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## Shedding light on ISO 14001 certification audits

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## ABSTRACT

This article analyses the extent to which the ISO 14001 certification audit can be considered as an independent and rigorous process ensuring organizational conformance with the standard and improved environmental performance. Although the ISO 14001 certification process and external recognition are based on external audits, the rigor, focus and reliability of these audits tend to be taken for granted and have been largely overlooked in the literature. Moreover, the experience of auditors and ISO 14001 professionals has rarely been taken into account in the literature. As a result, the reasons why organizations which have superficially implemented the ISO 14001 standard have succeeded in becoming certified remain unclear. This article describes a qualitative study conducted in Canada with thirty-six professionals involved in ISO 14001 certification audits, and sheds light on the rather elastic interpretation and application of this standard, with a focus on procedural rather than substantive aspects of the Environmental Management System. The findings call into question the prevailing opinion on the rather objective, rigorous and unambiguous nature of ISO 14001 certification audits.

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## 1. Introduction

ISO 14001 has become the most popular and frequently used international standard for implementing an Environmental Management System (EMS), an infrastructure to manage the organization's interaction with the environment (González-Benito et al., 2011). Since its launch in 1996, ISO 14001 certification has experienced intensive growth on the international stage: by the end of 2011, 267,457 certificates had been issued in 158 countries (ISO, 2012). In the period from 2000 to 2010 the number of certificates issued worldwide increased nearly 11-fold, although there are differences in the growth rate of certification depending on countries and sectors of activity (Marimon et al., 2011).

The theoretical academic literature stresses that the external audit component is a cornerstone of the entire ISO 14001 system (Kuhre, 1996; Ammenberg et al., 2001; Potoski and Prakash, 2005). Furthermore, some empirical works on the adoption of ISO 14001, such as the study by Babakri et al. (2003), have identified that these external audits are one of the elements that need the greatest effort on the part of certified companies. Surprisingly, very few empirical

works on this issue has been published, although the number of certified organization has continued to grow significantly across the world. With few exceptions (Ammenberg et al., 2001; Zutshi and Sohal, 2002), this issue has thus not been analyzed in depth. Moreover, those few works were based on field-work carried out at a time when the diffusion of ISO 14001 was in its early phase (Casadesús et al., 2008), and criteria for adopting and auditing ISO 14001 were less developed (Ammenberg et al., 2001).

No recent empirical study has analyzed in depth the characteristics of ISO 14001 external environmental audits, while a set of empirical works have explored external audits based on other management standards, notably ISO 9001 (e.g. Beckmerhagen et al., 2004; Poksinska et al., 2006; Power and Terziowski, 2007; Bernardo et al., 2010). These empirical works must be taken into account as the framework and underlying rules of the ISO 14001 standard are quite similar to others certifiable standards such as ISO 9001 (Hillary, 1998; Wealleans, 2005). Nevertheless, even when taking the empirical works on ISO 9001 into account, the literature on certification audits remains quite limited and essentially focused on the implementation of ISO standard inside certified organizations. The experience of professionals involved in the certification process is rarely taken into account, notably with regard to the ISO 14001 standard. This paper focuses on this experience and is intended to answer the following questions:

- To what extent are ISO 14001 external audits objective, rigorous and unambiguous?

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- To what extent are the external audits of ISO 14001 carried out from a consulting or a conformance perspective?
- To what extent do ISO 14001 external audits focus on substantial improvements of environmental performance rather than EMS procedural aspects?

The rest of the paper is organized as follows. The next section presents the main conceptual framework related to the external environmental audits. The main concepts, approaches and standards related to environmental audits are analyzed. The literature on ISO 9001 audits is also reviewed. The section on methods describes the approach applied for collecting and analyzing data. Finally, the main results of the field work are summarized. The final section presents the main contributions and implications of the article.

## 2. Theoretical framework, literature review and research questions

### 2.1. The definition and scope of environmental audits

There is little consensus on the definition of environmental audits in the academic literature, probably because these audits can be associated with a wide range of activities (Hillary, 1998; De Moor and De Beelde, 2005). Likewise, the existence of very different national regulations on this issue has contributed to the dissemination and survival of diverse definitions of this activity (Tomlinson and Atkinson, 1987). As Hillary (1998) anticipated some years ago, various activities fall under the umbrella term of “environmental audits” and, conversely, there is also a set of activities (e.g. insurance liability audits, merger audits, divestiture or pre-sale audits) which are inappropriately referred to as environmental audits.

