental policy by helping managers define environmental objectives and examine the environmental impact of products, inputs, and services. It encourages them to set environmental objectives; obliges them to meet legal and regulatory requirements; expects training for employees to be provided; and offers suggestions for oversight and auditing procedures. At this juncture, a differentiation must be made between the ISO 14001 environmental management system and a corporate social responsibility report. The ISO 14001 series does not compete with any of the recent corporate social responsibility guidance based reporting movements though these missions may overlap in some cases. The 14001 series is strictly concerned with environmental policies and impact at the firm level and does not make normative judgments about a firm's relationship with surrounding communities or their employees⁴.

As previously stated, the ISO 14001 builds on the ISO 9000, a standard for quality management principles. The 9000 series has been very popular as compliance to the standard indicates a commitment to consistent business practices including transparency of firm policies.

⁴ The ISO has begun the process of creating a formal Corporate Social Responsibility reporting initiative and standard creation completely different from the ISO 14000. It is true their mandates may overlap.

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The 9000 series arose from concerns that although an end product may be considered of 'high quality,' perhaps the practices within the firm that produced end product were not. In effect, the 9000 series came about for many of the same reasons that the ISO 14000 series did. Consumers and trading partners dealing with intricate supply chains wanted assurance that business practices were fair, action was taken against corruption, and employees were not only safe but also had access to transparent firm documents and policies. The systemic application of best practices in firm policies and behaviors is also referred to as "process management." The most recent iteration of the 9000 series (released in 2000) stresses the consistency of process management not just on the production floor but also seeks to integrate upper executives and stakeholders⁵. These criteria are folded into the 14000 series as well. Logically, the ISO 9000 series is subject to many of the same issues of credibility and criticisms that the 14000 series is. However, the sheer widespread application and global popularity of the 9000 series has lent the 14000 series a level of credibility that other environmental management standards do not have. Therefore the 14000 series cannot claim to emerge as the most widely recognized EMS because it was necessarily 'the best' but rather because it was able to build on the ISO's name and history while other voluntary environmental management systems could not.

The ISO 14001 uses the process management principles of the 9000 series as a foundation with the addition of environmental policy and environmental safety elements. The International Standards Organization gives the following breakdown of the 9000 series and then lists those characteristics which were developed to create the 14001 series.

The ISO 9000 principles for quality management are grouped as follows:

⁵ <http://www.iso.ch/iso/en/iso9000-14000/understand/qmp.html#TheNextStep>. Accessed 5/26/2007.

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- “Customer Focus
- Leadership
- Involvement of People
- Process Approach
- Systems Approach to management
- Continual improvement
- Factual approach to decision making
- Mutually beneficial supplier relationships

The ISO 14001 adds the additional elements:

- Guidelines for an environmental management system
- The current status of compliance with legal requirements
- Guidelines for environmental auditing
- Environmental labels and declarations
- Environmental management – performance evaluation, principles and framework, goal and scope definition and inventory analysis, lifecycle impact assessment, environmental aspects into product design and development
- Environmental communications
- Guidelines for measuring, reporting, and verifying entity project level green house gas emissions
- The level of [internal] verification to meet market requirements or stakeholder expectations
- Employee training and awareness programs⁶

One of the key attractions to these management systems is their flexibility while still being universally applicable. While each firm must meet each requirement, their design and implementation of each requirement will be different, making each interpretation of the standard unique. Certification assures the sophistication of each element or insures that the firm is actively working towards compliance with a particular criteria but may require additional time or resources to do so. However, certification maintains that a firm is in strict compliance with their national and state laws and regulations. Therefore while every nation will have different laws and regulations with varying degrees of severity, complexity and supervision, ISO 14000 certification indicates that lawful conformity has indeed been met. Further, the ISO 14000 requires that there

⁶ “The ISO 14001 family of standards, guides and technical reports.” ISO. www.iso.org

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be some form of internal accountability structure measuring compliance to the commitments it has made and goals that it has set for itself. While there is no punishment that the ISO can levy for a firm's failure to meet environmental policy targets the ISO has stipulated that a firm must have an individual(s) who is accountable for understanding the targets and maintaining a some type of firm 'road map' for attainment of those goals.

IV. Implementation, Evaluation and Certification

A. Incentives and disincentives in choosing to certify ISO 14001:

An ISO 14001 EMS assumes that an organization already knows the extent of its environmental impacts and is therefore willing to go beyond basic lawful compliance by designing and implementing a systemic environmental management system which ensures a certain level of quality processes. The catch is - organizations which do not 100% comply with ISO 14001 standards *can still be certified* ISO 14001. Why is this? Technically, an organization simply has to prove that they are in compliance with their national laws and that an environmental management system has been implemented and documented which demonstrates that the organization ultimately seeks to achieve 14001 compliance⁷.

