

**THE CHALLENGES OF AUDITING ENVIRONMENTAL MATTERS
IN FINANCIAL REPORTS**

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ABSTRACT

This study investigated the challenges and issues auditors face when auditing material environmental matters relevant for financial reporting. This study adopted an interpretive methodology. Qualitative interviews with 18 New Zealand audit partners and managers from the North and South Islands provided the research findings. Legitimacy theory informed the interpretation of the research findings.

The research findings revealed that auditors could risk not considering environmental matters and environmental risks exposure in audit planning if disclosures are not made in the financial report or communicated to the auditor; also for new clients or clients not operating in obviously environmentally sensitive industries or sector. The auditors are further challenged by keeping up with the prolific environmental laws and regulations. AGS-1010 recommended that auditors apply the accounting standard for 'Provisions, Contingent Liabilities and Contingent Assets', however, it is subjective and creates some confusion in its application. Generally, auditors do seek technical advice but there are few suitable qualified environmental experts in New Zealand to assist them.

The general implication is that the audit of significant environmental matters seems to extend the boundary of financial audits, reflecting perhaps unreasonable expectations of auditors' knowledge of environmental issues and auditing environmental matters.

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INTRODUCTION

The objective of this study is to investigate the challenges and issues (if any) in auditing material environmental matters which are relevant to a company's financial statements. Environmental matters are the reporting of any initiatives to avoid, remedy or mitigate any adverse effects of company activities on the environment, or to deal with conservation of renewable and non-renewable resources, consequences of violating environmental laws and regulations; consequences of environmental damage done to others or to natural resources; and consequences of vicarious liability imposed by law (ICANZ, 2001a, Audit Guidance Statement (AGS)-1010: *The Consideration of Environmental Matters in the Audit of Financial Reports*; paragraph 10b). Legitimacy theory is used to frame the discussion and to highlight the contribution this study makes to the body of knowledge. This study is important because the findings provide insights into an audit phenomenon that is not widely known.

For companies with such environmental matters which materially affect financial reporting, the auditor needs to consider environmental matters in the audit of the financial report (AGS-paragraph 2). AGS-1010 cautions auditors to be aware of "the complexity of environmental matters" (paragraph 3) and to consider whether the effects of material environmental matters are adequately treated or disclosed (paragraph 55) in the financial reports. AGS-1010 further directs auditors to read "any other information to be included with the financial report in order to identify any material inconsistent information on environmental matters (paragraph 55). Regarding this, Surma (1992) alerted auditors to understand their clients' exposure to material environmental risks which are inherent in their client's operations and also to understand the basic framework of environmental regulations in order for them to assess the appropriateness of their client's current environmental accounting and disclosures in financial reports.

Collison (Collison, 1996; Collison & Gray, 1997; Collison, Gray, & Innes, 1996) provided empirical evidence of auditors' growing concerns about the potential risk exposure they face consequential to the impact of business activities on the environment. He noted that the level of concern was such that the more one is aware of the potential impact of environmental issues, the more anxious one becomes. Collison also reported that a majority of audit firms do not have detailed understanding of what environmental issues might mean for their clients and their financial statements. Other authors commented that environmental matters pose major challenges to the accountancy profession (Adamson & Shailer, 1998; Billing, Buisman, Willis, & Wilson, 1994; Dixon, Mousa, & Woodhead, 2004; Hines & Jackson, 1994; Rogers, 2004; Vaughan & Mulliken, 2007). Chiang (2006) is the only New Zealand empirical study on auditors and environmental matter. Chiang (2006) surveyed New Zealand auditors for their perceptions on environmental issues and their possible implications for the consideration of environmental matters in financial audits. The survey responses indicated that auditors in New Zealand have some difficulty in translating their personal views on environmental issues to the auditing sphere of activity. This may perhaps be due to their limited general awareness of environmental matters. Little else is known about this research area. In particular, little is known empirically about the

challenges and issues (if any) in the audit of material environmental matters relevant for financial reporting. The gap in the literature is the motivation for this study.

Information on company environmental matters may be reported in an annual financial report; a document containing an audited financial report or a stand-alone environmental report (Gray & Bebbington, 2000). However, this study considered only material environmental matters relevant for reporting in an annual financial report and the document containing the audited financial report. These documents directly affect accountants and auditors in their traditional and statutory roles as financial report preparers and auditors under the New Zealand Companies Act 1993. This study drew on qualitative interview findings from eighteen New Zealand auditors' experiences in auditing environmental matters. The interviews were taped, transcribed and analysed. The next section reviews the literature on financial auditing and environmental matters, followed by a discussion of legitimacy theory as the appropriate theory for this study. The research method, findings and implications of findings follow on in sequence, with the research conclusions at the end of the paper.

FINANCIAL AUDITING AND ENVIRONMENTAL MATTERS

Researchers recognised the importance of material environmental matters in the economic functioning of entities whose activities affect the environment (Collison, 1996; Collison & Gray, 1997; Collison et al., 1996; Medley, 1997). Material environmental matters may also impact different aspects of accounting (Collison & Gray, 1997; Collison et al., 1996; Gray & Bebbington, 2000; R. Gray, Bebbington et al., 1998; Todd & Stafford-Bush, 1995), manifesting themselves as contingent liabilities, provisions, reserves, valuation of fixed assets and depreciation policy (Collison et al., 1996). More specifically, the financial implications of material environmental matters are usually in the form of liabilities for cleaning up contaminated land and liabilities for being in breach of environmental legislation and regulations (R. Gray & Bebbington, 2001). For example, if a company's business impacts negatively upon the environment (for example by violating pollution laws), it is potentially liable for a fine and eventually, the company may incur the costs of cleaning up and abating future pollution (Simunic, 1994). Therefore, the financial report for this company ought to present material environmental costs, liabilities and contingencies of the company's activities fairly (Teasley, 1995). If the financial report of the company is then subject to an audit, the auditor has a responsibility to ensure that material environmental matters are properly accounted for and reported (Chadick, Rouse, & Surma, 1993; Gray, 2000; Gray & Bebbington, 2000; R. Gray, Collison, & Bebbington, 1998; Huizing & Dekker, 1992).

