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IMPLEMENTING A CARBON MEASUREMENT & REPORTING SYSTEM IN

AN INTERNATIONAL NON-GOVERNMENT ORGANISATION: A CASE STUDY

A THESIS

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Abstract

The movement towards sustainable business practices has been necessitated by the growing acceptance that traditional business practices are unsustainable: financially, socially and environmentally. To date, studies have largely been concentrated on the for-profit sector, in particular on the implications for investors. In this research, I utilise an action research methodology to explore how the implementation of a carbon reporting system impacts the social license to operate in a large international non-governmental organisation, Christian Blind Mission. The case study summarises the process of developing the reporting system, tools, and implementation in this large organisation spanning 76 countries. The purpose of this study is to utilise institutional theory to demonstration how the NGO's accountability has progressed beyond only being accountable to the INGO Accountability Charter to include stakeholders under the Social Licence to Operate for long term sustainability. I utilise a new institutional theory perspective in particular: constructing normative networks, 'changing normative association' education, undermining assumptions and beliefs, and enabling work. I utilise Institutional theory as a means to explain how institutional pressures change organisational behaviour and the implications of the pressures while implementing a carbon measurement and reporting system. I also discuss the implication of carbon reporting on organisations Social Licence to Operate. I also highlight the need for research in implementing traditionally for-profit sustainability tools in the not for profit sector.

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1. Introduction

The movement towards sustainable business practices has been necessitated by the growing acceptance that traditional business practices are unsustainable: financially, socially and environmentally. A growing stream of accounting scholars have focused their work on the role of accounting practices in more sustainable forms of business (de Villiers & van Staden, 2011; Faisal, Greg, & Rusmin, 2012; Fauzi, Svensson, & Rahman, 2010; Graham, 2010; Gray, Owen, & Adams, 1996; Jensen & Berg, 2012; Joseph, 2012; Kook Weng & Boehmer, 2013; Koot, 2005; Owen, 2006; Prno & Slocombe, 2012; Sherman, 2012). The importance of carbon reporting to organisations has become central to these considerations as a key area of focus to reduce a business impact on the environment.

To date, studies have largely concentrated on the for-profit sector, in particular on the implications of sustainability measures for investors (Haigh & Shapiro, 2011). Additionally, many of these studies have been quantitative in nature, focusing on the uptake of carbon reporting practices (Archel, Fernández, & Larrinaga, 2008; Haigh & Shapiro, 2012; McGrath & Mathews, 2008). The studies that relate to the NGO sector focus on the contribution of NGOs' to advocate for legislation and practices to enhance sustainability as well as studying the partnerships formed between NGOs and Companies (Baur & Arenas, 2014; Cadman, Maraseni, & Blazey, 2012; Doh & Guay, 2006; Esben Rahbek Gjerdrum & Pedersen, 2013; O'Sullivan & O'Dwyer, 2009; Pallas & Urpelainen, 2012; van Broekhuizen & Reijnders, 2011). However there has not been a study that consists of a case study as well as action research to study the complex environment in which NGOs operate and the complexities that can arise when implementing a sustainability concept in an NGO.

This thesis contributes to literature by firstly demonstrating that carbon management is not always a linear process. Secondly the case focusses on

developing a carbon reporting and measurement system while existing literature focusses on carbon management and reduction. The thesis also contributes to theory by utilising new institutional theory as well as demonstrating that enabling can be utilised to create institutional change as well as maintaining institutional change. Lastly this thesis contributes to the literature by demonstrating that carbon reporting can be used to enhance an organisations SLO in the NGO sector.

In this research, I utilise an action research methodology to explore how the implementation of a carbon reporting system impacts the social license to operate in a large international non-governmental organisation (NGO), Christian Blind Mission (CBM). The impetus for the implementation arose from proposed changes to legislation governing the funding of NGOs in the European Union. Under the proposed changes, all NGOs would be required to produce annual carbon reports in order to comply with EU funding requirements. I draw on institutional theory to discuss the issues which arose during the implementation of the carbon reporting system. I then discuss how carbon reporting enhances a Social Licence to Operate (SLO) which can be seen as an institution: a set of rules and decision making procedures, which are negotiated between companies and local communities throughout the business lifecycle (Prno & Slocombe, 2012, p. 348).

The case study summarises the process of developing the reporting system, tools, and implementation in this large organisation spanning 76 countries. The lessons learned from this experience provides a detailed account of the process of implementing such a system, providing both researchers and practitioners with valuable insights into the implementation process. Additionally, this research makes a significant contribution with its focus on the NGO sector.

In this chapter, I begin by outlining the purpose of the research. I then provide a brief background to CBM and to the concept of a Social License to Operate. I follow by outlining the structure to be followed in the remainder of the report.

The purpose of this study is to utilise institutional theory to demonstration how the NGO's accountability has progressed beyond only being accountable to the INGO Accountability Charter to include stakeholders under the SLO for long term sustainability.

This thesis is structured into seven further chapters. In chapter 2, I outline the background of the organisation CBM.

In chapter 3, I present a review of the extant literature, particularly focusing on the sustainability reporting and the subset of carbon accounting and reporting. I conclude that although there has been significant attention paid to forms of sustainability reporting in the private sector, there have been few examples of research focused on the NGO sector, despite increasing pressure on this sector to mandate carbon reporting.

In Chapter 4, I outline the theory I draw on in this research. In particular, I discuss the development of institutional theory, from the early work focusing on almost exclusively on isomorphism, to the 'new' institutional theory which brings in aspects of culture and context.

In Chapter 5, I present my methodology and method. I describe my use of an action research methodology, and describe methods used to gather my data, in particular case study which is presented in chapter 6, interviews, field notes and secondary research.

Chapter 6 consists of the presentation of my findings, in the form of a case study. In this chapter, I outline the process I undertook in the design and implementation of a carbon reporting system at CBM. I also provide recommendations which arose from the analysis of the original carbon data set, provided to the organisation with regards to how to reduce CBM's carbon footprint.

In Chapter 7, I draw on my literature and theoretical perspective to discuss the implication of implementing a carbon measurement and reporting system. I utilise previous literature predominantly from the for profit sector as a means to demonstrate the differences between the private and NGO sector. I also utilise Institutional theory as a means to explain how institutional pressures change organisational behaviour and the implications of the pressures while implementing a carbon measurement and reporting system. I also discuss the implication of carbon reporting on organisations SLO.

In Chapter 8, I conclude my thesis, and discuss implications both operationally for the NGO sector, and for future research.

2. Background

In this section describe the background of the organisation CBM and the background of the green office project.

2.1. CBM

Christian Blind Mission (CBM) is an international Christian development organisation, committed to improving the quality of life of people with disabilities in the poorest communities of the world for 100 years ("About CBM," 2014). CBM was founded by a German Pastor Ernst Jakob Christoffel in Turkey in 1908 with the aim to provide homes for blind children, orphans, and physically disabled children in the Middle East and Asia ("About CBM," 2014). The head office is situated in Bensheim, Germany which houses 80 employees who facilitate the distribution of funds from donors to field projects. CBM has a hierarchical structure with 13 advisory board members from around the world, seven members of the senior leadership team (SLT) which is represented by the head of each department with the remainder consisting of supporting staff.

CBM International aims to have an inclusive world in which all persons with disabilities enjoy their human rights and achieve their full potential. As a Christian International Nongovernmental Organisation (INGO) acknowledging its environmental responsibility, CBM has also signed the Micah agreement in 2009 (" INGO Accountability Charter," 2014). In this public document CBM states that it is determined to be part of global efforts aimed at improving and protecting the environment, and seeking to reduce climate change: including through the lowering of carbon emissions. Under CBM's core value of integrity, Under CBM's core value of integrity, it strives to be a good steward of the resources entrusted to it: seeking to use the world's resources in a more responsible manner. This is seen through CBM's aim to be environmentally responsible and the creation of its Environmental Stewardship Working Group. CBM relies on donor funds, a

substantial part which is attracted from European Commission who has mandated carbon reporting for International NGO's by 2014

CBM works with Members Association to raise funds and awareness of disability issues of children in less developed countries in first world nations and then distributes the funds raised, approximately 62.5 million euros including scrutinised overhead expenditure, to projects in developing countries. CBM International gathers funds from over 850,000 active supporters and donors through 12 Members Association and together with 624 partner organisations supports 714 projects in 73 countries in: Africa, Asia, Latin America, and the Middle East. These projects are aimed reducing the prevalence of diseases which cause impairments, minimise the conditions which lead to disability, and promote equal opportunities for economic empowerment, livelihood security, and full inclusion in all aspects of society for persons with disabilities.

2.2. The Green office project

CBM initiated the Green Office Project in collaboration with the University of Waikato in 2012. The purpose of the project was to assess the green office standards in CBM International and to develop recommendations for the office management to improve CBM's environmental soundness. However, upon initial investigations, it became obvious that there were significant challenges facing CBM, in particular the proposed changes to EU funding of NGOs. Under the proposed changes by the EU all NGOs will need to produce annual carbon reports as part of the 2015 reporting year, with funding becoming contingent on organisations meeting these reporting requirements. For CBM, EU funding constitutes a significant portion of their total funding. Therefore, the initial project brief was given increased impetus and importance on an organisational level.

The CBM family did not have consensus on carbon reporting implementation. The International office initiated the project and wanted to roll out a carbon

footprint reporting system to all their offices around the world. The Australian office produced a carbon footprint report in 2009 and 2011; however, after assessing the emission factors it became apparent that the factors were too high and was sourced from websites other than the GHG Protocol. The other offices around the world had not produced any carbon footprint reports and did not have any suggestions on a measurement and reporting system.

3. Literature Review

In the last few decades environmental and social concerns have been the prominent discussion points in reporting initiatives (Armbrester & Clay, 2011; De Villiers & van Staden, 2010; Deegan, 2000; Elkington, 1998; Gray et al., 1996; Kaushik, 2012; Owen, 2006). Business focus has moved beyond maximising shareholder wealth to emphasising the importance of organisational effects on human and ecological aspects of society and the planet (Kaushik, 2012).

The term sustainable development has arguably been popularised by the Brundtland report published by the World Commission on Environment and Development in 1987 (Borowy, 2014). The aim of the report was to set guidelines to create "a future with development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, World Commission on, & Development, 1987, p. 43). The report was utilised as a fundamental starting point during the United Nations Conference on Environment and Development in Rio de Janeiro in 1992 (the Rio conference) where the leaders of the world set out the principles of sustainable development. The Rio conference focussed on Agenda 21 which incorporated environmental principles of sustainable development into the current financial focussed organisations ("AGENDA 21," 2007). A further UN initiative aimed at furthering sustainable development is the UN Global Compact. The UN Global Compact is a framework which has gained considerable support amongst the global business community. This framework aims to assist in the development, implementation, and disclosure of sustainability policies and practices. To operate in accordance with the framework, businesses must commit to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption ("UN Global Compact," 2007).

The refocus on environmental and societal concerns was further pressed by the public which demanded to be informed of actions taken by organisations in response to social and environmental concerns (Gelb & Strawser, 2001). This led to firms employing sustainable business practices (Everaert, Boets, Lock, Džeroski, & Goethals, 2011). The government and public focus has consequently moved away from the dominant traditional financial performance reporting to include non-financial information which focusses on environmental and social aspects. The business response to these concerns has been to incorporate environmental and social aspects into traditional financial reporting in the accounting domain through for example producing a GRI report.

3.1. Sustainability reporting

The need for sustainable practices has emanated from the growing need to inform society of the actions taken by companies in response to social and environmental concerns (Everaert et al., 2011). Organisations realise that they need to ensure that their sustainability actions are disclosed to stakeholders (Gelb & Strawser, 2001). This awareness that sustainability information should be disclosed to stakeholders is reinforced by the increase in accountability imposed by stakeholders on organisations in relation to their social and environmental impact.

Many studies have suggested reasons behind sustainability reporting (Aerts & Cormier, 2009; Brennan, Binney, McCrohan, & Lancaster, 2011; Clarkson, Li, Richardson, & Vasvari, 2008; de Villiers & van Staden, 2011; Evangeline, 2007; Koot, 2005). The most prominent theoretical perspectives applied to discussions of sustainability disclosure are stakeholder theory (Belal & Roberts, 2010; Eccles, Krzus, Rogers, & Serafeim, 2012; Hilke Elke Jacke, 2010; Kaushik, 2012; Leigh, 2011; Manetti & Toccafondi, 2012) and institutional theory (Amran & Haniffa, 2011; Jensen & Berg, 2012; Rahaman, Lawrence, & Roper, 2004; Smith, Haniffa, & Fairbrass, 2011). Stakeholder theory proposes that companies focus on

stakeholders which can influence the resources needed to obtain companies' primary objectives, traditionally, creating a profit making enterprise (Ponsford & Williams, 2010). Drawing on the institutional perspectives, it follows that firms will voluntarily disclose sustainability information to enhance legitimacy by adhering to institutional pressures such as legislation. The stakeholder perspective shows that firms voluntarily disclose sustainability information to reduce information asymmetry between agents and stakeholders (Kaushik, 2012). Stakeholder theory postulates that firm disclose information based on their stakeholders' needs as opposed to institutional theory that postulates that firms disclose sustainability information as a result of institutional pressures.