Many organizations find that an EMS is important to them either because of institutional forces (state regulations or investing to pre-empt lawful regulations) or market based pressures. However costs involved in auditing and consultations are nontrivial and as a result many small to medium firms are limited to voluntary compliance. Without certification these companies may not be able to compete for 14001 specific contracts along side those organizations that are certified. However,

⁷ Environmental, Health & Safety Management Systems Information Center. <http://ems-hsms.com/FAQs.htm#FAQ3>. Accessed May 27, 2007.

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they may find it very useful as a marketing tool or to solicit business from intrastate firms who may find ISO 14001 adherence attractive but not a requirement.

B. Auditing and Certification

In the process of auditing and certifying it is important to note that the ISO has created the management system, published the standard and actively maintains guidelines for the training of auditors. However, the ISO does not take on the responsibility of certifying or retaining records of audits and continuing/lapsing certifications. These roles are assumed globally by consulting firms who specialize in training individuals to become professionals competent in 14001 auditing, certifying management systems and maintaining records and re-evaluations of audits and certification. Thus ISO certification is completely decentralized. The ISO creates and maintains the competitiveness, applicability and accuracy of the standard through its international membership body which meets in Geneva periodically. Once the standard is in place it is dispersed and promulgated by its membership and auditing bodies around the world. A firm who wishes to begin the process of instituting the ISO 14001 may purchase the ISO 14001 manual directly from the ISO website and begin the process of EMS design and implementation. This design may occur with or without the assistance of a professional consultant who is trained and knowledgeable in the process and complexities of the 14000 series. As a result, firms may publish that they *adhere* to ISO 14001 but they may not claim to be ISO 14001 *certified* without obtaining 3rd party certification (these 3rd party consultants are referred to as Certification Bodies) which is a lengthy and costly process. Firms who simply state that they *adhere* to the ISO 14001 principles have absolutely no way of establishing their credibility and compliance without certification. Firms may publish *adherence* to 14001 for several reasons; they may have taken steps to reduce their environmental impact and desire the publicity, they may not be able to afford the cost of

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certification, or they may not be in a position or industry in which they feel they will directly benefit from the expense of certification. On the other hand, those firms who do seek to obtain *certification* commit themselves to a lengthy process of detailed documentation of firm policies, processes, behaviors and a future goals. These characteristics must be met in addition to proving that all state and national laws and regulations have been met.

C. Costs: Weighing the cost with the reward

While studies show that the cost of designing, implementing, certifying, and maintaining an EMS is high, it has not been found that the cost is high enough to be a deterrent. The Global Environment and Technology Fund has found that design, implementation and certification costs between \$24,000 and \$128,000.⁸ Prakash and Potoski have reported that “William Glasser of the EPA estimates that “large facilities [firms] spend on average about US \$1,000,000.00 in sunk transaction costs to pursue certification.”⁹” For many small to medium enterprises (SMEs) it is clear that the time, effort, man hours and cost of certification may be too high and therefore supersedes market or institutional pressure or even the competitive advantage they might receive from the certification. Therefore it is clear that the cost is a deterrent for SMEs but perhaps not so for larger firms.

While many SMEs find certification to be beyond their financial reach, larger firms may see this as a long term investment and an opportunity to bid for contracts from the largest international conglomerates that have begun to require 14001 in trading contracts throughout their supply chain.

⁸ Jiang, Ruihua Joy and Pratima Bansal. “Seeing the Need for ISO 14001.” *Journal of Management Studies*. Issue 40. No.4. 2003.

⁹ Prakash, Aseem and Matthew Potoski. “Racing to the Bottom? Trade, Environment, Governance, and ISO 14001.” *American Journal of Political Science*. Vol.50. No. 2. April 2006. pg. 352.

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Often larger firms are, or perceive themselves to be, more visible or have a closer relationship to their clients and customers and therefore become more likely to design and implement an EMS. This elevates the importance of having an EMS being that these firms are more sensitive to the whims of the market. End producers generally fall into this category as they have a closer relationship to their core consumer. In both cases, the reason for the adoption of ISO 14001 and subsequent certification is largely based on a firm's perceived increase in competitive advantage, whether that advantage comes from the ability to bid for international contracts with a 14001 stipulation or from an advantage with their core consumers who feel strongly about a product with an environmentally conscious supply chain. The latter is closely related with a firm's desire to protect themselves against negative market pressure and unwanted media publicity regarding the practices within their own production processes or those of their suppliers.