It is assumed that a company survives beyond the short term as a going-concern. However, if a company's business activities detrimentally affect the environment significantly and it is sanctioned by law, the company may face closure (Fiedler & Lehman, 1995). Therefore, they concluded that "environmental matters are important accountability issues" (p. 196); with significant implications for financial reporting and auditing (Blokdiik & Driehuisen, 1992; Browning, 1994; Cornell & Apostolou, 1991). In this context, financial audits are intended to provide shareholders and other stakeholders reasonable assurance that generally, "substantive procedures were carried out to reduce the risk of not detecting a material misstatement in the financial report to an acceptable level, including any material misstatements if the company fails to properly recognise, measure or disclose the effects of environmental matters" (ICANZ, 2001a, AGS-1010, paragraph 41).

Environmental matters may be significant for some companies, and for those companies, AGS-1010 paragraph 2 acknowledges that “there may be a risk of material misstatement (including inadequate disclosure) in the financial report arising from such matters. The following are examples of conditions and events that may indicate risks of material misstatement due to environmental matters (known as environmental risks) which may also affect the financial report: Environmental laws and regulations which may involve an impairment of assets and consequently a need to write down their carrying value; failure to comply with legal requirements concerning environmental matters, such as emissions or waste disposal, or changes to legislation with retrospective effect, which may require accrual of remediation, compensation or legal costs; some entities, for example in the extraction industries (oil and gas exploration or mining), chemical manufacturers, agribusinesses, local authorities or waste management companies may incur environmental liabilities as a direct by-product of their core operations; constructive obligations that stem from a voluntary initiative, for example an entity may have identified contamination of land and, although under no legal obligation, it may have decided to remedy the contamination, because of its concern for its long-term reputation and its relationship with the community; an entity may need to disclose in the notes the existence of a contingent liability when the expense relating to environmental matters cannot be reasonably estimated; and in extreme situations, non-compliance with certain environmental laws and regulations that may affect the continuance of an entity as a going concern and consequently may affect the disclosures in and the basis of preparation of the financial report (paragraph 15). Once an auditor has obtained an understanding of a company’s background, its business environment, including the company’s internal controls, the auditor ought to use the acquired knowledge to identify and assess the risks of material misstatement, whether due to fraud or error, at the financial statement and assertion levels. This would then provide a basis for designing and implementing responses to the assessed risks of material misstatement (NZICA, 2009c, International Standard on Auditing (New Zealand) (ISA(NZ)) 315: Identifying and assessing the risks of material misstatement through understanding the entity and its environment).

A possible audit procedure for assessing risk is for auditors to enquire of management, those charged with governance and others in the company for information that is likely to assist in identifying risks of material misstatement (NZICA, 2009c; ISA (NZ), paragraph 6). In the context of environmental matters, this would mean that auditors ought to obtain sufficient information on the audit environment to identify the existence of any activities or events that significantly impact the environment; and to understand the implications of environmental matters which in the auditor’s judgement may have a significant impact on financial reporting (NZICA, 2009a, ISA (NZ) 200: *Overall objectives of the independent auditor and the conduct of an audit in accordance with international standards on auditing (New Zealand)*). For a company with environmental matters which has significant implications for the financial report, AGS-1010 states that auditors ought to enquire and discuss with management “the entity’s policies and procedures on compliance with relevant environmental laws and regulations [and those] adopted for identifying, evaluating and accounting for litigation, claims and assessments” (ICANZ, 2001a, paragraph 39). Authors (Hatherly, 1998; Morrison, 2004) observed that auditors significantly rely on management for information about company business. This reliance could potentially lead to their bias in seeing the business through the same eyes as management (Hatherly, 1998). Management may also control the information flowing to the auditor (Morrison, 2004). Rogers (2004, p. 55) indicated that auditors generally rely on company employees to disclose any environmental liabilities, but depending on the questions asked,

“employees may not provide the auditor with a comprehensive list of environmental obligations beyond those pending legal action”. This may potentially lead auditors to miss verifying the completeness of company disclosures.