Utilising an institutional approach, Petrini and Pozzebon (2010) argue that isomorphism has reached the normative stage of professionalization due to mechanisms such as communication and training from the GRI. According to the authors, managers who obtain similar training, to other managers, and advice on GRI implementation from specialists, and interact with other professionals, are socialised into similar views regarding sustainability and sustainability reporting as explained through isomorphism. Empirical studies have supported the effect of institutional pressures on sustainability reporting, highlighting the key role of government agencies, the media, industry associations, and environmental group pressures in the decision to adopt proactive environmental management practices (Delmas, 2002; Hoffman, 1999; King & Lenox, 2000; Rivera & De Leon, 2005). These studies establish that there are patterns in environmental reporting due to institutionalisation; however, they have neglected to take into consideration the other aspect of sustainability reporting, namely social reporting which is a means to disclose information on the impact of an organisation on society (Marcuccio & Steccolini, 2005). It is argued that in order to establish a comprehensive view of sustainability reporting, both dimensions should be taken into account (Godfrey & Hatch, 2007).

Stakeholder theory and institutional theory have been used as theoretical perspectives to provide reasons for sustainability reporting; however Neu, Warsame, and Pedwell (1998) argue that firms take only the relevant publics into consideration and ignore the marginal publics. Neu et al. (1998) argue that relevant publics are shareholders and regulators that can affect a frim, "while marginal publics are seen as the remaining stakeholders who do not have a direct influence on a firm" (p. 270). However, many studies contradict this argument by stating that firms take only shareholders into account. For example de Villiers and van Staden (2011) extends the studies by Gray et al. (1996); and Deegan, Cooper, and Shelly (2006) to argue that Australian, US, and UK individual shareholders seek environmental information in annual reports, in the belief that organisations should be held accountable for environmental and social actions as well as economic. In this case, shareholders are seen as the relevant public; and the needs of broader society are not taken into consideration in such a model.

Companies have responded to these expressed needs by providing information in their annual reports or in standalone reporting. However shareholders often mistake quantity for quality in sustainability reporting. Shareholders assume that more information is preceded by action which enhances legitimacy to firms through the purported corporate responsibility (Milne, Walton, & Tregidga, 2009). The quantity of information does not necessarily mean that there is substance to the information (Aerts & Cormier, 2009; Cho, Roberts, & Patten, 2010; Clarkson, Overell, & Chapple, 2011; Deegan & Rankin, 1996). Milne et al. (2009) argue that although companies are disclosing more volume of information in their annual reports, it is largely lacking in content and does not necessarily reflect the practices of the firm.

Despite this, some shareholders have moved to demand assurance by auditors and external consultants of sustainability reports, due to the lack of content (Graham, 2010). Selected firms have responded to this demand by having their sustainability reports assured by auditors. It is argued that this will lead to

enhanced legitimacy for a firm by giving in to institutional pressure (O'Dwyer, Owen, & Unerman, 2011). O'Dwyer et al. (2011) demonstrate that sustainability reports lack depth in both information and content, given that assurance is provided without verification. This view is further supported by Clarkson et al. (2008) and Clarkson, Li, Richardson, and Vasvari (2011) who illustrate that sustainability reports lack depth and content in terms of information and that even assurance does not enhance the credibility of these reports. Therefore Clarkson, Li, et al. (2011) suggests that sustainability disclosure should be mandatory and should bear a closer relationship to performance. A recent trend has been to mandate carbon reporting for the INGO sector as a means to assist in addressing environmental concerns.

3.2. Carbon reporting

As described by Weinhofer and Hoffmann (2010), organisations are facing increasing pressure from governments, shareholders, and customers to address their carbon footprint. The approach to address these concerns often involves carbon reporting which is defined as incorporating the reporting of a company's carbon footprint into regular reporting cycle (Stanny & Ely, 2008, p. 339). According to Toffel and Reid (2009) a company's carbon footprint is a measure of their impact on the environment through carbon dioxide and other greenhouse gas (GHG) emissions'. Carbon reporting is undertaken by organisations in a wide range of industries, and is particularly common in resource-based industries including Oil and Gas Industries and Mining Industries. However, according to Haigh and Shapiro (2012), much of the current research on carbon reporting focuses on the importance of carbon reporting, rather than detailing methods used and application to varied contexts.

Carbon accounting follows the trend described above by including an increasingly complex range of factors into regular reporting cycles (Rankin, Windsor, & Wahyuni, 2011). In general, carbon accounting falls into the sphere

of management accounting, constituting reporting to assist with management decision making (Singh, 2008). As detailed by Weinhofer and Hoffmann (2010), there are many different measurement frameworks proposed; however, most are grouped into external and internal factors for measurement. Internal factors are all those which occur within the daily activities of the organisation, whereas external factors are all instituted by government and stock exchange regulations, as well as industry bodies.

However in the new century, there is an increasing trend towards mandated carbon reporting and emission trading. For example, the State of New Mexico in the United States implemented mandatory reporting of greenhouse gases in 2008 (Mulugetta, Jackson, & van der Horst, 2010; Zhou & Green, 2013), and the Australian government began the process towards mandatory carbon reporting with the introduction of the National Greenhouse and Energy Reporting Scheme (NGERS) in 2007. This policy began with mandated reporting for corporates with emissions above 100 terajoules, implemented predominantly by the energy industry, with a view to extending to all Australian industries within 2014 years. However, the instatement of a new prime minister, Tony Abbot in late 2013 saw change brought to this policy which is yet to be changed (Stewart, 2014). Although the policy changes have not been confirmed there is a debate around which sectors including the NGO sector should produce a form of carbon report. In the European Union (EU), mandated carbon reporting is proposed to be introduced and applied to Non-Government Organisations (NGOs) who are current beneficiaries of EU funding ("Mandatory GHG Emissions Reporting Is On Its Way," 2012). Under this proposal, for NGOs to continue to be eligible for EU funding, they must produce annual carbon reports.

In addition to the mandated reporting policies, there are other voluntary disclosure schemes operating around the world, for example in France and Canada (Zhou & Green, 2013). Several studies have examined reasons behind such disclosure (Deegan, 2000; Deegan & Rankin, 1996; Gibson & O'Donovan, 2007; Noel & Craig, 1998). These studies argue that carbon reporting is utilised

as a means to gain and enhance legitimacy in society.   In many other contexts, carbon reporting is being included as a part of sustainability reporting guidelines applied to industry body members, for example, the Sustainability Business Council of New Zealand ("Terms of membership," 2014).

In addition to the above stated environmental concerns from the academic, business community and general stakeholder groups, there are also key drivers for organisations to implement carbon reporting systems. One key driver is the increase in investment, and a positive impact on share price. As described by Rankin et al. (2011), many organisations believe that carbon reporting will increase legitimacy amongst existing shareholders and prospective investors, and as such, positively impact on perceptions of company value. In response, Haigh and Shapiro (2012) investigated whether carbon reporting impacted on investors portfolio decision-making. The authors concluded that while investors viewed organisations undertaking carbon reporting positively, this view did not extend to impacting on investment decision-making.

Another cited reason is that a focus on reducing energy consumption will, over and above wider environmental benefits, reduce organisational costs. As noted by Patel (2008), organisations commit to sustainability programmes for reasons including: reducing energy consumption in order to reduce costs (p. 33). Peckham (2010), furthers this argument and found that the primary driver for implementing carbon reporting for over 80% of respondents was the financial sustainability of the organisation. Patel (2008), further argues that reducing energy consumption will have downstream environmental effects from reduced carbon emissions, which enhances public perception of the company's environmentally responsible reputation; however will arguably not have an effect on investors decision making (Haigh & Shapiro, 2012).

Therefore, research would suggest that the primary drivers for organisations who implement carbon reporting still spears to focus on the financial benefits that may follow. This is despite such systems appearing to be unrelated to the

decisions shareholders make in terms of future investment. Additionally, this suggests that organisations currently undertaking such reporting are doing so as a response to reputational concerns (Haigh & Shapiro, 2012).

3.2.1. Carbon reporting framework

As a general framework, Tang and Luo (2014, p. 86) suggest an effective carbon management system should include: (1) Board function (top-down approach); (2) Carbon risk and opportunity assessment; (3) Staff involvement; (4) Reduction targets; (5) Policy implementation; (6) Supply-chain emission control; (7)Greenhouse gas (GHG) accounting; (8) GHG assurance; (9) Engagement with stakeholders; (10) External disclosure and communication (p. 86). Tang and Luo (2014) argue that the suggested management system is executed in a linear sequence to enhance effective carbon management.

3.2.2. Carbon management

Carbon management strategies are concerned with the approach organisations take in addressing their carbon footprint (Hua & Cheng, 2011). According to Patel (2008), in order for an organisation to make meaningful reductions in its carbon footprint, managers much approach the issue from a "systemic and strategic perspective, embedding carbon management processes throughout the organisation" (p. 34). A key part of this management is being able to accurately measure and report on carbon emissions (Mandell, Fastigheter och, Bygg- och, Kth, & Skolan för arkitektur och, 2011). Patel (2008) places carbon measurement, accounting, and reporting at the centre of this process: "How we capture data, turn it into information, utilise for management actions to help reduce usage and costs before being able to enter these figures into these carbon-calculators is the key" (p. 33).

3.2.2.1.   Carbon reporting standards

Research rendered two available measurements guides: the Green House Gas (GHG) Protocol and the International Organisation for Standardization's ISO 14064. The calculation and reporting standard implemented in this case study was chosen based on the research and recommendation made by me. The decision was also influenced by the standard used for the Australian carbon reports which utilised the Green House Gas Protocol measurement and reporting standard. The following section contains a comparison between the Green House Gas Protocol and the ISO 14064.

3.2.2.2.   Green House Gas Protocol

The GHG Protocol is an international standard for GHG accounting and reporting. The standard was developed by the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) in collaboration with multiple stakeholders as a reaction to the evolving climate change policy. The GHG Protocol is currently being used by 128 International corporate such as British Petroleum and General Motors and 22 non-corporates such as EU Emissions Trading Scheme and the Global Reporting Initiative. The first addition of GHG Protocol standards was released in 2001 followed by multiple detailed guidance documents and calculation tools till date. These documents render a comprehensive step-by-step guide to create and develop a GHG inventory and a carbon foot print report.

3.2.2.3.   International Organisation for Standardisation: ISO 14064

The ISO 14064 was developed by the International Organization for Standardization who consists of 175 experts from relevant disciplines who

collaborate to create international standards. The ISO 14064 standard consists of three parts which is aimed at assisting corporates designing and developing GHG inventories, produce a carbon foot print reports, and provide guidance for conducting GHG information validation and verification. The standard is adopted by 52 corporates worldwide including the School of the Environment-University of Toronto and DNV KEMA Energy and Sustainability.

Table 1: GHGP and ISO 14064 comparison

	GHG Protocol	ISO 14064
Benefits	• Existing best practice • Rigorous road testing • Created through dialog with multi stakeholders approach • Robust and user friendly • Step-by-step guidance • Guidance for large corporates and small office base organizations • Electronic worksheets provided for easy calculation • Available in English, Chinese, Japanese, Korean, Portuguese, Spanish, and French. • Carbon reduction guide • Promoted by WBCSD and WRI • GRI compatible and	• Minimum requirements • General guidelines • Created by 175 international experts • Includes verification guide • ISO certification • Carbon reduction guide • Promoted by WBCSD and WRI

	recommended	
Drawbacks	• More complex than ISO 14064 • Does not have a guide for verification	• Only minimum requirements • In English only

Source: Own compilation

The ISO 14064 is based on the GHG Protocol; however the ISO 14064 guidelines are minimum standards for compliance with GHG Protocol best practice standards. The GHG Protocol is a more comprehensive step-by-step guide on calculating and reporting on the carbon footprint while the ISO 14064 provides a more general guide. The ISO 14064 provides a verification guideline that is not specified in the GHG Protocol; however and external party such as TÜVRheinland, a German based company, can provide assistance for GHG Protocol verification.

The literature focusses on for profit organisations and their rational behind carbon reporting. However, although NGO's have not had the same pressures placed upon them in terms of sustainability issues, especially carbon emissions; because they are created to "do good" governments are recognising the importance of sustainable NGO's. The EU has moved to include NGO's in mandated carbon reporting legislation to increase transparent and accountable.