While the incentives to adopt and certify may be strong, much data exists about the nature of standardization and the tendency for standards to induce basic compliance rather than facilitate excellence. Some firms, who pride themselves on their own achievements and standards of excellence, have stepped forward with complaints about lack of superiority within the requirements of the ISO 14001, specifically that ISO 14001 certification does not communicate the higher levels of environmental policy integration and achievement but rather signals only the most basic compliance. This attitude indicates that while ISO 14001 may be used as a signal within the market indicating that environmental standards have indeed been met, from the firm's perspective certification will not signal achievement in excess of the basic 14001 standards. It is at this juncture that it can be hypothesized that EMS certification may be subject to adverse selection – the firms who are most likely to certify are actually the worst environmentally

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performing firms. Effectually, firms with poor performance are actually those who have the most to gain from communicating some form of environmental policy progress. ISO 14001 certification is the most widely recognized way of doing so. Despite the fact that ISO certified companies have higher rates of compliance with national and regional regulations than those who are not ISO 14001 compliant there is no information to suggest that ISO 14001 certification actually indicates anything other than the most basic forms of compliance and environmental planning¹⁰. Further, those firms who consider themselves to be leaders in the field of environmental management and who are engaged in environmental impact reduction become less likely to certify, thereby reducing the overall signal of superior performance that the ISO 14001 wishes to communicate (King, 2005). Those firms who have entrenched reputations for advanced environmental initiatives and best practices have not, on occasion, found certification desirable because there is no mechanism within the 14001 certification process which signals efforts above and beyond certification minimums. Therefore there is more to be gained by the lowest environmental performers through certification than there is to be gained by those firms who have cultivated reputations for advanced environmental management objectives within their management and performance. Higher performing firms are likely to drop out of the pool of firms who have been certified ISO 14001. It could be argued however, that these are not the target audience of the ISO's management series to begin with.

IV. The Drafting of a Standard: How the ISO 14001 was created

¹⁰ Potoski, Matthew and Aseem Prakash. "Green Clubs and Voluntary Compliance: ISO 14001 and Firms' Regulatory Compliance." *American Journal of Political Science*. Vol. 49. No. 2. 2005.

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The ISO drafts many kinds of standards which will go on to extensively effect business methods and production globally. Thus a standard is a process of iterations each of which are changed based on the input of an international body of stakeholders.

The ISO is an international organization comprised of countries specific member bodies. In the United States the representing member is the ANSI, the American National Standards Institute, who is primarily concerned with the promulgation and integrity of standards within the United States. ANSI is a private entity, having both private and public sector actors from organizations such as EPA, OSHA and the DOE amongst its members.

In 1991, just before the United Nations Conference on Environment and Development, the ISO launched the Strategic Advisory Group on the Environment (SAGE). By the time the Conference was underway in Rio de Janeiro in 1992, the decision to launch an environmental management system had been made and was subsequently made public. The SAGE was broken into subcommittees, each headed up by an individual country membership body, who were to address major themes in the creation of an environmental management best practices standard¹¹. At this point in the process many countries began offering up their own versions of an EMS as potential foundations for the ISO 14001. Despite the SAGE's designation as an advisory committee, premature standards were drawn up which were to be handed over to a technical advisory committee (the TAG), which had the ultimate decision in the creation of the standard. The US strongly objected to the ISO's decision to allow individual countries to have such influence over the foundation of the standard, and incidentally there was no US standard offered up at that time,

¹¹ See Appendix 1.

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therefore no US voice was to be found in those original drafts which became the original draft of the ISO 14001¹². Politically, the United States found itself being portrayed as a country who did not support the promulgation of an ISO EMS despite the fact that it had backed the standard strongly. From the perspective of the US government and American firms, the 14000 series was seen to be very much desirable and to ultimately facilitate international trade.

The United States sub-committee was assigned the task of considering “Environmental Performance Evaluation.” ANSI, the previously mentioned US member organization, formed a task force to address this issue and a number of Technical Advisory Groups (TAGs) whose job it was to circulate proposals amongst the other country sub-committees, and in addition, visit the other country sub committee groups to make the United States position known and negotiate its position at each meeting. This group was comprised of nearly 500 members and included government representatives. ISO working drafts become committee drafts through consensus and for a committee draft to be considered an “international standard, two thirds of the participating members of the subcommittee must approve it and not more than 25% of the entire ISO voting membership can vote against it.”¹³ This process was completed in 1996 and then standard became available globally.

V. ANAB: American National Accreditation Board

On January 1st 2005 accreditation branch of the American National Standards Institute (ANSI) and the American Society for Quality (ASQ) merged to form the American National Accreditation

¹² Cascio, J. “ISO 14000 Guide: The New International Environmental Management Standards” McGraw Hill. 1996. pg. 11

¹³ Cascio, J. “ISO 14001 Guide: The New International Environmental Management Standards” McGraw Hill. 1996. pg. 22.