The very essence of auditing lies in ‘auditors’ professional judgement (T. Bell, Marrs, Solomon, & Thomas, 1997; Hatherly, 1999); and professional judgement is made throughout the audit (R. Gray, Owen, & Maunders, 1991). Auditors apply the concept of professional judgement when making decisions on audit materiality and audit risk (the risk that an auditor gives an inappropriate opinion), the nature, timing and extent of audit procedures; evaluating the sufficiency of appropriate audit evidence; evaluation of management judgements, and drawing conclusions based on the audit evidence obtained. (NZICA, 2009a, ISA (NZ) 200, paragraph 23). Iskandar (1996) explained that decisions on audit materiality is the most fundamental. Professional judgement is based on the application of relevant training, knowledge and experience, within the context provided by auditing, accounting and ethical standards, in making informed decisions about the courses of action that are appropriate in the circumstances of the audit engagement (NZICA, 2009a, ISA (NZ) 200, paragraph 13). In the context of environmental matters, *AGS-1010, paragraph 4 states that an auditor ought to refer to the appropriate environmental laws and regulations for a company. This consideration provides a basis for an auditor’s professional judgement on whether environmental matters are material for the company (ICANZ, 2001b)*. Based on that assessment, the auditor designs procedures to detect any omitted, misstated or distorted information on environmental matters for the company. *When the auditor believes that sufficient appropriate audit evidence on environmental matters for the company is obtained, the auditor is able to give an opinion on whether the reporting of significant environmental matters for the company complies with generally accepted accounting practice and gives a true and fair view of the matter to which it relates (NZICA, 2009g, ISA (NZ) 700: Forming an opinion and reporting on financial statements)*. *Knechel (2007, p. 17) commented that “translating knowledge about risks into evidence that can support conclusions about the financial statements is probably the most difficult challenge that auditors faced”. Some authors made suggestions for quantitative considerations when evaluating the materiality of detected misstatement the basis (Fogarty, Graham, & Schubert, 2006; Weinstein, 2007) whilst others made suggestions for qualitative considerations (Carmichael, 2006). However, quantitative considerations have been criticised (Burrowes, 2006; Chewning & Higgs, 2002). In particular, Kranacher (2007) the editor-in-chief of the CPA Journal warned that:*

Quantitative measures provide a deceptive sense of comfort, especially for those accustomed to dealing with numbers....the qualitative aspects of a misstatement cannot be disregarded or excused for merely quantitative reasons. The issues behind the numbers often tell us more than the numbers alone. If CPAs ignore these clues, if they set aside their professional judgement, they do so at their own peril (p. 80).

The auditor’s greatest concern for each audit is the possibility that a material misstatement, omission or non-disclosure is not detected by the audit procedures carried out (detection risk). This could potentially result in a high audit risk exposure of giving an inappropriate opinion. Therefore, in planning the audit, the auditor makes professional judgements about the size of misstatements that will be considered material (NZICA, 2009f; ISA (NZ) 320, paragraph 2). Judgements about materiality are made in the light of surrounding circumstances, affected by the

size an/or the nature of a misstatement; and also a consideration of the common financial information needs of users as a group (paragraph 2). Judgements about materiality enable the auditor to decide which items to examine and what appropriate procedures to perform. McKee and Elifsen (2000, p. 54) cautioned that choosing the wrong materiality level affects decisions about the nature, extent and timing of the fieldwork, and “these decisions, in turn, affect the effectiveness or efficiency of the audit”.

It is mandatory for auditors to apply auditing and accounting standards in their audit practice. AS-702: *The audit report on an attest audit* states that an audit must be conducted (1) in accordance with New Zealand auditing standards and (2) to assess whether the amounts and disclosures in a financial report comply with generally accepted accounting practice. However, “there are few authoritative accounting standards that explicitly address the recognition, measurement and disclosure of the consequences for financial reporting arising from environmental matters” (AGS-1010, paragraph 17). Various authors cited contingent liabilities as the most widely experienced type of financial statement impact (R. Gray, Collison et al., 1998; ICAEW, 1996; ICANZ, 2001a; IFAC, 1995), and considered ‘provisions and contingent liabilities’ as the appropriate accounting treatment for environmental matters (Hines & Jackson, 1994; McGuinness & Sharpe, 2001; Medley, 1997; Specht, 1992). AGS-1010 suggested that auditors apply the New Zealand equivalent to International Accounting Standard (NZ IAS) 37: *Provisions, contingent liabilities and contingent assets* to the recognition and disclosure of contingent losses ensuing from environmental matters. Other authors provided guidance for disclosures of environmental risks and their impact on key financial items (S. Bell, 1992; Collier, Doolittle, & Broke, 1993 August; Munter & Sacasas, 1996; Specht, 1992). However, Gill, Cosserat, Leung, and Coram (2001) cautioned that environmental matters (considered as contingent liabilities) are unlikely to be recorded in the accounting records until the occurrence of the uncertain future event. Therefore, there is a high risk that they would *not* be disclosed completely and properly.

The survey findings on New Zealand auditors’ perceptions on environmental issues and their possible implications for the consideration of environmental matters in financial audits reported in Chiang (2006) and Chiang and Lightbody (2004) acknowledged that the auditors’ knowledge of environmental matters is somewhat limited and they therefore relied on the work of an expert. ISA(NZ) 620: *Using the work of an expert* (NZICA, 2009d) acknowledged that auditors are not expected to have expertise in other fields. For example, if an auditor, unfamiliar with environmental matters is auditing a client with possible environmental violations, the auditor would need to consult an environmental expert or consultant and also utilise their work (Colbert & Scarbrough, 1993, p. 28). Throughout AGS-1010 many examples were given where experts’ work may be relied on. Generally, an auditor may need to rely on the work of environmental consultants in assessing environmental clean-up obligations or seek technical advice from experts, such as lawyers, engineers or other environmental experts, on whether a particular event or condition is a breach of environmental laws and regulations. When an auditor decides to rely on the findings of an environmental audit as audit evidence, the auditor has to decide whether the environmental audit meets the evaluation criteria in ISA(NZ) 620, paragraphs A14 - A20 (NZICA, 2009d). Collison and Gray (1997) commented that although auditors recognised a need to rely on other environmental specialists, they are concerned that specialist advice was not usually sought when, arguably, it should be because, for many audit firms, the *first* stage of awareness of possible environmental risk is absent.