3.3. Social Licence to Operate

The Social Licence to Operate (SLO) concept emerged from the mining industry as a means of enhancing stakeholder engagement, in particular with local communities (Prno & Slocombe, 2012). The SLO is seen as a response to increased pressure from society to address negative social impacts caused by the mining industry (Lacey, Parsons, & Moffat, 2012). Lynch-Wood and Williamson (2007) argue that due to market, shareholder, and media scrutiny, firms have

recognised the importance of community engagement as an extension of corporate social responsibility. This has led to firms going beyond regulatory compliance to adhere to terms of a SLO in order to continue business operations (Gunningham, Kagan, & Thornton, 2004).

A SLO is defined by Nelsen (2006) as "a set of concepts, values, tools and practices that represent a way of viewing reality for industry and stakeholders" (p. 161). The definition is then extended by Nelsen to include "a purpose to create a forum for negotiation whereby the parties involved are heard, understood and respected", by which a company can "earn accountability, credibility, flexibility and capacity for both stakeholders and industry" (2006, p. 161). The wider definition used by Kealley (2012) states that a SLO is "a type of approval that must be sought and granted from local communities in which the activity is operating" (p. 7). Kealley (2012) extends the definition by stating that a SLO will provide the community with "comfort that risk is managed" (p. 7).

The various definitions suggest that a SLO is a social, unwritten, contract between companies and society for companies to acquire approval to start or continue with business operations. The terms of a SLO are negotiated by the company and its stakeholders. The social contract does not stem from a legal or regulatory compliance base; however, it is deemed to be the base for acquiring future economic certainty from society (Kealley, 2012). Society, particularly surrounding communities where business activities are carried out, has become a more powerful force in granting economic certainty, due to increased public awareness of the effects business has on society (Kealley, 2012).

Communities can influence the business activities of companies by, for example, petitioning against company permits to conduct business activities in the area. Therefore companies should enhance their stakeholder engagement to include communities, which may improve their ability to acquire a SLO and secure future economic certainty, through enhancing legitimacy (Kealley, 2012). Economic certainty, and the ability to continue with business activities, will no longer

depend solely on financial results (Nelsen, 2006). Companies, particularly in industries reliant on natural resources, should take social norms and expectations into consideration in their operations. Although the term SLO was introduced by industries reliant on natural resources, it has become evident from public demand for social responsibility that companies from all sectors should incorporate a SLO into their business practices (Browne, Stehlik, & Buckley, 2011). Social responsibility is denoted as a company's ethical behaviour towards stakeholders, which suggests the importance of stakeholder engagement and gaining a SLO (Williams, Gill, & Ponsford, 2007, p. 133).

A SLO is both tangible and intangible in the way in which it is acquired and the "insurance" it provides (Nelsen, 2006, p. 161). The tangible aspects of a SLO can be seen in outcomes after a SLO is granted. Companies receive the right to start or continue with business activities such as mining, agriculture, forestry, and power generation. For example, before a mining project is started the approval in the form of SLO should be obtained from the community before the mining activities commence. Society in return receives a form of insurance that the company will deliver on the agreed upon terms of the SLO. The intangible aspects of a SLO are most pertinent in the way in which it is agreed. The SLO is a unwritten agreement between society and a company which is intangible in nature (Ponsford & Williams, 2010). Intangibles such as "trust, reliability, quality, consistency, credibility, relationships, and transparency" should be 'acquired' between the company and stakeholders to create a SLO (Browne et al., 2011, p. 708). These intangible aspects are established by companies through building a relationship with the community to instil confidence that the company will uphold the terms of the SLO.

Jenkin (2009) argues that a SLO is a measurement of the confidence society has in a company that its actions and outcomes are socially acceptable. The SLO is a new 'dimension' to the drivers behind business, especially in industries reliant on natural resources (Nelsen, 2006). This dimension adds to a company's responsibilities to acquire acceptance from the communities which are affected

by the company's activities. This acceptance stems from the communities' support for the activities of the company through building relationships (Nelsen, 2006). Browne et al. (2011) argues that communication from the company is key in acquiring acceptance from the community. Communication assists in developing relationships and creating acceptance by incorporating shared community values and beliefs into business decisions and activities. This will in turn establish intangibles such as trust and reliability to further strengthen these relationships and eases the acquisition of a SLO.

The intangible trust can be seen as "embedded in the unspoken assumptions that underpin normal communication: that a speaker is being truthful, sincere, genuine and appropriate in what they say" (Browne et al., 2011, p. 717). A company should communicate its business activities to the community in such a way as to be seen as truthful and sincere. Companies which deliver on the expectations of communities arising from such communications will establish their reliability, consistency, credibility, and relationships, and consequently strengthen trust and their SLO (Browne et al., 2011). The quality and transparency of communication required for a SLO is however more complex to establish, as it relies on the community's perceptions of business activities and communications. Companies can combine open and honest communication with the requirements for building trust to enhance perceived transparency (Browne et al., 2011). A number of authors (in particular Browne et al., 2011; Jenkin, 2009; Nelsen, 2006) stress the importance of being perceived as producing transparent, quality information as part of fulfilling the "terms" of a SLO.

Jenkin (2009) argues that a SLO can be difficult to earn, and is easily revoked if society believes that the company is breaching the terms of its SLO. Relationships should be built with careful consideration of the relevant social-political-business environment and influences, which can be complex (Browne et al., 2011). Jenkin (2009) also states that negotiating and maintaining a SLO is a delicate process, due to the divergent views of the various parties involved being influenced by the community's shared values and experiences. To maintain a SLO it is

imperative to take into consideration changes in community expectations, and keep open lines of communication available to voice expectations and concerns (Jenkin, 2009). Nelsen (2006) argues that due to the nature of the SLO, companies are required to continuously reassess the terms of the SLO during the lifecycle of the project. The SLO must therefore be flexible enough to accommodate changes in social dynamics which may include cultural requirements (Nelsen, 2006). A SLO is not a static licence that is granted and held with constant terms for the duration of a business activity. Environmental and social needs change, as do the terms of the SLO. Evolving environmental and social demands make it imperative for a company to account for these demands to maintain the SLO.

The SLO concept emerged as a reaction to the convergence of civil society and the State as a body that demands accountability from business (Prno & Slocombe, 2012). This has extended the traditional government imposed regulations, or coercion imposed by legal requirements, to include demands from society, resulting in a shift of governance responsibilities to companies (Gunningham & Kagan, 2005). The shift has produced an extended governance process which includes traditional legislative coercion, as well as negotiation, accommodation, concentration, cooperation, and alliance formation with broader society (Prno & Slocombe, 2012, p. 349). The focus of this extended governance suggests the importance of acquiring a SLO as a means to facilitate the incorporation of institutional expectations (Gjølberg, 2009). Institutions are seen as the 'rules of the game' to which companies should adhere, imposed by stakeholders such as suppliers, communities and others who can influence, and are influenced by, a company's actions (Freeman, 1983; Lee & Hunt, 2012, p. 223). Therefore the rules are seen as the agreed upon terms of the SLO, as well as legal requirements which expand the governance role of companies to negotiate terms with society in order to conduct business activities.

As noted earlier a SLO can be seen as an institution: a set of rules and decision making procedures, which are negotiated between companies and local

communities throughout the business lifecycle (Prno & Slocombe, 2012, p. 348). The negotiations can be both formal and informal: for instance, meetings with parties with a stake in business activities, or the incorporation of cultural norms. However, Prno and Slocombe (2012) argue that the broad sustainability principle, namely that economic, social, and environmental benefits outweigh the impacts of the business's activities, is a prerequisite before a community will consider approval for a project This illustrates the need for companies to inform communities of their activities to ensure that the economic, social, and environmental benefits of the business's operations are known before activity commences.

3.4. Literature summary

The literature focusses on implementing and reporting sustainability practices in the for-profit setting. The for-profit response to sustainability reporting has been addressed through reporting under the GRI framework and through producing carbon reports. However, sustainability is central to the operation of the NGO sector. Therefore it is important to explore the differences and difficulties that can occur when implementing a traditionally for-profit solution to sustainability, in this case carbon reporting, in the NGO sector.

Previous research has focussed on for-profit reaction and solutions to sustainability reporting; however, with increased legislation in the NGO sector to mandate carbon reporting research based on NGOs are of increased importance. The increase in social licence to operate uptake in society has also increased the pressure on NGOs to operate in a more sustainable manner.

4. Theoretical Framework

The theoretical framework implemented in this research is new institutional theory. The following section describes traditional institutional theory by DiMaggio and Powel 1983 which is then followed by new institutional theory based on the seminal work of Lawrence and Suddaby 2006.

4.1. Traditional Institutional Theory

Institutional theory considers the form organisations take and provides explanations as to why organisations within particular 'organisational fields` tend to take on similar characteristics and forms. DiMaggio and Powell (1983, p. 147) define these organisational fields as those organisations that, in the aggregate, constitute a recognised area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organisations that provide similar services or products".

Two dimensions of Institutional Theory are depicted as isomorphism and decoupling. Isomorphism which is the focus of this paper is described by DiMaggio and Powell (1983, p. 149) as "a constraining process that forces one unit in a population to resemble other units that face the same environmental conditions". The main argument presented by DiMaggio and Powell (1983) for isomorphism is that firms which do not conform to organisational behaviour in the same field face additional scrutiny which will attract criticism from stakeholders.

Isomorphism describes three different processes namely: coercive-, mimetic-, and normative isomorphism (DiMaggio & Powell, 1983). Coercive isomorphism can result from 'formal and informal pressures' that is exerted on an organisation by other organisations on which they are dependant, as well as other cultural pressures in the society where the organisation operates

(DiMaggio & Powell, 1983). These pressures may be felt as a 'force, persuasive, or invitation' (DiMaggio & Powell, 1983, p. 149). The theory shows that organisations will succumb to outside pressure in order to retain legitimacy. Legitimacy depicts that organisation act within the norms and bounds of society in order to secure support from parties in their organisational field (Suchman, 1995). Coercive powers will 'invite, persuade, or force' organisations to report on social and environmental issues.

The mimetic approach is described by DiMaggio and Powell (1983) as the situation where organisations copy sustainability practices of other organisations in their organisational field to establish legitimacy. The approach relies on the ideology that 'uncertainty encourages imitation' which can be created by poorly understood or ambiguous goals, or when the environment creates symbolic uncertainty (Griffiths, 2009). The theory sets out an understanding that in order to survive through times of uncertainty organisations model their behaviour on the behaviour of other organisations.

The normative approach described by (Griffiths, 2009) as the pressures arising from group norms to adopt particular institutional practices seeks to explain why organisations in the same field adopt similar practices. The normative approach stems primarily from the trend of professionalisation of managers in organisations. This shows that sustainability reporting is in a state of maturity due to conformance to social expectations through training and experience with GRI (Petrini & Pozzebon, 2010).

Organisations have realised that institutional group demands sustainability reporting. The study by Tilt (1994) shows that pressure groups in Australia both demand and use sustainability information. The study is backed up by Deegan and Rankin (1996) who found that in Australia various classes of annual report users: shareholders, consumers, and government, seek environmental information. De Villiers and van Staden (2010) extend this study from Australia to include the UK and the US. Their study shows that individual shareholders seek

environmental information because they believe that organisations should be held accountable for their economic as well as environmental actions.

Sustainability is seen as important to annual report users; however, it is important to establish who is responsible for initiating sustainability practices and reports. Bansal (2003) argues that in order to facilitate commitment to sustainability top management must 'buy' into the concept of sustainability. This will lead to management implementing organisational change with a top-down-approach by applying strategies to integrate sustainability into existing business processes. Pezzack (2007) argues that sustainability integration into business processes is underpinned by successful integration of sustainability into processes such as governance, human resource management, and stakeholder engagement. This will lead to management implementing organisational changes to ensure sustainability is integrated into all levels of business processes by creating congruence between employee concerns, organisational processes, and sustainability focusses (Pezzack, 2007). The arguments show that in order to integrate sustainability into business processes managers must take active steps to centre business processes on sustainability.

DiMaggio and Powell (1983) argue that strategic conformity is used to avoid criticism from institutional players who seek out organisations which deviate from the norm. Organisations use sustainability reporting to discharge their duty to the players who impose institutional pressure (Tullberg, 2012). This research emphasises that organisations manage sustainability for sound business reasons by managing the 'new business risk' that is imposed by institutional players (Pezzack, 2007). This is done to gain short term business opportunities such as increased sales, or to gain a long term strategic position in society such as retaining employees and customers (Pezzack, 2007). The argument is substantiated by showing that managers strategically manage sustainability to gain legitimacy from stakeholders in order to secure resources, human capital, and consumer approval (Pezzack, 2007). Legitimacy is gained by portraying good corporate citizenship while aligning information disclosure with the needs of

players imposing institutional pressures. These players include government agencies, suppliers, employees, and lobbyists to name a few (Pezzack, 2007). Managers are thus becoming more pro-active with managing sustainability by using intentional strategies created a high level of entity hierarchies.