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Board (ANAB). Prior to this time accreditation of certification bodies was operated by ANSI, the official membership body of the ISO. ANAB is now the accreditation body for several management systems including the ISO 14001 series¹⁴. This merger was a direct result of the ISO 17001 standard which is specifically interested in the impartiality of accreditation bodies and those bodies of conformity assessment. As a result, the ANSI, which in addition to being the United States ISO membership body also provides some certification itself, was required to give up its accreditation administration. ANAB became a legal body on its own, not overseen by the ANSI¹⁵. Prior to 2005, accreditation of Certification Bodies was actually a partnership program between ANSI and the American Society for Quality¹⁶. Furthermore, the ISO dictates that bodies of accreditation be strictly separate from certification bodies while ANSI does provide some training and certification in specific areas itself. Thus ANAB is an institution which makes up a governing body for the ISO 14001 and 9000 *certification bodies* among many other management systems. Their dual purpose is in the coordination and promulgation of standards while functionally their role is in the accreditation certification bodies and bodies who educate auditors, (certification bodies are those individuals who are in the field evaluating the compliance of management systems). Therefore, ANAB provides information about the credibility of certification bodies by accrediting them and holding information on them, implicitly making the claim that those certification bodies who achieve accreditation are well established and reliable firms who have become accredited in ANAB through merit. This is important in the accountability and verification of the validity of a firm's ISO 14001 certification. An accredited auditing/certification body gains credibility through establishing rigorous enforcement of ISO 14001 guidelines.

¹⁴ ANSI remains its own independent organization and continues to be the governing body for thousands of standards and guidelines. This body also provides some personnel training for certification bodies.

¹⁵ American National Accreditation Board. <http://www.anab.org/>.

¹⁶ American National Accreditation Board. <http://www.anab.org/>.

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While there has been much skepticism and criticism regarding the validity and credibility of these claims, these are the specified lines of accountability within the system of ISO 14000 certification. The lack of ability to verify rigorous enforcement of ISO stipulations and criteria or test the characteristics which warrant a certification body's 'merit' and elevation to 'accredited' status is a serious and obvious loophole in the system. This illustrates the imperfection of using third party certification, not just in the application of ISO 14000, but in general. While many systems prefer third party certification for its ability to be nonbiased in its granting of certification status, the accreditation body, which is supposedly monitoring the monitors has very little mechanism for doing so.

ANAB also has the ability to play a large role in the lifecycle of a standard from its creation all the way through the process to the accreditation of a certification body or standard making organization. ANAB plays this role by representing key stakeholders and their concerns as the standard making body (i.e. the ISO) is in the process of designing the standard. They effectually provide accountability for certification bodies (the consultants who are in the field certifying and auditing the firms seeking ISO 14001 status) while also acting on the behalf of key stakeholders who will be effected ones a benchmark or standard is created. Therefore ANAB has the ability to voice concerns about a standard to the ANSI when they represent the US in Geneva.

A certification body who audits firms claiming to have implemented an ISO 14001 series management system will seek accreditation for many of the same reasons that firms seek certification. Accreditation for a certification body adds a layer of reliability and accountability as

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they must meet the conformity assessment standards of the American National Accreditation Board (ANAB). In essence this is a certification body's way of declaring their credibility and the high standards of their management system auditors. For the firm looking to become certified ISO 14001, hiring an accredited certification body is desirable because it adds a layer of credibility to their own environmental management system for having passed rigorous inspection. In theory, this added layer of credibility increases a position of a firm while bidding for contracts. Simultaneously this signifies that not all certification bodies consider themselves equal. Certification bodies are distinguishing themselves based on their rigorous application of the standard they certify. In the United States, a firm which is certified ISO 14001 by one of the top 10 certifications bodies (shown in the table below) signals to potential partnering firms that their EMS has passed the intensive scrutiny from one of the most widely recognized names in ISO certification.

Top 10 ISO 14001 Certification Bodies:

- BSI Global
- QMI: Management Systems Registration
- LRQA: Lloyd's Register Quality Assurance
- Perry Johnson Registrar's
- Underwriter's Laboratories Inc.
- NSF – International Strategic Registrations
- DNV: Certification Services
- IASC
- SGS Group
- Intertek

VI. Audits

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Certification is the first step for companies wishing to publicize and authenticate their ISO EMS. After certification status is achieved periodic audits are performed to indicate maintained compliance and that incremental and targeted progress has been achieved.

It is important to note that auditing of an ISO environmental management system is based primarily on continued conformance with country laws and specifications in conjunction with the goals and assumptions that both the ISO and firm has set out for itself. There are no specifications laid out by ISO, so 'progress' will be different in each application of the standard and within each firm. Thus the auditor is looking at conformance not to an overall industry standard but rather at the company's continued compliance with all country laws and individual stipulations within the firm's self imposed policies. They are making sure that there has been no backsliding within the past year and also that those targets the firm has established for itself have been achieved or are credibly being worked towards.