On 10 September 2008, legislation establishing New Zealand's emissions trading scheme was passed into law. Authors commented that the implementation of this law would cause companies and their accountants to grapple with the challenges of carbon accounting which is now expected as a consequence of the Kyoto Protocol Agreements (Clark, 2009; Cummins, 2007; Kolk, Levy, & Pinkse, 2008; Lohmann, 2009). Auditing carbon accounting in many ways are similar in nature to auditing environmental matters, albeit even more complex? Before asking any questions about auditors' responses to carbon accounting and what the challenges might be, it is pertinent to first determine what the challenges and issues are (if any) in auditing environmental matters in financial report. Answers to this research question would lead to asking questions about the challenges to the audit of carbon accounting. Empirical studies on auditors and environmental matters are limited. This research is therefore timely and the interview evidence from this study should be of significance to the accountancy profession in providing the impetus in deliberations on how to improve the audit of environmental matters and how to develop the audit of carbon accounting. The next section discusses 'legitimacy theory' in the context of organisations and justifications for its choice and appropriateness for informing this study.

LEGITIMACY THEORY

Organisational legitimacy is underpinned by a 'social contract' between the organisation and the society in which it operates (Deegan, 2006; Deegan *et al.*, 2002; Guthrie and Parker, 1989; O'Donovan, 2002). To fulfil the terms of a social contract, an organisation agrees to perform socially desired actions "in return for approval of its objectives, other rewards, and its ultimate survival" (Guthrie and Parker, 1989, p. 344); i.e. society 'confers' upon the organisation a "state of legitimacy" (Deegan, 2002, p. 292). 'Legitimacy' is defined as "congruence between the social values associated with or implied by [organizational] activities and the norms of acceptable behaviour in the larger social systems" (Dowling & Pfeffer, 1975, p. 122). Suchman (1995, p. 574) added: "legitimacy is a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions". Thus, a legitimate organisation is one whose role in society is justified; and its norms appear in conformity with social norms, values and expectations. Legitimacy is said to "attract resources and the continued support of its constituents" (Ashforth and Gibbs, 1990, p. 177), thus securing their long-term survival (Savage *et al.*, 2000). However, an organisation's contract to continue functioning in society can be revoked if societal expectations of the legitimacy of an organisation's operations are not met (Deegan, 2002). Thus, an organisation will always want to be adjudged legitimate so it is able to continue functioning in society (Lindblom, 1993).

Legitimacy theory informs two broad strands of audit literature. The first concerns the role of audit in producing legitimacy in organisations and society. Rather than taking this perspective, this study is positioned within the second strand of audit literature, which concerns the audit profession as a legitimacy-producing and legitimacy-seeking institution in itself. A social *contract* can be seen to exist between auditors and their clients. It specifies that auditors will provide *social* value in the form of *audited* financial statements in exchange for a virtual monopoly of audit practice and self-regulation (Baker, 1977). In other words, auditors must meet clients' requirements in exchange for the audit fees they pay and the professional status they hold. Also, the New Zealand Institute of Chartered Accountants (NZICA) acknowledged in the

Code of Ethics: *Independence in Assurance Engagements* that “in relation to the provision of assurance services such as the audit of financial statements, auditors have an important role and position in society” (NZICA, 2008, paragraph 6), and are expected to “demonstrate that their services are provided to high levels of performance in accordance with ethical standards designed to maintain public confidence that the accountancy profession will act in the public interest” (NZICA, 2006, *Code of Ethics*, paragraph 14). This research thus locates the auditing profession as an organisation functioning “within a society’s framework of legitimate authority” (Pasewark *et al.*, 1995, p. 77). A critical foundation of the audit profession is the maintenance of legitimacy and members of the audit profession rely on the perception that they are performing an important task which they execute with proficiency and the backing of a legitimate professional body in order to retain their continuing status and position, (Pasewark *et al.*, 1995; Savage *et al.*, 2000).

Chandler (1997) explained that a legitimation crisis occurs when the accountancy profession is perceived to have broken the (unwritten) code of conduct in protecting the public interest. At such times, the profession must respond to public concerns or risk losing its own legitimacy in the form of its authority to act for the public interest (Pasewark *et al.*, 1995). Thus, to respond to public concerns and to justify its co-existence with society in the midst of ‘problematic legitimacy’, some authors have suggested that the accountancy profession adopts whatever legitimation strategies are required to comply with the expectations of society and to safeguard its own self-interest (Pasewark *et al.*, 1995; Savage *et al.*, 2000). For example, Okike (2004) reports that when the Nigerian government was dissatisfied with their auditors’ performance, the legitimacy of the Nigerian auditing profession and its members were challenged. To re-establish legitimacy, substantial changes were made to auditors’ roles and practices and the profession disciplined and make examples of members who contravened the Code of Ethics. The profession also started issuing audit standards and guidelines for its members and paid closer attention to the activities of one-partner firms (Okike, 2004). Other authors (Curtis & Turley, 2007; Humphrey, Moizer, & Turley, 1992; Mills & Bettner, 1992; Neu, 1991; Pentland, 1993) suggested that the issuing of auditing standards and guidance statements by the accountancy profession is seen as a symbolic legitimation strategy for maintaining its public status. Fogarty *et al.* (1991, p. 433) noted that the outcome of symbolic strategies is “to control the debate over the body of knowledge of accounting and auditing, protecting it from external intervention”.