4.2. New Institutional theory

As described above, traditional institutional theory focused on the forms of institutional power, generally defined as normative, coercive, and mimetic (DiMaggio & Powell, 1983). However, some researchers critique this traditional approach for ignoring the internal institutional determinants (Basu & Palazzo, 2008; Clegg, 2010; Lounsbury, 2008). Scott (2001), also critiques traditional institutional theory for not taking the cultural context into account, and redefines the cognitive pillar part of isomorphism, as cultural cognitive. Cultural cognitive is seen as the beliefs and perception of reality that persons from the same environment hold. Recent studies have incorporated Scott (2001) into their institutional framework (Butler, 2011; Clegg, 2010; Gauthier, 2013; Lounsbury, 2008; Neville & Caprar, 2012). More recently, a stream of institutional theorists Iarossi, Miller, O'Connor, and Keil (2013); and Tracey, Phillips, and Jarvis (2011) have moved institutional theory to the domain of critical organisational studies, focusing not only on isomorphism, but also on the behavioural and cultural consequences of sources of institutional power, and how these sources of power might be utilised to maintain, disrupt, and/or transform organisations (Bartlett, Tywoniak, & Hatcher, 2007; Martin, Currie, Finn, & McDonald, 2011; Tracey et al., 2011).

Change management can be seen as "when the organization decide to alter the present mode of business activities into a new one style or model to cope with rapid changes of the business world" (Hashim, 2013). Change management is the basis for organisations to successfully change according to institutional pressures (Burnes & By, 2012). Internal change is arguably important to accommodate the incorporation of institutional pressures into internal processes to produce, in this

case, carbon reports (Ruiz, 2014). Change management can in this case be utilised to encourage staff members to implement the processes to adhere to, for example, the mandated carbon reporting by the EU for the NGO sector.

In this research, I am focused on the Lawrence and Suddaby (2006) framework, termed new institutional theory, which articulates the extension of institutional theory as three functions of institutional power: creation, maintenance, and disruption of institutions. The authors do not conceptualise these aspects as a linear process, but rather as interdependent uses of institutional power.

Lawrence and Suddaby (2006) describe the following types if institutional work:
Creating: Vesting, defining, advocacy, constructing identities, changing norms, constructing, networks, mimicry, theorising, and education.
Maintaining: Enabling, policing, deterring, valorising/demonising, mythologizing, and embedding and routinizing.
Disrupting: Disconnecting sanctions/rewards, disassociating moral foundations, undermining assumptions and beliefs.
For the purpose of this case study the following types of institutional work will be utilised: constructing normative networks, 'changing normative association' education, undermining assumptions and beliefs, and enabling work.

Creating an institution focusses on the means to create an institution in an organisation. Creating an institution can be done by, 'defining', 'constructing normative networks', 'changing normative associations', 'undermining assumptions and beliefs', and 'education' (Lawrence & Suddaby, 2006). Defining an institution is described by Lawrence and Suddaby (2006) as "the construction of rule systems that confer status or identity, define boundaries of membership, or create status hierarchies within a field" (p. 222). Constructing normative networks is described by Lawrence and Suddaby (2006) "the inter-organisational connections through which practices become normatively sanctioned and which form the relevant peer group with respect to normative compliance, monitoring, and evaluation" (p. 222). Changing Normative Associations is defined by

Lawrence and Suddaby (2006) as "re-making the connections between sets of practices and the moral and cultural foundations for those practices" (p. 223). Education is seen by Lawrence and Suddaby (2006) as "educating of actors in skills and knowledge necessary to support the new institution" (p. 227).

Defining, constructing normative networks, undermining assumptions and beliefs, and education can be used to enable the creation of new institutional configurations (Tracey et al., 2011). For Tracey et al (2011), a key part of the enabling process is to orientate the organisation to existing or new institutional configurations. The creation of these new configurations can shape the strategic priorities of an organisation and expand the focus of an organisation to incorporate the new institutional considerations. Examples of such new considerations could include sustainability aspects, and encourage organisations to incorporate these into their management and reporting practices. Thus, the creation of new institutional configurations could result in organisations being redefined in sustainability-comparable dimensions. Neville and Caprar (2012) argue that if an organisation is predominantly defined by sustainability-comparable dimensions it is more likely to facilitate the adoption of sustainable practices. Therefore it can be argued that if an organisation is predominantly defined by sustainability-comparable dimensions it will configure and shape an organisation to incorporate sustainability aspects into their management and reporting practices.

Maintaining institutions is arguably a less examined area as opposed to creating institutions (Scott, 2001). Lawrence and Suddaby (2006) state that "enabling work" is a means to maintain institution of which actors in an organisational field create rules that facilitate, supplement, and support institutions (p. 230). Jepperson (1991) argues that few institutions have the powerful reproductive mechanisms that allow institutions to be maintained without maintenance from organisational actors (p. 148). Enabling work is arguably a tool which can be implemented to maintain institutions which would otherwise be abandoned. For

example by designating resources and/or appointing an authorised agent will ease the maintenance of institutions.

5. Methodology & Method

The following sections will focus on the methodology and method used in this research to address the research question.

5.1. Methodology

5.1.1. <u>Research Question</u>

As described in the Literature Review, there has been significant interest amongst the accounting community in forms of reporting which incorporate measures associated with environmental and social sustainability. Two concepts, SLO and carbon reporting, are the focus of this research. Although there has been significant work in these areas, there is little prior research which focuses on the implementation of these concepts in the NGO sector. This is surprising, given the NGO sector focus on issues of environmental and societal wellbeing. Moreover, as discussed, NGOs are increasingly being mandated to report on factors such as carbon emissions("Mandatory GHG Emissions Reporting Is On Its Way," 2012). This research is based on addressing the gap of a lack of research in sustainability in the NGO sector. The research is based on the following research theme:

How NGO's accountability has progressed beyond only being accountable to the INGO Accountability Charter to include stakeholders under the SLO for long term sustainability.

This question assumes a link between carbon reporting and a SLO. As discussed in the literature review, a SLO is social, unwritten, contract between companies and society for companies to acquire approval to start or continue with business operations.

The following sections outline my research methodology based on action research and case study methodologies, and the methods used in this research.

5.1.2. Action Research Methodology

In this research, I use a participatory action research methodology, based on an interpretivist paradigm, to address the above research theme. The interpretivist paradigm is consistent with my theoretical framework for analysis, focused on institutional and stakeholder theories, both assuming subjectivity, rather than objective 'truth'.

Action Research was chosen as a central part of the research theme is the *implementation* of a carbon reporting system. This focus centres the research on the experiences of both researcher and participant during a period of change for the organisation.

- Bridge theory and practice (Kemmis & McTaggart, 1988)

Key features of action research:
- Planning a change
- Acting and observing the process and consequences of the change
- Reflecting on the processes and consequences of the change
- Replanning
- Acting and Observing

5.1.3. Case Study

According to Creswell (2013) case study methodology is useful to gather in-depth information on a small sample rather than a generalisable large sample.

Eisenhardt (1989) describes the use of a case study methodology in theory building. For Eisenhardt (p.533), the case study process involves eight key steps:

- Getting started

- Selecting cases

- Crafting instruments and protocols

- Entering the field

- Shaping hypothesis

- Enfolding literature

- Reaching conclusion

Eisenhardt's steps provide a useful framework to guide case study research. In my research, many of these steps are applicable; for example, I went through the process of 'getting started' – I formulated my research themes. I selected my case using Stake's (1995) notion of 'instrumental case study', whereby a case is chosen to achieve a comprehensive understanding of a particular individual case. However, where my application of case study departs from Eisenhardt's framework is that from entering the field, I utilised an Action Research methodology, as described above.   Rather than, as Eisenhardt suggests, formulating hypothesis to test through observation and data collection, my empirical research was carried out through the design and implementation of a change process, in this case the development and implementation of a carbon reporting system. Data consisted of my observations of this process, and of the insights of those I spoke with throughout the project.

5.2. Method

As described above, an action research and case study methodologies was used. In this section, I discuss the research methods used, and the research design. In particular, I detail my criteria for case selection, my data collection methods, and my methods of analysis. I also briefly discuss ethical considerations.

5.2.1. Case Selection

The selection of research site for this study was based on two key factors: complexity of context, and a current organisational need for a carbon reporting system. CBM International fulfilled both these criteria. At the onset of the research, CBM was facing significant funding risk associated with proposed changes to the EU Funding criteria. Under the proposed changes, NGOs receiving EU funding would be required to produce annual carbon reports (Kook Weng & Boehmer, 2013). Moreover, at the time, CBM had only limited development in this area, with the only organisational expertise consisting of one set of data produced by the Australia Office. Therefore, CBM fulfilled the research criteria of an organisation with a current need for a carbon reporting system. Moreover, the environment CBM is operating in is significantly complex, with 76 offices spread internationally, consisting of hundreds of staff members internationally. The organisation is focused on providing services to people with disabilities in impoverished communities, a goal which contains a complex range of services, from medical assistance to housing, with associated administrative and managerial functions to support these goals. This range of organisational functions results in a significantly complex operating environment.

5.2.2. Research Process & Collection of Data

- Ad hoc unstructured interviewing
- Field notes
- Observation
- Collection of carbon Data

5.2.2.1.   Secondary Data

I used an archival research method to collect secondary data, both during the preparation phase prior to entering the field, and during the project, to aid in the development of the reporting tool. The advantages of archival research include

that it allows a rich description to be built up over time, with the inclusion of multiple sources of data. The method is also unobtrusive (Creswell, 2009) and is able to be carried out in the initial stages of the inquiry to contextually orientate the researcher. The key limitation of an archival method is that it is time consuming, and requires a methodical approach on the part of the researcher (Creswell, 2009) – both in ensuring a complete search, and in compiling and documenting the information gathered.

Examples of secondary sources included G3 and G4 reporting guidelines, greenhouse gas protocol guidelines, ISO accreditation criteria, CBM Annual and Sustainability reports, Annual reports from other NGOs for benchmarking purposes and demographic data. This information was used to both build the case study for CBM, and provides contextual information to aid in the development of reporting measures to be built into the carbon reporting system.

5.2.2.2.   Interviewing/Contacts with Participants

According to Creswell (2009) the key advantages of the interview are that it provides in-depth information in situations where participants cannot be directly observed, and it allows the researcher degrees of control over questioning. In this research, I conducted interviews in a consultative meeting-style, with the aim of gathering information to form the basis for the case study, and to review aspects of the tool as it was developed.

During the three month duration of the initial project, I interviewed 10 individuals in an in-depth manner, with each meeting lasting between 1-2hours each. These participants were chosen because they held the highest position in their department. In addition, I met with 20 staff in various information-gathering meetings. These participants were chosen to gather information from general staff on the project. Although these meetings didn't constitute formal interviews, the information gathered during this period added to my data

gathering. The staff I met with represented 5 offices, and 9 departments across the organisation.

My primary contact for the research was based in the International Office, located in Bensheim, Germany. The primary contact held the position of Head of Budgeting within the Strategy Department. My contact with this participant was on a daily basis for the duration of the initial project, with a number of longer meetings held to gain contextual information.

5.2.2.3.   *Collection of carbon Data for Reporting*

The emission data was collection from CBM International, CBM Europe, and Central Asia Regional Office. The following document, Table1, was sent to each office to complete and return to the Green Office team to calculate the carbon footprint of each office.

Table 2: Data collection document

Consumption of (per FTE)	2011	2012	Further information		
Heating oil (litter)					
Natural gas (kWh)					
Electricity (kWh)			green Electricity	yes	no
Water (litter)					
Office paper (kilo)			recycled	yes	no
Waste (landfill) (kilo)					
Waste (recycled) (kilo)					
Fleet vehicles - Petrol (litter)			if applicable		

Staff commuting by own car (km)					
Travel (land-based) (km)					
Travel (flights) (km)					
Cleaning agents (litter)			organic products	yes	no

Source: Own compilation

The information was to be collected by the assigned person based in the respective offices. The travel data was collected from the staff members of each office as well as travel invoices while the rest of the information was collected from invoices.

5.2.3. Methods of Analysis

Broadly, analysis in action research consists of reflections on the process undertaken during the change process (Kemmis & McTaggart, 1988). Kemmis and McTaggart (1988) describe a number of different analytical orientations in actions research. For this research, my analysis falls into Kemmis and McTaggart's 'Focus on practice as intentional action' (p. 272), in that from an institutional perspective.

In this study, the analysis consists of examining the experiences from the field in light of my chosen theoretical framework, outlined in Chapter 4. After the completion of the initial project, I reviewed both the results of the implementation of the carbon reporting system, my field notes, notes from interviews, and developed key findings from these sources. These findings were then analysed in light of the key aspects of institutional and stakeholder theory covered in the theoretical framework.

Additional reflection and subsequent analysis came after CBM engaged me to perform a second carbon reporting round in May 2014. The organisational interactions and raw data collected during this second process provided insights into issues carrying over from the initial research. This second phase shed additional light on the analysis of the initial research.