For example, Huizing and Dekker (1992: 429) have proposed a very general and inclusive definition of environmental audit as “the systematic and independent investigation into the working methods and procedures used in a company, taking into account, if necessary, the technical, administrative, organizational and juridical aspects. Its purpose is to assess whether the company controls its effects on the environment, and to identify aspects for improvement”. Obviously, many different activities could be included in this definition.

Generally speaking, the very elastic and inclusive definition of environmental audits calls for a more specific focus on the scope and implications of these audits. In her pioneering classification, Hillary (1998: 72) proposed a typology based on four audit types:

- the issue audit;
- the compliance audit;
- the supplier, customer and contractor audit; and
- the site audit.

The issue audit focuses on specific environmental issues of global importance, such as deforestation and global warming. Compliance audits focus on identifying all relevant environmental legislation and codes of practice applicable to an organization and assessing whether its procedures and practices bring the organization into compliance with the applicable laws. For the supplier, customer or contractor audit, Hillary (1998) distinguished two forms: 1) A company requests information from its suppliers, customers and/or contractors, compelling them to undertake some form of audit to satisfy the request; 2) A company goes to the supplier's, contractor's or customer's site and undertakes an audit against its own standards. Finally, in site audits, individual facilities are examined for actual and potential environmental problems

relating to their management. Although Hillary's classification is useful to paint a global picture of the focus and scope of environmental audits, it was established before the international dissemination of the ISO 14001 standard, which now represents the main source of EMS audits. After the publication of the ISO 14001 standard, EMS auditors were trained to distinguish between the compliance audit – that is based on an organizations compliance with relevant environmental regulations – , and the conformance audit of ISO 14001 EMS – that is based on the organizations conformance to an EMS standard. Therefore, the authors will use conformance in this article in discussing audits of ISO 14001 EMS and compliance when discussing regulatory audits.

From this perspective, the classification proposed by De Moor and De Beelde (2005) may be more valuable for the objective of this article. According to De Moor and De Beelde (2005), two types of environmental audits can be distinguished: 1) one focusing on the environmental compliance status, and 2) one focusing on EMSs. The former type of audit is simply a check on how well companies comply with environmental regulations, and the latter, to which ISO 14001 audits seem to belong, checks whether the company has a system to achieve and maintain compliance.

Alongside these definitions from the academic literature, the definitions established by the ISO standards on EMS and auditing must be considered (see Table 1). Thus, according to the ISO 17000 guidelines on conformity assessment, the external environmental audit, or certification audit, can be defined as a “systematic, independent, documented process for obtaining records, statements of facts or other relevant information and assessing them objectively to determine the extent to which specified requirements are fulfilled” (IOS, 2004a: 4.4).

Among the aforementioned ISO standards, both ISO 17021 and ISO 19011 should be especially taken into account, due to the aim of this article. ISO 17021 is established for the assessment of the certification bodies that provide audit and certification of management systems. Likewise, ISO 19011 is the standard that include the guidelines for external auditors recommending ISO 14001 (or ISO 9001) certification of the organization to the certification body. Although neither ISO 19011 nor ISO 17021 is a mandatory standard for external environmental auditing, Wealleans (2005) has stressed that assessors examining organizations for ISO 14001 conformance must have those standards at the back of their minds when looking at good audit practice. Nevertheless, whatever the legitimacy and rationale of ISO standards in themselves, the institutionalization of

**Table 1**  
Main ISO standards applicable to ISO 14001 external audits.

Standard	Name/content	Launch	Last update
ISO 14010	Guidelines for environmental auditing – general principles	1996	Not operative
ISO 14011	Guidelines for environmental auditing – audit procedures	1996	Not operative
ISO 14012	Guidelines for environmental auditing – qualification criteria for environmental auditors	1996	Not operative
ISO 19011	Guidelines for auditing management systems	2002	2011
ISO/IEC 17000	Conformity assessment – vocabulary and general principles	2004	2011
ISO/IEC 17011	Conformity assessment – general requirements for accreditation bodies accrediting conformity assessment bodies	2004	2011
ISO/IEC 17021	Conformity assessment – requirements for bodies providing audit and certification of management systems	2006	2011

Source: based on the mentioned standards of ISO

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