In recent years, media and public scrutiny of the number of high profile international corporate failures has resulted in significant, mounting criticisms of the auditing profession (Chandler, 1999). This caused tremendous turbulence in the area in which the auditing profession operates. Added to this, highly publicised environmental disasters such as the Exxon Valdez, Chernobyl, Love Canal, Union Carbide at Bhopal, the explosion of the AZF chemical plant in France and the massive coal-ash spill at a Tennessee Valley Authority power plant have brought into sharp focus public and political concerns regarding material environmental matters and their implication for financial reporting (Anonymous, 2008; Anonymous, 2009; Cho, 2009; Cho *et al.*, 2008; Engelhaupt, 2008; Kripalan, 2008; Smith, 2008; Stromberg, 2009). Faced with such circumstances, it is critical for the audit profession to maintain organisational legitimacy. “If society recognises a need for either different or additional information, then accountants [and auditors] are expected to provide the needed information” (Reynolds & Mathews, 1999, p. 89). This appears to be the case for environmental matters. Dixon, Mousa, and Woodhead (2004) observed that users of environmental information have become more interested in the

implications of significant environmental matters on a company's financial statements in the situation where this company is fined or penalized by governmental agencies because of its environmental violations.

This new demand for significant environmental matters in financial reporting led to an expansion in corporate accountability obligations (Fiedler & Lehman, 1995; Lucy & Hayes, 2004; Schacter, 2005) which in turn led to a need for widening the scope of the financial auditing profession to encapsulate environmental issues (Dixon et al., 2004). The audit profession acknowledged that "environment matters are becoming significant to an increasing number of entities and may, in certain circumstances, have a material impact on financial reports of those entities. These issues are of growing interest to the users of financial reports" (ICANZ, 2001a, paragraph 1). It was in the midst of high profile corporate failures, environmental disasters and criticisms of the auditing profession, in 1998, International Auditing Practice Statement (IAPS) 1010: *The Consideration of Environmental Matters in the Audit of Financial Statements* was issued. In 2001, New Zealand's AGS-1010, "consistent in all material aspects" with IAPS – 1010 (ICANZ, 2001a, Appendix 1) was issued to assist auditors in developing good practice "by providing guidance on the application of Auditing Standards in cases when environmental matters are significant to the financial report of the entity" (ICANZ, 2001a, paragraph 6). AGS-1010 certainly gives the perception that the auditing profession has provided its members appropriate guidance on the audit of environmental matters and that auditors are up with the requirements for the audit task. Thus various aspects of legitimacy and the insights it can offer seemed relevant for the current study.

This legitimacy theory informed view of the accounting and auditing profession has raised questions about audit methodologies and/or a body of knowledge that justifies the claims of professional expertise and audit practices (Curtis and Turley, 2007). Do the practices of auditors match the expectations of those who rely on the audit standards or guidance statements (Chandler, 1997) or are auditors challenged by the audit of material environmental matters which are relevant to financial reporting? What are the issues of concerns? These issues are relevant to the research questions examined here. The approach taken to examining the research questions is outlined next.

RESEARCH METHOD

The aim of this study was to examine the challenges and issues (if any) in auditing the financial implications of significant environmental matters relevant for financial reporting. Qualitative interviews and policy document analysis – within an overarching interpretive methodology were used for this study. This study examined the "meaning which an action had for the actor" within the "comprehensive and given social reality that confronts the individual", thus an interpretive methodology was appropriate for this study (Chua, 1986, p. 614). An interpretive perspective aims to understand human phenomena from the perspective of the research subjects (the auditors) and to uncover and understand what lies behind practices about which little is yet known (Cavana *et al.*, 2001; Silverman, 2005; Strauss and Corbin, 1990). For this study, combining research interviews with an interpretive perspective revealed the previously opaque perceptions and experiences of the practising auditors at whom AGS-1010 was directed.

The primary source of data was from semi-structured interviews of audit partners and managers in chartered accounting practices from around New Zealand because they are the audit team members expected to have the expertise, experience and technical competence required to assess potential environmental risks at the audit planning stage, before audit fieldwork is conducted. Eighteen senior auditors in chartered accounting practices agreed to participate in the study. Table 1 provides a breakdown of the interview participants.

Table 1: Categories of Financial Auditors Interviewed

Financial auditors	Total	Auckland	Wellington
Big 4 audit firms			
- Audit Partners	5	4	3
- Audit Managers	5	3	5
Medium sized audit firms			
- Audit Partners	4	2	4
- Audit Managers	4	1	4
Total – Financial auditors	18	10	8

The face-to-face, semi-structured interviews were conducted in June to December 2005 and lasted on average one hour. This study adopted various strategies for securing interviews with the participants. Information on the research study was first emailed to potential participants before any attempts were made at contacting them; negotiating access with personal assistants led to more successes results than contacting the potential participants directly; and most of the interviews were carried out during the less busy time of the year (June and July) and often after work hours.

The interviews were questions were open-ended and semi-structured to allow the auditors to focus on particular areas that cover the research question (Silverman, 2005). The interviews were taped, recorded, transcribed and coded. NVivo7, a qualitative data analysis software programme, was used to manage the thematic analysis of the transcriptions. Data analysis for this study was informed by a range of literature (e.g., Appleton, 1995; Burnard, 1991), but focussed specifically on the work of Miles and Huberman (1994). Internal validity and confidence in the research evidence were achieved by converging observations from multiple respondents. Credibility was enhanced by theoretical generalisability, i.e. the ability to generalise back to key constructs of legitimacy theory. The evidence assembled using these dual research methods is reported next.

RESEARCH FINDINGS AND IMPLICATIONS

Several key themes emerged from the interviews with the auditors. In the following sections, research findings for each key theme and their implications for new knowledge are discussed to illuminate the interviewee’s perceptions of the challenges in the audit of environmental matters.