5.2.4. Research Ethics

In this research, I fulfilled all requirements of formal ethical approval as required by the University of Waikato Ethics Committee. I also approached all aspects of this research with a sensitivity of taking the upmost care to respect the information shared by participants, and the relationships built as part of the research process.

Prior to any participant contact, I gained formal ethical approval from the University of Waikato Ethics Committee (Appendix A). Once initial contact was made with the organisation, I forwarded an information sheet (Appendix B) to the organisational representative, which detailed the aims of my research. During the research, I followed a process of informing participants about the nature of the research before conducting interviews. In particular, I advised participants that in addition to the process representing an operational change for the organisation; it was also research being conducted. Participants were given the opportunity to withdraw, or to not have their comments noted and included in the study, and participants were not offered any incentive to participate.

6. Case Study: Designing & Implementing a Carbon Reporting System for CBM International

In the following section I will follow the case study method described in chapter 5.

6.1. Initiation of the project

As indicated in chapter 2 the green office project was initiated as a collaboration between CBM and the University of Waikato.

The initial project brief was defined as follows:

- To assess the baseline of the office in Bensheim, Brussels and Bangkok on CBM International green office standard.
- To report and prioritise recommendations on how to improve CBM International's environmental performance.
- Measurement completed and approval by SLT and results to be included in SLT Business Plan 2014
- To develop a mapping method to identify the carbon footprint of all participating offices for 2012 and 2011, including a process which is embedded in the organization and runs in a sustainable manner.
- To develop a concept for the rollout of the tools developed across the CBM family, including lessons learned and compelling strategy for the CBM internal communication.

6.2. The case as I found it

6.2.1. Initial Reaction to the project from the International office

Despite initial enthusiasm from CBM management, the initial stages of the project provided significant challenges in terms of delivering on the project

outcomes without the full commitment of the wider CBM staff. The first encounter with a staff member on her perception of the Green Office project showed the lack of interest and a lack of understanding for the project. The staff member is responsible for internal audit with a focus on building accessibility. She argued that it is difficult to understand why we are working on a carbon footprint project when there is still an office in India that is not accessible to the public due to excess security measures. I tried to explain the importance based on the recent legislation mandating carbon reporting in the UK for all INGOs. The debate continued and the staff member did not seem to understand the implications of not pursuing the project.

The staff were also concerned that funding a carbon footprint project in CBM will require using funds that could have been allocated to project in the field to assist people with disabilities. The staff were also concerned that the resources used and time allocated to the project will reduce their capacity to deliver the preset goals in their work packet.

To address this initial resistance, I determined a need to situate CBM's carbon reporting needs within the wider INGO context, in order to both assess the degree to which other INGOs were utilizing carbon reporting, and also to build a case for increased commitment on the part of key staff.

6.2.2. Environmental/Social Reporting in the NGO Sector

An initial review of the carbon reporting practices of International NGO's (INGO) provided further justification for the Green Office project. The INGO sector has recently incorporated sustainability into their practices. Carbon footprint reporting is in the process of being mandated as a requirement for funding from legally contracted designated funders. Designated funds constitutes 33% of CBM International program budget which is sourced from European Commission (EC), the Australian Agency for International Development (AusAID), the Canadian

International Development Assistance (CIDA), the Swiss Development Cooperation (DEZA/SDC), the Development Cooperation Ireland—Department of Foreign Affairs (DCI), the United States Agency for International Development (USAID) or the Federal Ministry for Economic Cooperation and Development (BMZ) in Germany.

The UK mandated carbon reporting for all INGOs and will take effect starting the 2014 reporting year. Australia will mandate carbon reporting for INGOs in the reporting year starting 2015 which will be followed by New Zealand. Michael Barnier a representative from the European Union announced the intention to mandate carbon reporting for INGOs before the 2014 election as a requirement for funding at the Global Reporting Conference.

The INGO sector has an upwards trend from 2009 to 2011 in carbon footprint reporting which is likely to continue increasing in the future. Action Aid is the leading carbon footprint reporter with a detailed carbon footprint report and carbon management policy. CBM International is awarded a score of 1.5 due to the narrative in the GRI report; however, CBM is lagging behind the trend.

The current trend in the INGO sector show an increase in carbon reporting which can be seen in the graph below:

Figure 1: INGO Carbon Reporting Trend
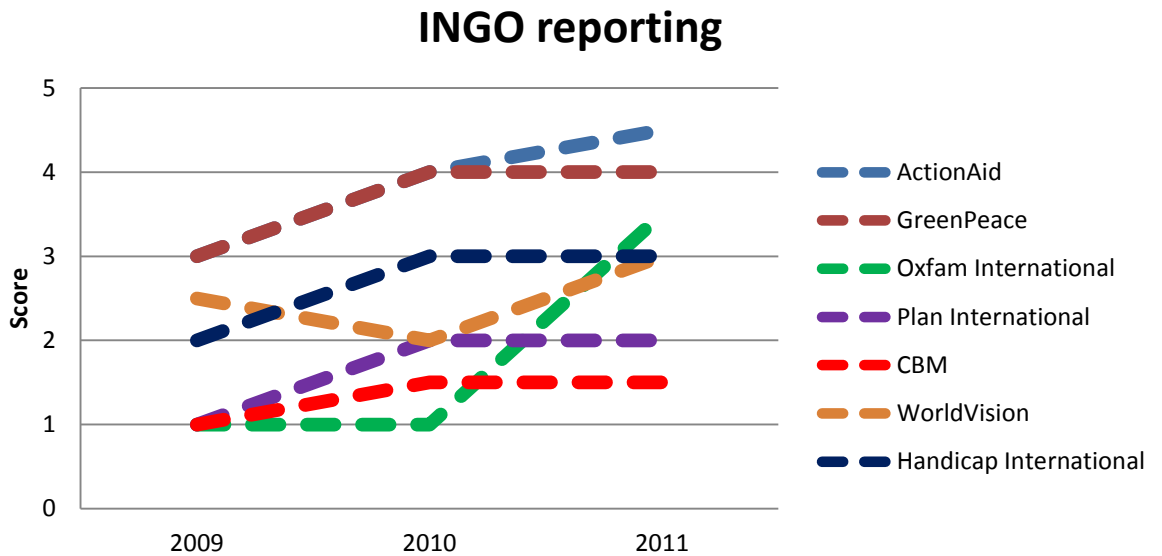
INGO reporting

Source: Own compilation

Table 2: INGO reporting score

Score	
0	No mention of carbon emissions or global warming
1	Only mention carbon emissions
2	Narrative about carbon emissions
3	Report carbon footprint
4	Report carbon footprint with comprehensive narrative
5	Report carbon footprint with comprehensive carbon management policy

Source: Own compilation

Leading INGOs are developing environmental monitoring tools and plans. The INGO Accountability Charter is in the process of defining minimum standards in various aspects like governance, accountability and carbon reporting.

The presentation of this information illustrated that not only was carbon reporting becoming more prevalent in the INGO sector, but also that CBM was not performing highly compared to their peers. This revelation saw an increased buy-in to the initial project by key staff, and in particular, CBM members on the

Green Office project team. This increased buy-in allowed the first step in the development of measurement guidelines.

6.3. Developing a Framework for Measurement

Following initial investigation into the INGO context, I could embark on the first step to delivering on project goals. The first task was to develop a framework for measuring the carbon footprint of the CBM International Office, as a benchmark for developing further measurement and reporting tools to be rolled out to the entire CBM organisation. This phase involved defining emission aspects, evaluating and selecting appropriate reporting guidelines, and data collection.

6.3.1. Emission aspects

The initial emission aspects for data collection and calculation were chosen based on the position paper by the CBM Environmental Stewardship Working Group (ESWG) and the 2009 and 2011 carbon footprint reports produced by CBM Australia. The ESWG position paper highlighted the need to reduce greenhouse gas emissions to reduce CBM's contribution to global warming as environmental stewards. The position paper contained recommendation aimed at reducing CBM's carbon footprint by reducing emissions caused by: electricity, water, consumables, equipment, and land and air based travel. These aspects were chosen based on the insignificant financial outlay required to implement the carbon reduction policy. CBM Australia's carbon reports from 2009 and 2011 included the following emission aspects: mains natural gas, fleet vehicles, purchased electricity, staff commuting, flights, office paper.

The Green office team held a meeting to decide which emission aspect to include and decided on including: heating oil, natural gas, electricity, water, office paper, waste, and travel, and cleaning agents. The one point raised around travel was whether the year the car was made should be included in the data gathered and

whether this would have an effect on the emissions from travelling, which was then included in the information gathered.

6.3.2. Assessing and Selecting Reporting Standards

The calculation and reporting standards was chosen based on the research and recommendation made by me. The decision was also influenced by the standard used for the Australian carbon reports which utilised the Green House Gas Protocol measurement and reporting standard. Research rendered two available measurements guides: the Green House Gas (GHG) Protocol and the International Organisation for Standardization's ISO 14064.

6.3.2.1. Green House Gas Protocol

The GHG Protocol is an international standard for GHG accounting and reporting. The standard was developed by the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) in collaboration with multiple stakeholders as a reaction to the evolving climate change policy. The GHG Protocol is currently being used by 128 International corporate such as British Petroleum and General Motors and 22 non-corporates such as EU Emissions Trading Scheme and the Global Reporting Initiative. The first addition of GHG Protocol standards was released in 2001 followed by multiple detailed guidance documents and calculation tools till date. These documents render a comprehensive step-by-step guide to create and develop a GHG inventory and a carbon foot print report.

6.3.2.2. International Organisation for Standardisation: ISO 14064

The ISO 14064 was developed by the International Organization for Standardization who consists of 175 experts from relevant disciplines who

collaborate to create international standards. The ISO 14064 standard consists of three parts which is aimed at assisting corporates designing and developing GHG inventories, produce a carbon foot print reports, and provide guidance for conducting GHG information validation and verification. The standard is adopted by 52 corporates worldwide including the School of the Environment-University of Toronto and DNV KEMA Energy and Sustainability.

6.3.2.3. Comparison

	GHG Protocol	ISO 14064
Benefits	- Existing best practice - Rigorous road testing - Created through dialog with multi stakeholders approach - Robust and user friendly - Step-by-step guidance - Guidance for large corporates and small office base organizations - Electronic worksheets provided for easy calculation - Available in English, Chinese, Japanese, Korean, Portuguese, Spanish, and French. - Carbon reduction guide - Promoted by WBCSD and WRI - GRI compatible and	- Minimum requirements - General guidelines - Created by 175 international experts - Includes verification guide - ISO certification - Carbon reduction guide - Promoted by WBCSD and WRI

	recommended	
Drawbacks	• More complex than ISO 14064 • Does not have a guide for verification	• Only minimum requirements • In English only

Table 3 GHGP, ISO 14064 comparison ("All Tools ", 2013; "Environmental management: The ISO 14000 family of International Standards," 2013; "ISO 14064," 2013; "ISO 14064-1 and the GHG Protocol," 2013; Kook Weng & Boehmer, 2013; "Publications and Tools," 2013; "Publications: Climate, Energy & Transport," 2013)

The ISO 14064 is based on rt," 2013)

The ISO 14064 is based on the GHG Protocol; however the ISO 14064 guidelines are minimum standards for compliance with GHG Protocol best practice standards. The GHG Protocol is a more comprehensive step-by-step guide on calculating and reporting on the carbon footprint while the ISO 14064 provides a more general guide. The ISO 14064 provides a verification guideline that is not specified in the GHG Protocol; however and external party such as TÜVRheinland, a German based company, can provide assistance for GHG Protocol verification.

6.3.2.4. Recommendation

The GHG Protocol is user friendly and provides multiple detailed tools for calculation and is suited to all organisations regardless of sector or size. The benefits of the GHG Protocol outweigh the benefits postulated by implementing the ISO 14064 guidelines. The GHG Protocol is more suited to inexperienced users and is available various languages which eases implementation in non-English speaking organisations. The GHG Protocol is also aimed at multiple stakeholders which is beneficial to non-profit organisations that cater to a wide range of stakeholders. The GHG Protocol is also internationally accepted as best

practice and will allow organisations such as CBM to enhance the ease of implementation in various countries. The GHG Protocol is also recommended by the GRI to report carbon emissions. Therefore GHG Protocol is recommended for use by CBM due to the comprehensive and detailed guidance for calculating and reporting on the carbon footprint.

6.3.2.5. Reaction to Measurement Selections

The presentation of recommended measurement and reporting standards presented further communication challenges. Despite that the project team was made up of accounting and auditing staff, the knowledge of carbon reporting proved limited and robust discussion and negotiation regarding the choice of measurement and reporting standards was largely deferred to me. This illustrated that whilst carbon reporting is often seen as a generalised accounting function, the skills and knowledge required in this area are relatively specialised. In this case, a team of staff who were highly motivated and interested in the project, rather than purely accounting staff, may have proven to be more effective in not only promoting robust discussion of recommendations, but also in terms of disseminating the aims of the project through the wider organisation.