VII. Criticism

A. Transparency

Though the ISO provides a framework and a system for reporting there has been widespread criticism of the transparency, reproducibility and consistency of the application of the standard. Tonis Poder has stressed that 'companies have demonstrated that limited transparency and reproducibility of the assessment process serves as a common shortcoming.'¹⁷ Firms who implement ISO 14001 are required to craft a public statement of their overall environmental impact. Despite the fact that implementing ISO 14001 is a commitment to incremental

¹⁷ Poder, Tonis. "Evaluation of Environmental Aspects Significance in ISO 14001" Environmental Management. March 2006. Pg. 732-743.

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improvement, firms are likely to be reluctant to disclose accurate levels of pollution habits or environmental risks within their facilities. As a result, this environmental impact report may be extremely limited in transparency. Furthermore, ISO 14001 is a framework and open to interpretation. Subsequently firms have been accused of inconsistently applying their EMS to all of their business relationships and activities, due to the fact that the ISO does not specifically list every endeavor or activity that a business must include in their EMS. Implicit in these accusations is that the 14000 series framework is perhaps too broad and allows firms to get away with excluding key relationships or endeavors which should be included in their environmental management and business practices.

These are severe criticisms considering that not only is the ISO's reputation for setting quality standards in jeopardy but also the 14001 series legitimizes its existence by being known as a consistently enforced environmental management standard rooted in daily practices. For the ISO 14000 series to work, proof of certification, which insures that a documented system exists and government regulations are met, *must be considered sufficient evidence* of 14001. However the suspicion, and resulting criticism, is that if close scrutiny of certified ISO 14001 reports and corresponding daily behaviors were key in the process of eliciting trading contracts then daily enforcement and reproducibility would be a essential. However, this does not appear to be the case and furthermore, it can be assumed that with environmental management being so costly, firms will take advantage of the lack of oversight and only implement their EMS when a certified monitor is present. Despite these logical allegations, within the business community, simply having 14001 certification and yearly audits appears to be sufficient for competing for 14001

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specific international trading contracts. Therefore, whether or not one has faith in the authenticity of the application of 14001 in reality, the system is still operating as designed.

B. A tool for PR?

If demonstrating 14001 certification is sufficient in business circles then this leads us to a most disturbing assumption which hits at the heart and legitimacy of the philosophy of an environmental management system. The philosophy of creating a standard which requires the creation of a unique firm vision and approach to environmental concerns in addition mandating basic compliance to national laws and regulations is something which was internationally called for. Firms needed a way to discriminate between firms that are concerned for the environment and those that are not. If the ISO 14001 criticism proves correct and certification illustrates a firm's management behaviors and policies *at a static moment in time* rather than indicating a dedicated approach to firm behaviors, and yet this is still considered satisfactory, then what does this signify for the standard? It has been cited in both the ISO 14000 literature and general environmental management system critiques that in fact implementation of an EMS is a tool for firms to gain competitive advantage while parent firms or multilateral conglomerates can use their trading partners' proof of certification as a hedging tool. This tool protects them from consumers and activists who scrutinize supply chain behaviors and can put multinationals at considerable risk of bad press and share devaluations when environmentally detrimental practices come to light.

C. Can standards lower the overall value of an EMS?

Though the International Standards Organization has been both criticized and praised for its requirements for firms to document in detail each item and step within the environmental management system this has not proven to be sufficient within the international community to

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equate with actual production floor results. It is critical to recognize this key step because certification is designed to reduce or breakdown information asymmetries between trading partners when in fact many scholars and firm managers are questioning whether they can actually trust that certification actually provides enough information about the day to day activities beyond the rhetoric of a firm's vision.

In essence the ISO 14001 certification schema relies and profits on producer/consumer information asymmetries and claims to reduce these asymmetries. ISO is profiting from the fact that firm managers, wherever they may be in the web of complex production chains, will not take the opportunity to visit each production site they out source to and are subsequently willing to accept foreign third party certification in a foreign setting or country as proof of a specific level of attainment as sufficient information to base trading relationships on (assuming ISO 14001 is the marginal decision). This leads one to wonder if certification is then merely a symbolic act, albeit a very expensive symbolic act, yes in essence guarantees very little substance.

However, King and Lennox, in their recent study, conclude that while certification may in itself be a symbolic act and one which is strategic in attaining and retaining more business contracts, certification itself cannot be obtained without making real changes within the firm¹⁸. This indicates that beyond cost, implementing ISO 14001 has real teeth and positive environmental changes must be made, not simply once, but annually for certification status to be maintained. Therefore it is both the standard which needs to be called into question and simultaneously the

¹⁸ King, A., Lennox, M. and Ann Terlaak. "The Strategic Use of Decentralized Institutions: Exploring Certification with the ISO 14001 Management Standard." *Academy of Management Journal*. Vol. 48. No. 6. 1091- 1106.