Initial planning considerations

Adequate audit planning requires an auditor to have knowledge of the audit subject matter which would assist in the identification of circumstances, events, transactions and practices which may have a material effect on the subject matter (NZICA, 2009e, ISA(NZ) 300: Planning an Audit of

Financial Statements). The consideration of environmental matters for audit planning often is initiated by what is being disclosed in the financial report:

The initial consideration of environmental matters is really initiated by the fact that the company has something in the accounts that would indicate the existence of significant environmental matters. (Audit Manager 11; Big 4 Firm)

The interviewees further explained that environmental matters are not always obvious and if unreported, makes it hard to detect.

I think the audit difficulty is that although they [environmental matters] have important financial statement implications for some industries and clients, they are less obvious and therefore are harder to detect. Actually it is difficult to search out for those unrecorded environmental matters. (Audit Manager 17, Big 4 Firm)

Also, not every company duly disclose all environmental matters and this is also another concern for the interviewees:

For companies whose published financial statements are being filed with the Companies Office, their directors often resist any disclosures of environmental liabilities so that they are not available for other people to see. [Audit Manager 1 – Big 4 Firm]

For companies operating in obvious environmental risky industries environmental matters would be obvious and the interviewees confirmed that they would be key focus for the audit:

Environmental issues are more likely to impact the financial statements of some companies in some specific industries. For those companies exposed to environmental risks, I think that it is already a key focus and is routinely a part of audit planning; something that an audit partner, manager and team are quite conscious of. (Audit Partner 4, Big 4 Firm)

For example:

If it is a freezing works [a New Zealand term for a meat abattoir] or a chemical storage facility or mining company, verifying environmental matters is an obvious part of the audit planning process when you're assessing the risks. (Audit Manager 1; Medium-sized Firm)

However, the interviewees saw the challenge in audit planning as their ability to identify environmental risks exposure or existing environmental matters early enough to plan for them; particularly for new audit clients, and existing audit clients operating in industries or sectors not classified as environmentally risky.

It's more of a problem for the newer clients. It is hard to get all the background information, especially if there has been a past environmental incident and client changed auditors. (Audit Partner 9, Medium-sized Firm)

Although some companies are not categorised as one operating in an environmentally risky industry or sector, yet unknowingly their activities may be impacting the environment or the company may have contravened some environmental laws. (Audit Partner 2, Big 4 Firm)

The interviewees said that they tended to rely on company processes and client management to inform them of any concerns they may have for any environmental risk exposures.

Finding environmental issues for the first time is the hard part. We are somewhat reliant on the organisation having processes for environmental matters to get flushed up to the top level. We are also reliant on the client to tell us if they have got any environmental issues. Much is dependent on what the client tells us. (Audit Manager 3, Medium-sized Firm)].

However, the interviewees are concerned that not everyone (both auditors and management alike) is conversant with environmental matters and may not even be aware that they exist for their clients.

If a company is not aware of the existence of these environmental matters, then it makes it much harder to detect its existence. (Audit Partner 2, Big 4 Firm)

For example

If the auditors would go out to a freight forwarders company (say), all they would see are trucks and storage facilities. Some freight forwarders transport chemicals. The transport company may not be aware that there's a hazardous material storage facility there. What would happen if the hazardous materials leaked? I should imagine whoever audits the company should take into consideration the environmental impact of chemicals transported. But I know from a trucking firm I used to audit, I don't think it made up a major consideration. (Audit Manager 1, Medium-sized Firm)

The interviewees are generally concerned about accessibility to all information necessary for assessing a company's exposure to environmental risks. Assessing the extent of exposure to environmental risks is very judgemental and subjective. Not getting complete information for some companies would make that assessment even more difficult:

I am continually concerned if I have complete information to assess the client's exposure to any environmental risks (Audit Partner 12, Medium-sized Firm)

The comments made in the previous sections led the interviewees to surmise that what is most crucial for auditors is their ability to detect the existence of environmental matters in the first instance. Once its existence is detected, environmental matters could be dealt with in the usual course of their audit.

The hardest part of the audit is to detect environmental matters for companies in the first instance. But once they are found then you can work through the issues. It is quite tough up to this point. (Audit Manager 1, Medium-sized Firm)

In this regard, the interviewees felt challenged by their general awareness that environmental matters may be present for their clients. To do this, auditors have to continually remind themselves to be on a look out, which is not always possible because of other equally important audit issues they also have to consider at the same time.

The challenge is the extent of the auditor's awareness of the company's potential environmental risk exposure. Often you don't become aware of it [environmental matters] until something comes out of the woodwork. (Audit Partner 9, Medium-sized Firm)

Besides:

The environment is just the environment and people don't really dwell on it or consider how it might impact the financial statements or the performance of a particular entity. (Audit Manager 14, Medium-sized Firm)

The interview findings indicated that there appears to be a general concern amongst the auditors about difficulties in identifying environmental matters specifically in the first instance, for companies *not* operating in an industry or sector exposed to significant environmental risks, or for newer clients. Audit concerns could be further exacerbated if client companies are unaware that their activities are affecting the environment. First stage awareness of the existence of possible environmental matters for a company is critical because unless an auditor is aware of its existence for a company, it might not be considered by the auditor when the audit is being planned. This could possibly result in the auditor not assessing the company's exposure to environmental risks and not determining the appropriate substantive procedures required for reducing the risk of not detecting a material misstatement in a financial report due to environmental matters.