6.4. Data collection

Following the selection of measurement and reporting standards, I embarked on initial data collection amongst the wider CBM staff. The emission data was collection from CBM International, CBM Europe, and Central Asia Regional Office. The following document was sent to each office to complete and return to the Green Office team to calculate the carbon footprint of each office.

The information was to be collected by the assigned person based in the respective offices. The travel data was collected from the staff members of each

office as well as travel invoices while the rest of the information was collected from invoices.

However the information provided from this method of collection was not sufficient from the Brussels and Bangkok office. The electricity information did not contain the manner in which electricity was generated. The year of the vehicle was also not available which also has a direct effect on the emission factor used. The flight and land based travel information did not contain the distance or type of transportation used as well as a lack of km breakdowns for each travel type. This information has a direct effect on the emission factor used which affected the accuracy of the carbon footprint measurement. However the international office collected data which contained all the sufficient information to produce and accurate carbon footprint.

The calculation process also showed that calculating the cleaning agent emissions was not possible as the emission factor was not available. Along with this it is also deemed that the emissions from cleaning agents at the point of use is factored into the emission factor provided for water emissions and therefore it was decided to abandon the calculation of cleaning agent emissions.

The internal knowledge that was not known to the intern was that the Brussels office contained staff that was part of the International office. Therefore the information gathered from the Brussels and International office had to be reassigned to the correct office. The team leader mentioned this in passing to the intern after all the calculations were finalised which the extended the process of the project significantly and time management became critical to deliver the remaining reports as well as carry out the reallocation.

The problem lied in that the data was summarised in the table and the travel data of each staff member was not known in order to reallocate the data to the correct office. The Brussels staff member had moved on to other projects and did not have the time to enter the data of each individual staff member. The intern

therefore asked the Brussels team member to scan the travel receipts for the 2011 and 2012 financial year. The intern the recalculated all the travel distances for each respective staff member and reallocated the data to the correct office.

The final part of this step was to write a data collection guideline. The guideline stipulated that all data should be gathered from invoices while travel distances could be found on google maps and flight distance information located on the atlas website. This was to ensure that all data is sourced from one place to make reports more comparable.

6.4.1. Reflecting on the Data Collection Process

The challenges faced whilst collecting this initial data set further highlighted the complex context of the INGO. Whilst carbon reporting guidelines require standardised information, and precise calculations, for large INGOs, operating in multiple countries, in complex organisational forms, the accurate collection of such data can be highly problematic. For example, due to the funding nature of organisations such as CBM, cross-country projects might be expanded or pulled at short notice, due to humanitarian need or funding cuts. Such changes impact on the carbon reporting data significantly. Additionally, operating across diverse countries, with differing systems of land ownership and lease, electricity supply, and public transport, further complicates these calculations.

6.5. Development of Tools to Assist Measurement & Reporting

The final major task within the project was the development of tools to simplify the carbon measurement and reporting process across CBM. Due to the funding constraints CBM could not purchase a system to calculate their carbon footprint. This lead to the development of an excel spread sheet that could calculate the carbon footprint for each office in their respective countries. The calculation

sheet had to be user friendly and easy to understand as most CBM staff members to not have advanced excel skills or access to online training tools due to low bandwidth in developing regions where most offices are based. Along with this the spread sheet had to take care of all the technical requirements in reporting and measuring the carbon footprint (see appendix C for CBM IO Carbon Report 2013)

The process of developing the carbon footprint spreadsheet was entrusted to the accounting intern who liaised with the project leader to ensure that the end product was user friendly and adapt to the needs of CBM. Meetings with staff from various departments shed light on the different ways in which each department obtained clearance for travel. This info was used to obtain the best course of action for obtaining the needed data for travel. Each department member stressed the fact that in order to obtain travel clearance a series of document (up to 25) had to be submitted before travel was approved and therefore recommended that adding another document to this pile might not be the best strategy. The staff also pointed out that their work packet was larger than the time allocated to complete the task that the additional time required to complete this information was not possible in the International office.

The spread sheet started with full instructions on use as well a measurement conversion table to ensure that all participating offices to ensure that the measurements were consistent. The second tab required some office specific information: The office name, the country in which the office is situated, the year which the data pertains to, whether the office building is rented or owned, whether the staff commuting by vehicle was made with staff owned or office owned vehicles, and whether this was the first year calculating the carbon footprint and if so the base year carbon data.

The information that was required for input was described and easy to use drop down lists were used to ensure quick and easy input of data. Staff commuting,

business travel and office consumption (electricity, heating oil, waste, and water) each had separate tabs to ensure easy understandably of which data to inset in each tab along with a description of what each tab required. The information required for travel and commuting extended to the date, travel type (flight, vehicle, bus, or train), travel type (year of the vehicle and fuel type, class on flights), and distance traveled.

The office consumption tab required type and amount of electricity used (gas, coal, or a combination), and the amount of office paper, water, waste, gas, and heating oil used.

The data entered would then filter through and render a sheet that could be inserted into the final carbon report. The sheet consisted of the final carbon footprint data as compared to the base year with comparative graphs to assist in analysis to produce the accompanying narratives required by the GHGP.

The final spreadsheet was a compilation of the data input as well as emission factors sourced from Department of Environment, Food and Rural Affairs from the UK as well as the GHGP. The calculation are done by the spreadsheet which ensures that users who do not have advanced excel skills can calculate and report their carbon footprint easily.

6.5.1. Reporting Tools for Non-traditional contexts

The development of tools for use across CBM was challenging in that the organisation consists of a wide range of staff members, from varied backgrounds, in contexts which range from developed, highly-technologically literate environments, to impoverished, developing countries. Furthermore, in some countries, technological infrastructure is limited, and unpredictable. Therefore, the tools that we developed had to be based on readily-available

software, simplified to be able to be used by beginner users, and accompanied by comprehensive user guides.

6.6. Presenting Recommendations to Management & Application to the Wider Organisation

I presented the final report and recommendation to the team members and to the Senior Leadership Team.   At this stage, the presentation focused on the justification for carbon reporting, as developed throughout the project, from the proposed changes to mandated reporting, to CBMs performance compared to INGO peers.

Largely, SLT members were most concerned with the usability of the tools, and the ability for CBM to produce satisfactory carbon reports with ease.   The accountability for choice of measurement and standards was largely left up to my judgement.   Additionally, the appearance of a team effort on the project added further weight to the SLT's comfort with the measurement underpinning the tools, and ultimately the report.

This highlighted to me the need for a systematic and thorough process in deciding which factors to choose in carbon measurement and reporting. Experiences throughout the project illustrated that often those charged with producing carbon reports are, whilst experienced in general accounting, not necessarily skilled in the specifics of carbon accounting.   Given the lack of knowledge at an upper management level, and the assumption from upper management that any decisions regarding measurement are objective and given, leaves much room for ad-hoc measurement and reporting.

7. Discussion

The discussion is structured in three different sections: the process of developing a carbon measurement and reporting process, applying institutional theory to the NGO sector, and enhancing a Social Licence to Operate.

7.1. The process of developing a carbon measurement and reporting system

As described in the literature carbon reporting is a linear process (Tang & Luo, 2014). However; the case study demonstrates that carbon calculation, reporting, and management does not necessarily follow a linear process. The case study provides an alternative to not only challenge the linear approach but also the sequence in which aspects involved in carbon reporting is implemented.

The case study of CBM shows that the project was initiated by the head of finance, also a board member, following a position paper published by the CBM Australia office: 'Minimising CBM's carbon footprint. In CBM's case the 'Green Office Project' was initiated from the top down by the head of finance and the co-ordinator of environmental stewardship. As literature suggests board approval is arguably the most effective and efficient manner to introduce new initiatives regarding sustainability matters (Amran & Haniffa, 2011).

Staff involvement, setting reduction targets, and policy implementation is a problematic step in the case presented. Mulugetta et al. (2010) argues that staff involvement in initiating carbon reporting is more likely to produce an efficient and effective implementation of reduction policies. The case; however, demonstrated that staff involvement was initially limited due to the lack of expertise in aspects on carbon reporting as well as the perception that the focus and goal of CBM should be limited to helping people with disabilities in the poorest communities through operations and facility maintenance. Due to the lack of expertise the team involved in the 'Green Office Project' lacked staff

involvement in the process of developing the carbon measurement and reporting tools. Time constraints also undermined staff involvement due to the additional work expected from the team above their agreed upon work load. In addition the lack of understanding and knowledge of carbon reporting and the benefits to the organisation, as well as a lack of understanding for the rationale behind initiating the project impeded the interest and support for the project.

In order for an organisation to make meaningful reductions in their carbon footprint, managers much approach the issue from a systemic and strategic perspective, embedding carbon management processes throughout the organisation (Patel, 2008). Setting reduction targets was not implemented during this project. Although it is argued that setting reduction targets are essential to carbon management the final reports were produced at the end of the project and it was not feasible to set targets without a feasibility study (Tang & Luo, 2014).

Carbon management policy implementation is a key step in carbon management process; however, the policy implementation would only take place after the project was completed. The supply chain emission control step presented obstacles from both the purchases department as well as the complexity of the purchase and delivery procedures. The purchase department could not understand why supply chain emissions had to be taken into account. The GRI have a mission statement for the G4 guidelines that organisation and their supply chains should be sustainable. However, due to the complexity of the supply chain the department did not deem it feasible to include data from the supply chain. The supplies are delivered by DHL and during the contract negotiation period I was allowed to meet with the representative of DHL to discuss the feasibility of collecting data from the emission caused by delivering goods. The representative suggested that CBM could purchase a carbon zero deliver packages; however, due to budgetary constraints no decisions have been made on the purchase.

The GHG accounting step included developing the carbon measurement system as well as collecting data and calculating CBM's carbon footprint. The greenhouse gas accounting step was inherently more problematic than portrayed by academia (Blamire-Brown & Harrison, 2010; Busch & Hoffmann, 2011; Couth & Trois, 2010; Crawford & Williams, 2010). The time and budgetary constraints inherent to the NGO sector deters NGO's from purchasing carbon accounting and management tool. In this case CBM did also not have the in-house carbon accounting expertise to develop a carbon accounting system. This in turn called for a low cost alternative to calculate and produce carbon reports which is easily understood by staff members, who do not possess specific carbon measurement and reporting expertise, and who do not poses the time or departmental budget to develop the expertise.

Patel (2008) advocates the use of software to monitor and report carbon emissions, to facilitate ease of information access for decision-makers at multiple organisational levels, and assist in regular, flexible reporting. However, in the case of an NGO the budgetary constraints does not always allow for such purchases. CBM employed me as an intern to produce a carbon calculation tool along with reporting and management guidelines. The case demonstrates that in the NGO sector alternative means to produce and measure the organisations carbon footprint is necessary as to not reduce the budget of the NGO's core goal more than necessary. In order to achieve this goal the time spent on collecting, calculating, and reporting the carbon footprint needs to be minimised.

Developing the calculation system was challenging due to all the factors that had to be taken into account. The system had to take into account the country specific emissions caused by office consumption of for example electricity. The emissions are also divided into different scopes: scope 1: Emissions from assets owned and controlled by the organisation (direct emissions); scope 2: Emissions result from the generation of purchased or acquired electricity, heating, cooling, and steam consumed within the organization (indirect emissions); and scope 3: All other emissions not included in scope 2, including the supply chain (indirect

emissions). The tool was designed to extract the country specific data from a separate sheet to ensure that calculation were accurate. The tool also allowed the user to select whether a building or vehicle was owned by CBM as this determined the scope under which the carbon emission would be reported.

Collecting the emission aspect data presented a further challenge. The data was collecting from staff members as well as invoices. The staff members were initially reluctant to participate in the data collection process as this reduced the time that could be spent on their work package. The EU office also consisted of three staff who worked for the international office. This would not be known to someone who does not have internal knowledge of the information as it is not publically available. The information was obtained by three persons from each of the respective offices: EU, International, and Bangkok. The structure of the information gathered was also problematic as it did not match the designed system: for example the flight distances were not included in the data which was collected. The problem was solved by searching each flight individually and noting the distance which was time consuming for me. The budgetary constraints in the NGO sector along with the lack of carbon reporting expertise lead to many obstacles during the process of producing carbon reports.

Greenhouse gas reporting assurance is argued to be key to the carbon management process. However, due to the budgetary constraints in the NGO sector I recommended that assurance should only be addressed when the INGO or government organisations demand such assurance. The engagement with stakeholders and external communication steps were implemented after and during the process of developing the carbon reports. Each department had unique issues around the implementation of a carbon reporting system and the validity of the project while carbon reporting is no the core function of CBM. For example the procurement department did not know how to obtain information to record their carbon footprint for shipping goods. However, after the initial negative response to the project, the final product changed the perception of staff after better understanding the rationale behind carbon reporting in the

NGO sector. The final product of the calculation and reporting tools demonstrated how CBM can measure and report their carbon footprint. The final system also showed how CBM could enhance their core business by savings from reduced carbon consumption. This in turn could be utilised for other purposes; as well as assist in reducing the effect of global warming on their target population.