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nature of decentralized certification institutions and their ability to accurately measure their clients' behaviors. If certification, in this case ISO, is merely a signal and does not convey concrete, reproducible results then the actual standard setting body must alter their proposed methodology to include randomized audits, etc., which are implemented by the third party certifier who must demonstrate a higher degree of credible reporting measures which allow firms and scholars to regain their faith in the overall standard.

The result of this lack of faith in the business community has also resulted in disdain at the firm level. Those firms who pride themselves on their design and implementation of an environmental management system which they consider to be of the highest levels of environmental management quality are balking at the idea of becoming ISO 14001 certified. The standard, which was designed to signal environmental management dedication wherever implemented, regardless of location, has also become a signal of mediocrity. The theory is that firms who seek ISO 14001 certification are in need of expressing adherence to the most basic levels of environmental attainment in order to gain competitive advantage. Those firms who have gone above and beyond basic standards and regulations have no way to express the quality of their management approaches and thus are frustrated with the low expectations of the ISO 14001, feeling that it only denotes adherence to national regulations, which should be expected regardless, and little else. For these reasons, those firms who excel find themselves without a way to communicate their superiority and are actually losing contracts to lower achieving firms who have gained 14001 certification status. This has the effect of lowering the overall levels of ISO 14001 average environmental management attainment by primarily obtaining adherence by the lowest performers.

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VIII. Conclusions

The International Standards Organization has become internationally recognized for the quality of their standards and their international applicability regardless of location. While the ISO prides themselves on the cutting edge nature of their standards and the international voices which went into the creation of that standard, there are growing concerns about the applicability and validity of the ISO 14001 and the amount of reliable information it can convey. This report presents a number of different perspectives which both support and criticize the international standard. Taking a step back and looking at the standard allows one to see the many international players and voices that were involved in communicating the need for a standard of environmental best practices from a number of perspectives which may or may not all be founded in genuine concern for the environment. This paper also takes a look at the international members of the ISO which designed the standard and all have their own reasons for supporting a standardized EMS. Further those who accredit certification bodies for their rigorous application of the standard have come under critique for their lack of genuine abilities to monitor their monitors. Importantly the reasons behind why firms must rely on the standard to inform them of the practices occurring on the production floor when they can't see for themselves have been laid out. And finally the incentives of the firms who claim to live up to their self imposed 14000 policies on a daily basis. This illustrates the vast quantity of voices and resources which are ultimately affecting the validity of the ISO 14000 series. Though the standard was internationally called for to communicate environmentally sound best practices within a firm and the logic of accountability is very well laid out, we still come up with obvious areas where the system begins to break down.

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Third party certification, in all its applications in its many settings, was designed as a *non-partial* method for signaling that a firm lives up to the practices it claims to implement. From this perspective third party certification often lives up to its mandate of impartiality and low subject to capture. However, taking a closer look one can see that the ISO 14000 standard's strategy breaks down for the same reasons that third party certification breaks down universally. To have faith in the application of a standard one must have faith in the certifier. On one level the ISO has attempted to solve this problem by encouraging accreditation of certification bodies; where becoming certified by an accredited certifier or auditor has an added level of accountability and credibility. Yet, it is easy to imagine a situation in which the certifier or auditor is susceptible to capture by the firm requesting certification. Furthermore the accrediting bodies have very little mechanisms for maintaining accurate information about certification bodies and their actions. Discriminating between certification bodies' rigorous enforcement of a standard is not a system which is transparent. Meanwhile, certification is designed as a process, a process that extends beyond the initial certification whereby a firm sets clear targets for future environmental progress. However, once certification status is granted, certification bodies are required to return to audit firms only once a year and never randomly. Thus, trading partners can only be sure of how a firm operates 1 day out of every year and thus we find three problems with third party certification: limited capabilities for observation of daily processes, the potential for capture, and little information about the actual merit of a certification body.

Does this mean that the ISO 14000 series has no value? The literature investigating ISO 140001 seems to conclude this is not the case despite all the criticism. While voluntary compliance without certification may exist in any format, actual certification requires extensive resources in

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the form of both time and money. The general conclusion is that certification is just too expensive to take on without significant devotion to the cause and extensive paper trails are created which would cause firms considerable negative press should it be found that they reneged on their claims. Not to mention resulting losses in and competitive advantage and as a result, their trading contracts. In fact, we see that firms implementing an ISO 14001 certified environmental management system are not without risk should they fail to live up to their own claims - claims which came at considerable expense. So in ISO 14001's basic and correct application the standard does provide trading partners with a certain degree of information about the firm it is contracting with and also indicates that their partner also has something to lose by reneging on their 14001 certification. Yet, the risk to the certified firm will never be as high as the contracting firm who is relying on certification to communicate genuine environmental practices. Thus the standard is attempting to expose the risks of both sides of a trading relationship but without bringing risk into equilibrium, (by increasing the risk of the firm which reneges on its commitment) there is ultimately no way for blind faith to be restored in 14001's current state.