The interview findings also indicated that the consideration of environmental matters for an audit of a company also very much depended on whether it was first reported in the financial statement and also on management's informing the auditors of any environmental concerns they might have for. This confirmed Roger's (2004) observation that unless information on environmental matters was disclosed to the auditors, they could completely miss detecting any omissions. Authors (Bamber & Iyer, 2007; Lemon, Tatum, & Turley, 2002) cautioned that management has the ability to control the level of information disclosed and auditors could possibly be unduly influenced by management's biases.

Limited knowledge

Undoubtedly, all the interviewees have general knowledge on environmental laws and regulations but they realise that the knowledge is perhaps not sufficient to enable them to check that their clients are fully compliant.

We're aware it's there, we're aware of certain aspects of it but we're not chapter and verse qualified in it. (Audit Manager 1, Medium-sized Firm)

We wouldn't know all the environmental laws and regulations and that makes it very difficult to check that the entity is complying with all the laws and regulations (Audit Manager 11, Big 4 Firm)

Environmental laws are different from normal laws and regulations. If you don't comply with environmental laws, you may not be aware of the non-compliance for some time (Audit Partner 15, Medium-sized Firm)

The interview findings revealed concerns amongst auditors about keeping general awareness of clients' exposure to environmental risks, and noted the proliferation of environmental laws and regulations. AGS-1010 indicated that many environmental matters arise from legal obligations (paragraph 53). Any non-compliance by a company with laws and regulations regarding environmental matters may require accrual of remediation, compensation or legal costs. It is such accruals which may materially affect the financial report (paragraph 12). Therefore it is necessary for auditors to evaluate the reasonableness of management's estimates of the likely financial settlement of legal matters, and to corroborate the completeness of the legal matters identified by management (paragraph 53) (ICANZ, 2001a). To do this, it would be necessary for auditors to keep current with new developments in environmental laws and regulations in so far as they impact client significantly.

Measurability

Auditors use professional judgement to assess client's exposure to environmental risks and based on the assessment, would design audit procedures to ensure that the risk of material misstatement of the financial report due to environmental matters be reduced to an acceptably low level (NZICA, 2009c; ISA (NZ) 315). Risk assessment is generally subjective. The interviewees indicated that they would assess client's exposure to material environmental risks, but commented that the challenge lies in measuring the risks and also quantifying the qualitative environmental risk factors:

We have to assess what the environmental risk is and determine if there is any documentation available for it. We also have to know whether the client is actually addressing this risk, and whether they're quantifying it. (Audit Manager 1, Medium-sized Firm)

The challenge is definitely in being able to measure these things [environmental risks] and actually turn qualitative information into quantitative dollars and cents. (Audit Partner 2, Big 4 Firm)

For example:

If the company land is poisoned, it is very difficult to determine the impact; to assess and measure the materiality of its impact and how it can be measured in financial terms. (Audit Manager 14, Medium-sized Firm)

There are problems you know. How do you quantify it [environmental matters]? Is the client willing to quantify it? Do you go to the trouble of quantifying it? (Audit Manager, Medium-sized Firm)

ISA(NZ) 320: *Materiality in planning and performing an audit* states that auditors should also consider the *nature* of the item or transaction when judging its significance and states that in addition to the amount (NZICA, 2009f), and ISA (NZ) 250: *Consideration of Laws and Regulations in an Audit of Financial Statements* states that the *nature* of non-compliance with laws and regulations should be considered (NZICA, 2009b). ISA (NZ) 250 further explained that even if laws and regulations do not have a direct financial effect on the financial report, by its nature, the non-compliance may still influence the decisions of users and therefore is material.

The interview findings indicated that the auditors were more comfortable working with quantifiable information on environmental matters and concerned whether they were able to turn qualitative environmental information into quantifiable information that would enable them to assess environmental risks exposures. It is not always possible to use a purely quantitative basis to decide whether an item is material, because for example, the emission of a small amount of toxic substance (for example dioxin or mercury) can be material to the receiving environment (Blokdijs & Driehuis, 1992). Kranacher (2007) also cautioned that qualitative considerations are just as important as quantitative considerations, especially for environmental matters and, therefore, should not be neglected because the issues behind the numbers often reveal more information than the numbers alone .

Accounting Treatment

At the date when AGS-1010 was issued, there were “few authoritative accounting standards that explicitly address the recognition, measurement and disclosure of the consequences for the financial reporting arising from environmental matters” (ICANZ, 2001a, paragraph 17). AGS-1010 recommended that auditors apply the accounting standard for ‘Provisions, Contingent Liabilities and Contingent Assets’ which provided the general considerations which apply to the recognition and disclosure of contingent losses, including losses as a consequence of environmental matters. The accounting standard also provides some examples of environmental liabilities as a consequence of environmental matters. All the interviewees indicated that they would apply the accounting standard for ‘provisions and contingent liabilities’. However, they remarked that applying the definition for provisions and contingent liabilities to environmental matters and calculating its financial effect are not straight forward.