The process of calculating and reporting CBM's carbon footprint illustrates in this case is not a linear process and presents difficulties unique to the NGO environment. The process is not linear and although staff involvement is suggested to be key in each step of the process, the case describes how difficulties arise to have staff involvement when the time, budgetary and expertise constraints of the NGO sector are play. In the case of CBM the calculation and reporting step seemed to be more problematic; whereas corporate organisations tend to have an external party produce the carbon footprint report. In contrast with the suggested steps in the carbon management process the case demonstrates that the steps followed are not always linear and present unique problems in a complex NGO. The case also discusses the problems presented when staff involvement is only secured after the carbon accounting cycle is finished. The literature also does not contain many strategies on how to obtain staff involvement and in this case it proved to be difficult to have staff involvement before the results were presented. However the end of the project presented a positive outlook on carbon reporting and the positive contribution carbon management could have for the organisation.

7.2. Applying Institutional theory to the NGO sector

As described in the literature creating and maintaining institutions can be achieved through various means. In this case study I focus on defining, constructing normative networks, changing normative association, education, undermining assumptions and beliefs, and enabling work.

7.2.1. <u>Defining institutions</u>

There are various institutional frameworks in the NGO sector, for example: the INGO Accountability Charter, funders' expectations, and staff perceptions. The institutional pressures differ among NGOs due to the varied contextual settings in which NGOs operate. The institutional differences can be explained by for example: cultural differences, local country specific conditions, and the main purpose of the organisation.

The following institutional characteristics are unique to the NGO sector:

7.2.1.1.   *NGOs have a function based around 'doing good'*

The case demonstrates the unique institutional beliefs and assumption in the NGO sector. The belief and assumption that NGOs are responsible for 'doing good' and should focus on containing budget allocations to field projects as opposed to non-core functions.

7.2.1.2.   *Fulfilling the requirements of funders*

The INGO sector is subject to mandates from state funders such as the EU, who are in the process of mandated carbon reporting for INGOs as a requirement for funding. Also private funders demand accountability from INGOs to fulfil their core function of 'doing good' in return for funding.

7.2.1.3.   *NGOs increased ligitimacy*

NGOs join internationally recognised bodies such as the INGO Accountability Charter, or sign agreements such as the Micah agreement, to enhance public

perception that the NGO is fulfilling their duty to public accountability in order to enhance their legitimacy ("About CBM," 2014).

7.2.2. Creating institutions in INGO Sector

The case demonstrates the unique pressures in the NGO sector that affect INGO behaviour which create institutions to encourage carbon reporting. Internationally developed policies represent one set of pressures which lead to the creation of institutions which guide the INGO sector, the most significant of which is the INGO Accountability Charter. The INGO Accountability Charter represents a framework for the mandated behaviour of NGOs, therefore leading to the creation of institutions by setting the rules and reporting guidelines for INGO members which is aimed at enhancing sustainability among INGOs. The guidelines that are created by the NGO Accountability Charter is an example of defining where rules are constructed and boundaries are defined to include sustainability practices among NGOs which redefines the actions of NGOs to include sustainability into their operations.

The networks formed at the Accountability Charter demonstrate how normative networks are constructed. The knowledge sharing inherent to the membership interactions allow NGOs to create and monitor sustainability practices while evaluating their behaviour and implementation against peer INGOs. This allows members to affect and be affected by institutional pressures which are defined by other INGOs while constructing and maintaining regulations and standards within the NGO sector. The interaction and between members have progressed to sanctioned carbon reporting in the NGO sector through defining the boundaries of membership and compliance peer cooperation.

Therefore it can be argued that a framework such as the INGO Accountability Charter represents one way in which institutions are created. Another means is the interaction between members of the INGO Accountability Charter. The

interaction between peers institutionalises behaviour through creating a consensus on acceptable behaviour which is measurable against the leading NGOs in the field.

7.2.3. Changing Internal Behaviour to Create Institutional Change in the Organisation

The case demonstrates the unique institutional beliefs and assumption in the NGO sector. The belief and assumption that NGOs are responsible for 'doing good' and should focus on containing budget allocations to field projects are a hurdle to implementing a carbon reporting and measurement system in an NGO organisation.

Changing normative associations advocates for the re-making the connections between practices and the moral and cultural foundations for those practices. Although the NGO sector is primarily occupied with 'doing good'; it can be argued that reducing carbon emissions is a means to discharge the organizational duty to protect the environment which is increasing becoming a concern in the NGO sector. In the case of CBM one of the core aims is to provide their target population with improved living conditions. Arguably implementing a carbon measurement and reporting system which allows CBM to monitor carbon emissions in order to implement a reduction policy can be utilised as a means to contribute to reducing the conditions for the increase of global warming. Carbon measurement and reporting in this instance should not be seen as a substitute for the purpose of and NGO; but as a tool to enhance the overall purpose of the organization.

The initial reaction of the staff at CBM challenged the premise that carbon measurement and reporting was necessary or would contribute to the core function of the organization. The staff did not grasp the rationale for the project which allowed them to have a pre-conceived negative outlook on towards the

project. However, after the rational was explained there was a shift to a positive response from the staff members who were interviewed. In this instance institutional beliefs and assumption were shifted through educating the staff members on the rationale behind the 'Green Office Poject'.

7.2.4. <u>Enabling Institutional Change to Create and Maintain Institutions</u>

The most significant observation of change in staff perception of the carbon reporting and measurement system was observed when the final measurement and reporting system was finalised. By demonstrating the final product showed staff that not only can carbon measurement and reporting be executed but it would also demand significantly less time and resource than expected. Although the literature shows that enabling is a means to maintain an institution, this case demonstrates that enabling can also be used to create a carbon reporting and management institution Lawrence and Suddaby (2006). In This case carbon measurement and reporting moved CBM to be redefined as focussed on sustainability which is a key part to enhance sustainability practice adoption in an organisation (Tracey et al., 2011).

By enabling and educating CBM on the advantages of measuring and producing carbon reports created a positive response from staff members to implement the system. Reporting CBM's carbon footprint is a means to enhance their environmental responsibility which in turn can enhance their legitimacy in society and therefore their social licence to operate.

7.3. Enhancing a Social License to Operate

When applying the literature in chapter 3 to the CBM case the local communities can be seen as the staff of CBM, the local government in the countries, in which CBM operates, and the funders, as well as the members of the INGO Accountability Charter.

The staff members of CBM as a community initially did not advocate for or understand the need for carbon reporting. However, after the rationale behind such a report was explained and the tools were developed staff understood and encouraged the project. The two main points which appealed to staff members were: the requirement of carbon reporting from the EU as part of the funding requirements, as well as the effect of global warming in the countries which CBM strives to improve living conditions. In the case of CBM approval from staff, as a community, was not obtained prior to starting the project which is in contradiction with SLO literature; however this was due to the lack of knowledge of the rationale behind such a project.

The staff as a community did not have expertise on carbon measurement and reporting and as such initially reluctant to acquire knowledge on carbon calculation and reporting. The literature discussed shows Nelsen (2006) argues that a SLO is both tangible and intangible. However, the staff members were initially reluctant to be involved in the project due to the intangible nature of the outcome of the project. Staff involvement and interest came about after the project rendered a more tangible stage by demonstrating the calculation and reporting tools. This provided a more tangible insurance that the project would deliver results, not only on budgetary considerations, but also the effect that reduced carbon emissions would have on their target population in developing countries.

In chapter three the literature shows that a relationship built between an organisation and the community should be built with careful consideration of the relevant social-political influences Browne et al. (2011). The communities in which CBM operates are usually developing countries who are most affected by global warming. CBM develops and implements projects aimed at reducing the prevalence of diseases which cause impairments, minimise the conditions which lead to disability, and promote equal opportunities for economic empowerment,

livelihood security, and full inclusion in all aspects of society for persons with disabilities.

Carbon reporting and management is a means to contribute to improving the livelihood of the target communities. Therefore, carbon reporting and management is a means to enhance CBM's SLO to discharge their duty to the community by showing CBM's commitment to environmental initiatives as opposed to purely financial considerations. Along with this CBM can also enhance their SLO by showing that they adhere to the intangible aspects of their SLO as explained by Browne et al. (2011). Browne et al. (2011) argues that a SLO should be acquired by building a relationship with the community based on trust, reliability, and consistency. Producing a carbon report and showing commitment to carbon reduction shows CBM's commitment to fulfilling their aim of improving the livelihood of their target population and therefore enhances their SLO. Through fulfilling this aim it provides the target population with the insurance that is required by the community to enhance CBM's SLO.

The political situations in these developing countries in which NGOs operate are also usually challenging and can stop an NGO from operating in the country. The importance of adhering to demands under a SLO from local governments in which CBM operates is therefore pivotal. By enhancing reporting and measurement on CBM's environmental responsibility through carbon reporting. This can arguably enhance CBM's legitimacy in developing countries as well as enhance their SLO through maintaining institutions.

Prno and Slocombe (2012) that the SLO concept emerged as a reaction to the convergence of society and the state as a body that demands accountability from business (Prno & Slocombe, 2012). This has extended the traditional government imposed regulations, or coercion by legal requirements, to include demands from society, resulting in a shift of governance responsibilities to companies (Gunningham & Kagan, 2005). The EU has mandated carbon reporting for all INGOs as a requirement for funding. Along with the EU mandate the INGO

Accountability Charter has incorporated carbon reporting into their requirements for membership.

The INGO Accountability Charter members and the working groups within the organisation can be seen as one of the communities to which CBM is accountable. As discussed in the background the INGO Accountability Charter requires members to commit to sustainable practices and reporting by producing a sustainability report under the GRI NGO guidelines. The INGO Accountability Charter consists of working groups that is composed of various individuals from NGO member organisations. The environmental working group aims to enhance environmental responsibility under member organisations through setting the standards to which members have to report. The working group is an environment where members share knowledge on the specific area which in turn educates other members in the group on best practice. The agenda of the working group includes setting standards on carbon reporting in the NGO sector. Although CBM historically did not produce a carbon report, it can be argued that by adhering to the standard set by the working group CBM can enhance their SLO with the NGO Accountability Charter.

Kealley (2012) argues that the "social contract" does not stem from a legal or regulatory compliance base; however, it is deemed to be the base for acquiring future economic certainty from society. The INGO Accountability Charter provides a framework for accountability to society and is not a legislative framework. The charter was initiated and is governed by the INGO sector due to the demand for accountability in society. Therefore it can be argued that the charter's initiatives are a response to the community demands and in itself is a community which demands carbon reporting as a means to enhance the SLO.

The communities discussed all provide CBM with a SLO and with of which carbon reporting is a means of communicating that CBM adheres to the expectations of these stakeholders. Nelsen (2006) argues that organisation need to be flexible to accommodate the changes in social dynamics. Along with this Jenkin (2009)

argues that negotiating and maintaining a SLO is a delicate process, due to the divergent views of the various parties involved influenced by the community's shared values and experiences. In the case of CBM the changing environment is constructed by the various communities in which it operates which has social and environmental needs which have changed to demand carbon reports. The communication of these reports needs to be transparent to enhance the perception of communities that CBM is adhering to the terms of the SLO as argued by Browne et al. (2011). This will instil confidence in the community and enhance CBM's SLO. This will not only enhance the credibility of CBM's claims to improve the living standards of their target community but also from funding organisations through adhering to standards from the INGO Accountability Standard and the EU mandate.

In this chapter I discuss the importance of adhering to institutional pressures in the NGO sector. By creating and maintaining a carbon measurement and reporting institution NGO's can enhance their SLO through adhering to the institutional pressures particularly local government and funders.

8. Conclusion

The literature discussed in this thesis showed that research in sustainability focusses on the for-profit sector. The carbon reporting literature describes carbon reporting as a linear process; however in the case study the NGO sector does not adhere to the linear process and there is a focus on creating a carbon measurement system as opposed to outsourcing or purchasing a carbon measurement system. This is an element which is a unique challenge to the NGO sector which has limited funds.

The method utilised in this research is a mix of case study and action research. The case study method follows Eisenhardt's (1989) steps which provide a useful framework to guide case study research. In my research, many of these steps are applicable; for example, I went through the process of 'getting started' – I formulated my research themes. I selected my case using Stake's (1995) notion of 'instrumental case study', whereby a case is chosen to achieve a comprehensive understanding of a particular individual case.

In this research, I also use a Participatory Action Research methodology, based on an interpretivist paradigm. The interpretivist paradigm is consistent with my theoretical framework for analysis, focused on institutional and stakeholder theories, both assuming subjectivity, rather than objective 'truth'. Through interviews I collect data which I analyse as described by Kemmis and McTaggart (1988) in which as an institutional perspective, the actions of individuals during the change process are indicative of response to the change.