In future iterations of the standard, the ISO must mandate a strengthening of the process of third party certification to indicate an increased degree of knowledge about firm level daily practices rather than the current certification scheme which indicates a firm's practice at a stationary point. Further, and more complex, is the task of increasing the risk to the firm that reneges on their documented management system which it gained certification from. The ISO, being a nongovernmental body, and the 14000 standard itself, being voluntary in nature, will inevitably find this challenging. Yet, the firm which puts trust in the ISO 14001 and subsequently partners with firms based on their certification status without personally auditing them has far more to lose

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in terms of market power and reputation. Conversely, the firm found guilty of malpractice, depending on their geographical location and relationship with final consumers, may retain very little risk of their own. In fact, many governments who *have* taken steps to limit firms' environmental impacts either through regulations or laws often do not have the resources to prosecute firms in noncompliance. This further reduces a firm's risk of renegeing on their environmental management system policies and casts doubt on ISO 14000's ability to elicit actual change in process management.

Finally it is the opinion here that firms who criticize the ISO 14000 series for its systematic lack of the ability to signal superior environmental management behavior are actually pointing to the future of environmental certification. As environmental concerns come to the forefront of corporate rhetoric and consumer increasingly demand change there will be demands for an environmental performance rating system similar to that which was instituted by the US Green Business Council with their LEED¹⁹ rating system. The LEED system gives a rating of an architectural structure's environmental impact or their environmental 'footprint'. Firms accrue points, and each point represents an architectural achievement that has been determined to improve a firm's environmental 'footprint.' Firms are challenged to achieve increasing amounts of points to illustrate their superiority and commitment to limiting their environmental impact. This type of rating system would alleviate ISO 14001's adverse selection problem, the tendency to recruit the lowest performing firms, by introducing a spirit of competition and offering an opportunity for achievement within the standard. Firms who wish to stand out amongst their colleagues can be rewarded with 'silver', 'gold' or 'platinum' status for going above and beyond

¹⁹ LEED stands for Leadership in Efficiency and Environmental Design. For more information see www.usgbc.org.

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the basic standard by reducing their impact. Though this requires a dramatic new take on the 14000 series it could induce increased levels of achievement while highlighting those firms who have dedicated themselves to best environmental management practices. While this solution speaks only to the number of firms who are ultimately attracted to the ISO 14001 by seeking to raise the bar, it does not solve the greater problem of information asymmetries in relation to firms' actual day to day activities. This problem is the most critical as it speaks to the series' credibility.

The ISO 14000 series should not be considered a farce or disregarded across the board as a tool for better public relations. Certification cannot be obtained without the expense of considerable resources which include both time and money. However there are basic problems both within the application of the standard and the process of third party certification which strike the standard to the core and have resulted in harsh critique and criticism. Thus this paper does not promote throwing the proverbial baby out with the bathwater, rather it stresses that the standard has obvious points of weakness which reduce the overall faith in the 14000 standard. It will be in the proactive strengthening of these weaknesses and promulgation of the new criteria in future iterations which will ultimately decide whether or not the 14000 series will remain a standard which signifies credible policies and regulatory compliance or simply amasses expensive paperwork for the sake of public relations and competitive advantage.

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IX. Discussion Questions

1. What does the ISO 14000 series seek to communicate?
2. What firms are likely to seek ISO 14001 certification?
3. Where does the ISO 14001 break down?
4. If the ISO were to alter the certification standards and implement a randomized audit mandate, who would bear that cost?
5. You are the manager of a medium size firm in a developing country. Your firm is positioned in the middle of a complex international supply network, meaning you both buy from suppliers and sell to producers. Your government has basic environmental regulations but enforcement is weak. Would you recommend to the stakeholders that ISO 14001 is an important international standard which your firm should adhere to? Do you seek certification?
6. Do you believe that the ISO 1400 series is designed to equip companies with good PR tools to defend against criticism from environmental groups? Or do you believe the standard actually designed to yield better results for the environment and business processes?
7. Do you believe process management principles utilized by the ISO 14000 and ISO 9000 series is the most effective way of governing environmental and quality business practices worldwide? Why or why not? What are the benefits of having universal applicability? What are the drawbacks?
8. How are transgressors of the standard held accountable? Where in the implementation, evaluation, and certification standards lie room to “cheat”? Does the standard facilitate adverse selection?
9. Who are the main stakeholders of the ISO 14001? What are their motivations for supporting or adopting the standard? How independent are third-party certification organizations?
10. Besides seeking ISO 14001 certifications, what other methods can firms adopt to strengthen their environmental management strategies? Are there alternative environmental certification schemes to choose from?

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X. Key resources for understanding the ISO 14000 series.