I think it is appropriate to apply the accounting standard for ‘provisions and contingent liabilities’ when accounting for environmental matters. (Audit Manager 1, Medium-sized Firm)

Environmental areas can be a bit grey at times because you need to estimate the financial effect of the environmental obligation. For example, when a landfill is closed, it still needs to be maintained, leached and the gas emissions released. A landfill affects the environment for the next 50 years. The obligations for the next 50 years need to be discounted to present day value. So what are the entity’s environmental obligations? And who do we ask to calculate the cost of

the remediation? Sometimes we get an engineer or a quantity surveyor to quantify that. From the auditors' perspective, we know we will have to check the calculations. (Audit Partner, Big 4 Firm)

[So] the big risk is estimating how much it will be and what method the company will use to restore it; and of course the extent of restoration that's required. (Audit Partner 15, Medium-sized Firm)

Many questions were raised on the application of the accounting standard:

If the environmental matter meets the definition of a contingent liability, you need to make a provision for environmental obligations under the current New Zealand Equivalent of the International Accounting Standard 37: *Provisions, Contingent Liabilities and Contingent Assets*. However, when is it a contingent liability? When does it fall within a definition of a provision? Well we've got contingent liabilities but when are they actual obligations that have to be accounted for in the balance sheet? (Audit Manager 14, Medium-sized Firm)

The interviewees also explained that reporting environmental matters as contingent liabilities meant that auditors would have to search for them.

Environmental matters are not normally separately disclosed. They are usually reported as a contingent liability, which does not make them obviously visible to the users of financial statements. As such, it takes greater effort for auditors to search for them. (Audit Manager 11, Big 4 Firm)

Using the accounting standard on 'provisions and contingent liabilities' for environmental matters has raised concerns for the interviewed auditors. Munter and Sacasas (1996) observed that it is often difficult to evaluate the accounting and disclosure requirements applicable to environmental issues adequately and Rezaee et al.'s (1995) added that a lack of authoritative accounting standards and uncertainties associated with identification, evaluation and measurement of environmental matters and also contingent liabilities in general has resulted in inconsistent accounting treatment of environmental matters in current practice. Hence, Baker and Owsen (2002, p. 786) raised the concern "whether any form of audit can be effective without strong standards of reporting".

Reliance on experts

AGS-1010 acknowledged that "the environmental area is an emerging speciality"; and management may require "technical advice from specialists to assist in developing accounting estimates and disclosures related to environmental matters" (paragraph 46) (ICANZ, 2001a, paragraphs 46,48). The auditor's education and experience should enable the auditor to be knowledgeable about business matters in general, but the auditor is not expected to have the expertise of an environmental expert. Similar to management, they too would benefit from seeking technical advice for environmental experts, and this is acknowledged by the interviewees:

In the current global environment, we now have to deal with audit matters which are outside the sphere of our accounting and auditing expertise – and

they can sometimes be very subjective issues. It is getting all too much sometimes, so we have to rely on the work of experts to some extent. In terms of our level of understanding of [environmental] risk areas and identifying it as a risk area that can have an impact on the financial statements, we rely on the work of environmental experts. Environmental risk assessment is one type of audit issue which we do not have a great deal of expert knowledge about and so we do rely on experts. (Audit Partner 9, Medium-sized Firm)]

But, they felt that it is very difficult to find a suitably qualified environmental expert in New Zealand to assist them:

The biggest issue would be finding a specialist particularly within the New Zealand environment who would be in a position to give an auditor the type of information that we'd need. Internationally I guess it's not too much of an issue but if you are in the New Zealand environment it's the biggest problem. I guess we've got to be careful who we rely on for that sort of stuff as well. (Audit Manager 11, Big 4 Firm)

The previous sections reported various issues which concern the interviewees in auditing environmental matters and therefore the necessity to somewhat rely on environmental experts. However, concerns in locating suitably qualified experts in New Zealand to assist them would raise further concerns about whether the task of considering significant environmental matters in financial reports is extending the boundary of financial audits and reflecting unreasonable expectations of auditors' knowledge of environmental issues and auditing environmental matters.

RESEARCH CONCLUSIONS

This paper reported interview findings on auditors' views about the challenges they face in auditing significant environmental matters for a company which are relevant for financial reporting. The auditor plans an audit by first analyzing the financial report which management has prepared and then enquiring if company has any significant issues that the auditor should know about. Only significant environmental matters which are relevant to a client's financial report would be considered in the planning. Auditor generally ought to be aware that significant environmental matters exist for the company. However, in some cases, unless disclosures are made in the financial report or communicated to the auditor, auditors could risk not considering environmental matters and environmental risks exposure in audit planning. This is because generally auditors are not always aware that environmental matters exist for a new client or clients not operating in obviously environmentally sensitive industries or sector.

To some extent, auditors rely on client's processes and management to inform them of any exposures to environmental risk. However some clients are not with the play and may not be even aware of the existence of environmental matters for their clients. If unreported, makes it hard for auditors to detect. There are also some clients who chose not to disclose information on environmental matters.

The auditors expressed concerns that keeping up with the prolific environmental laws and regulations poses a challenge for them. Environmental matters are not always obvious, but it is not always possible to obtain all information necessary for assessing a company's exposure to

environmental risks. Again this would pose a limitation for auditor's professional judgment. Detecting material risks exposure for a company is generally subjective. For companies with significant environmental matters, auditors would assess their exposure to significant environmental risks. However, they indicated that they are more heavily focussed on quantitative factors. Where there are any qualitative environmental risks factors, they would attempt to quantify those.

AGS-1010 recommended that auditors apply the accounting standard for 'Provisions, Contingent Liabilities and Contingent Assets'. However, interpretation of the accounting standard in terms of environmental matters is subjective and this can lead to some confusion in the application. The audit of environmental matters would be more effective if there are strong standards of reporting. The research findings confirmed that auditors do seek technical advice but there are few suitable qualified environmental experts in New Zealand to assist them. Reflecting on the various interview findings would lead to a deeper question on whether the task of considering significant environmental matters for the audit of a company's financial report is extending the boundary of financial audits and reflecting unreasonable expectations of auditors' knowledge of environmental issues and auditing environmental matters.

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