Cascio, J. "ISO 14000 Guide: The New International Environmental Management Standards" McGraw Hill. 1996.

King, A., Lenox, M. and Ann Terlaak. "The Strategic Use of Decentralized Institutions: Exploring Certification with the ISO 14001 Management Standard." *Academy of Management Journal*. Vol. 48. No. 6. 1091- 1106.

Prakash, Aseem and Matthew Potoski. "Racing to the Bottom? Trade, Environment, Governance, and ISO 14001." *American Journal of Political Science*. Vol.50. No. 2. April 2006. pg. 350-364.

Also: see www.iso.org

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Downloads for the 2002 Version of the 14001 certification system

<http://www.iso.org/iso/en/prods-services/otherpubs/iso14001/index.html>

XII. Appendix

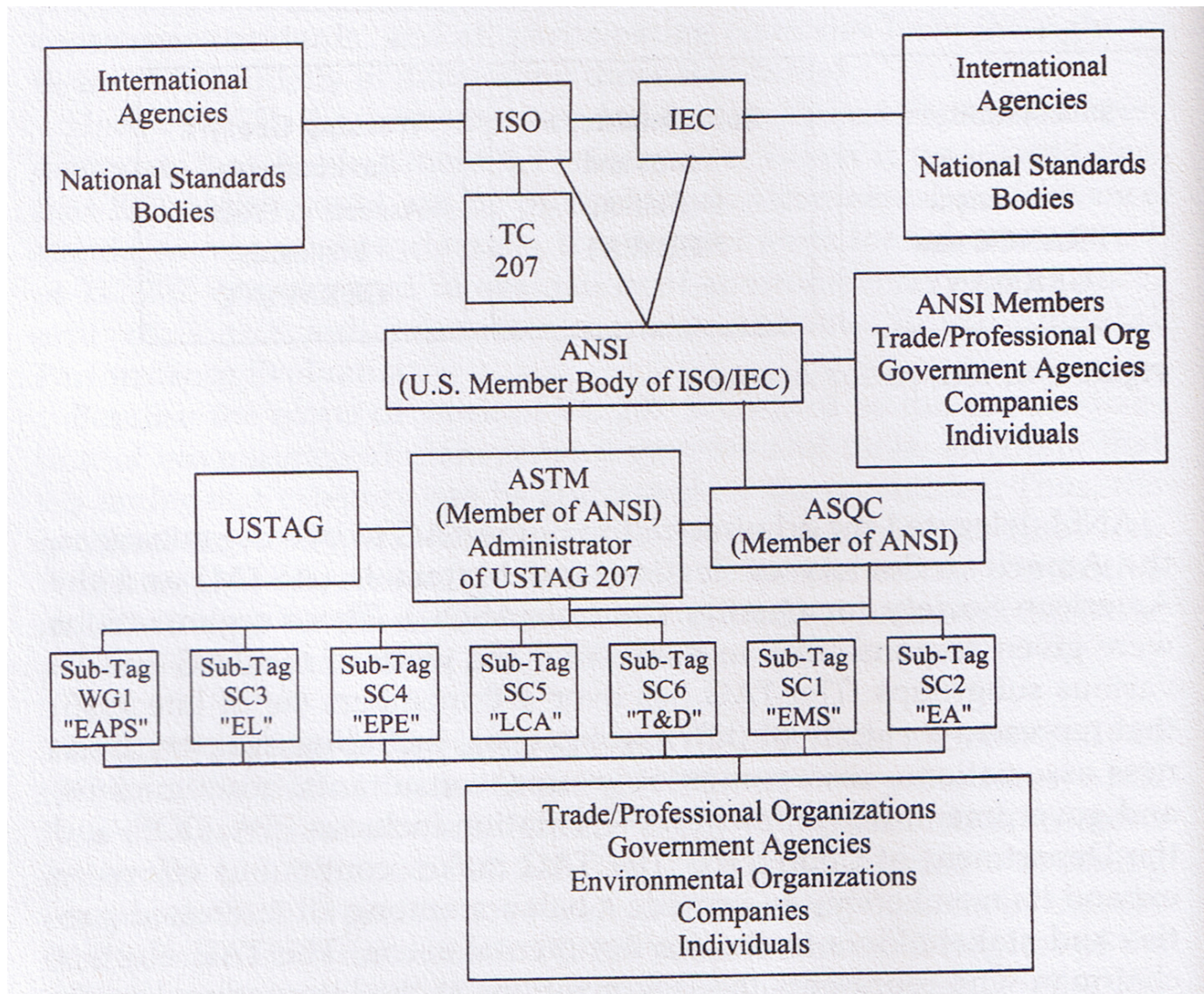


Figure 1 ISO Technical Advisory Group Structure in the creation of the ISO 14000 series standard.
Source: Cascio, 1996.

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