The key finding seen in the process discussion section shows that carbon reporting is not in this case a linear process. Unlike the literature on carbon reporting in the for-profit sector the case demonstrates that there is a focus on developing a carbon measurement system as opposed to purchasing a system. This is due to the lack of fund to disperse from the core projects of CBM.

The institutional theory utilised in this research is composed of concepts from new institutional theory. The pressure from governments is encouraging NGOs to produce carbon reports in return for funding as well as enhancing their legitimacy among other NGOs and local governments. The European Union mandated carbon reporting as a prerequisite for funding which forms 33% of CBM's funds. Along with this the INGO Accountability Charter creates institutional pressure by demanding similar responses from members to sustainability issues. Also the local governments in which NGOs operate are applying pressure to ensure that NGOs are environmentally responsible in return for access to their citizens. Therefore, producing a carbon footprint report can enhance a Social Licence to Operate among these parties by showing that CBM is environmentally responsible through carbon reporting.

The institutional pressure in CBM leads to institutional change through enabling and education. The carbon measurement and reporting system showed CBM staff members that carbon measurement can be done through a less costly and time consuming means. Through educating staff members the importance of Carbon reporting as a means of carbon management and the implications on funding shifted the belief that CBM should only focus on its core functions. The rationale behind carbon reporting in the NGO is one of funding, better serving CBM's target population, as well as adhering to the trends in the sector. Therefore in this case enabling and education was the most effective means of creating and maintaining institutional change to incorporate carbon reporting into the functions of CBM.

The NGO sector has unique challenges when implementing sustainability concepts traditionally used in the for-profit sectors. The budgetary constraints present unique challenges in respect to producing carbon report in order to enhance a Social Licence to Operate and therefore do not follow the same process presented in the for-profit literature. The core focus of NGOs' is usually presented as doing good; however, it has become apparent that the NGO sector is subjected to similar pressures as the for-profit sector to adhere to

sustainability practices, in particular carbon reporting and Social Licence to Operate.

This thesis contributes to existing literature and institutional theory in several ways. The first contribution to literature is that the case demonstrates that carbon management is not necessarily a linear process. The focus in this case is measuring and reporting CBM's carbon footprint whereas most literature focusses on carbon management. In this case the NGO sector which is known for budgetary constraints shows that developing a measurement and reporting system is a less costly alternative to outsourcing or purchasing reporting. Secondly this thesis contributes to the literature by showing how organisations in the NGO sector can enhance their SLO through carbon reporting. The case demonstrates that through carbon reporting it can enhance engagement with various groups in society: the INGO Accountability Charter, staff members, and local governments. Carbon reporting can demonstrate an INGO's commitment to environmental initiatives which demonstrates reliability and trustworthiness which is vital to obtaining and maintaining a SLO. The thesis also contributes to the understanding of Carbon reporting concepts, for example, by evaluating the reporting and measurement guidelines: GHG Protocol and the ISO 14064.

This thesis contributes to existing literature by utilising new institutional theory which has not been used in many studies. Traditional institutional theory is criticised for not taking internal change due to institutional pressures into account. This research focusses on the internal challenges during the change process to adhere to institutional pressures and presents a detailed case on the experience of a researcher implementing a system in such an environment.

This thesis contributes to new institutional theory by demonstrating how enabling can be utilised as a means of creating institutional change in an organisation. The seminal work by Lawrence and Suddaby uses enabling a means of maintaining an institution; however, in this case I demonstrate that enabling can be used as an important part to create institutional change.

The study has some limitations. The study was conducted on one INGO and could be extended to other INGOs. The study also relies on the researcher's perceptions and understanding of the case.

Future research can focus on an extension of this research to study the outcomes of implementing such as carbon measurement and reporting system after the initial implementation. Further future research can focus on implementing for-profit sustainability concepts in the NGO sector and how the unique challenges are overcome due to budgetary constraints and the central focus on doing good.

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9. Appendices

9.1. Appendix A

Application for Ethical Approval

Outline of Research Project

Waikato Management School
Te Raupapa

THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

1. Identify the project.

1.1 Title of Project
Implementing a Carbon Measurement & Reporting System in an International NGO: A Case Study

1.2 Researcher(s) name and contact information
Ruth Venter
112H Lake Road
Hamilton

02102967854

1.3 Supervisor's name and contact information (if relevant)
Vida Bothes

1.4 Anticipated date to begin data collection
04 May 2013

2. Describe the research

2.1 Briefly outline what the project is about including your research goals and anticipated benefits. Include links with a research programme, if relevant.

The purpose of this study is to demonstrate, through the use of a case study and the application of institutional theory, the impacts of regulation on the accountability of one multi-national not-for-profit entity for its carbon use. The

research will benefit NGO's in terms of understanding how for-profit tools can be utilised in the NGO sector. The research will also form part of my Masters Thesis.

2.2 Briefly outline your method.

In this research, I utilise an action research methodology to explore how the implementation of a carbon reporting system impacts the social license to operate in a large international non-governmental organisation (NGO), Christian Blind Mission (CBM). The impetus for the implementation arose from proposed changes to legislation governing the funding of NGOs in the European Union. Under the proposed changes, all NGOs would be required to produce annual carbon reports in order to comply with EU funding requirements. I draw on institutional theory to discuss the issues which arose during the implementation of the carbon reporting system.

2.3 Describe plans to give participants information about the research goals.

I intend to provide potential participants with a participant information sheet, which will outline research goals, and what contribution participants are likely to be required to make for the duration of the project. The information sheet will also outline how participants can withdraw, including a statement of the time limits that may apply to this withdrawal. The participant information sheet is enclosed with this application.

2.4 Identify the expected outputs of this research (e.g., reports, publications, presentations), including who is likely to see or hear the reports or presentations on this research

The main output for this research will be my Masters thesis, which will be publicly available through the University of Waikato Library and online via the doctoral theses database. It is also anticipated that parts of the research will be

used for additional research publications (journal/conferences) during the course of my Masters study, and after.

2.5 Identify the physical location(s) for the research, the group or community to which your potential participants belong, and any private data or documents you will seek to access. Describe how you have access to the site, participants and data/documents. Identify how you obtain(ed) permission from relevant authorities/gatekeepers if appropriate and any conditions associated with access.

The research will be conducted at the CBM office in Germany. The participants likely are from the German community in Bensheim and surrounding areas. I have access to the site due to my role as an intern.

3. Obtain participants' informed consent, without coercion

3.1 Describe how you will select participants (e.g., special criteria or characteristics) and how many will be involved.

Individual participants will be chosen based on a purposive strategy; i.e.: they will be individuals whose job falls within the scope of the Green Office project. It is envisaged that this will include members of CBM senior management, representatives from CBM regional offices, members of the audit and Accounting team, as well as other strategic areas.

3.2 Describe how you will invite them to participate.

Participants will be invited to attend a meeting with me and discuss their perception of the research goal and the Green office project.

3.3 Show how you provide prospective participants with all information relevant to their decision to participate. Attach your information sheet, cover letter, or introduction script. See document on informed consent for recommended content. Information should include, but is not limited to:

- **what you will ask them to do;**
- **how to refuse to answer any particular question, or withdraw any information they have provided at any time before completion of data collection;**
- **how and when to ask any further questions about the study or get more information.**
- **the form in which the findings will be disseminated and how participants can access a summary of the findings from the study when it is concluded.**

I have attached a sample information sheet that will be provided to prospective participants. This form includes statements on what is involved for participants, the withdrawal period, how to get further information and how the information will be used. As the interviews will be thematic/conversational interviews, there will be no specific pre-determined questions, and if participants choose to not answer a question, or continue a topic of conversation, which does arise during the course of the interview, they will be free to do so. I will explain this prior to each interview.   Additionally, participants will be provided with the conversational guide for each interview prior to the interview, and I will check before commencing each interview whether there are any themes they would explicitly prefer not to discuss, or if there are themes they would like to include for discussion'

Participants will be given a set period of time from which to withdraw from the study (2 weeks after interview transcripts and photos have been provided for feedback), and after this date, consent to use the transcripts and photos will be deemed to have been given, and analysis of the data can begin. This is detailed in the information sheet, and I will discuss this at each meeting.

3.3 Describe how you get their consent. (Attach a consent form if you use one.)

I intend to use a participant consent form, which participants will sign after they have read the participant information sheet, and had the opportunity to ask any questions/voice any concerns.

3.5 Explain incentives and/or compulsion for participants to be involved in this study, including monetary payment, prizes, goods, services, or favours, either directly or indirectly.

There will be no incentives offered to participants, aside from the personal satisfaction they may feel as a result of sharing their experiences.

4. Minimise deception.

4.1 If your research involves deception – this includes incomplete information to participants -- explain the rationale. Describe how and when you will provide full information or reveal the complete truth about the research including reasons for the deception.

It is not anticipated that this research will involve deception.

5. Respect privacy and confidentiality

5.1 Explain how any publications and/or reports will have the participants' consent.

The participant consent form to be signed prior to the start of the fieldwork phase details likely uses of the material, and seek consent from the participants to be included in these publications (e.g.: Masters thesis, journal articles, conference papers). This will also be explained at both interviews.

5.2 Explain how you will protect participants' identities (or why you will not).

Direct contact with individual participants will be for the purposes of gathering generalized information to build the case study, and as part of the development of the carbon reporting tool and its implementation. As such, there will not be cause to disclose individual identities or to associate specific statements with individuals.   In terms of the organization as a whole, the identity of the organization will be disclosed, as this is central to the specific nature of the research undertaken. Express consent from senior leadership to the disclosure

of the organisation will be sought prior to inclusion in either the 593 thesis or further publication.

5.3 Describe who will have access to the information/data collected from participants. Explain how you will protect or secure confidential information.

The interview recordings, and transcripts will be securely held for an indefinite period, in a secure facility (for example, a locked cabinet), and on a password-protected computer. When/if the material is destroyed, it will be done so in a secure manner. The only people who will have access to this information will be myself, and my Masters supervisors. If the need arises for additional people to have access to this material, consent will be obtained from participants on a case-by-case basis.

6. Minimise risk to participants.

'Risk' includes physical injury, economic injury (i.e. insurability, credibility), social risk (i.e. working relationships), psychological risk, pain, stress, emotional distress, fatigue, embarrassment, and cultural dissonance and exploitation.

6.1 Where participants risk change from participating in this research compared to their daily lives, identify that risk and explain how your procedures minimize the consequences.

I do not anticipate that there will be any risk associated with participating in this research.

6.2 Describe any way you are associated with participants that might influence the ethical appropriateness of you conducting this research – either favourably (e.g., same language or culture) or unfavourably (e.g., dependent relationships such as employer/employee, supervisor/worker,

lecturer/student).   As appropriate, describe the steps you will take to protect the participants.

I do not anticipate that I will be associated with participants in any way that might influence the ethical appropriateness of the research.

6.3 Describe any possible conflicts of interest and explain how you will protect participants' interests and maintain your objectivity.

The main conflict of interest lies in the fact that this research will be used to complete the requirements of my Master of Management Studies, and therefore I will be motivated towards completion. Additionally, as I will be in the role of intern during the period of the study, I do hold two roles within the organization; firstly as a junior employee, and secondly as a researcher.

7. Exercise social and cultural sensitivity.

7.1 Identify any areas in your research that are potentially sensitive, especially from participants' perspectives. Explain what you do to ensure your research procedures are sensitive (unlikely to be insensitive). Demonstrate familiarity with the culture as appropriate.

The area that is sensitive is information obtained regarding information not available to the public and ethical procedures will be followed to keep this information confidential.

7.2 If the participants as a group differ from the researcher in ways relevant to the research, describe your procedures to ensure the research is culturally safe and non-offensive for the participants.

I will work in the organization as an intern and will learn how to address participant before commencing the research.
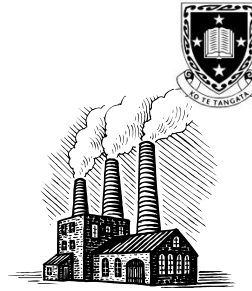
9.2. Appendix 2

Waikato Management School
Te Raupapa

THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

Implementing a Carbon Measurement & Reporting System in an International

NGO: A Case Study

Ruth Venter Masters Student, Waikato Management School

Email: ruth.venter@hotmail.com

Mobile: 02102967854

Thank you for expressing an interest in my research. This research will contribute towards my Masters in Accounting at the University of Waikato. My research is partially funded by scholarships awarded by the University of Waikato.

<u>Purpose</u>

The purpose of this study is to demonstrate, through the use of a case study and the application of institutional theory, the impacts of regulation on the accountability of one multi-national not-for-profit entity for its carbon use.

In particular, I'm interested in hearing the experiences of staff members of an NGO in relation to tools traditionally used in the for-profit sector: Carbon Accounting.

What's Involved?

For the first phase of my research, I will be conducting interviews. The purpose of the interviews will be to record your stories, experiences and reflections. The interview will take approximately 1hour, and will be held at a time that suits you. You will be provided with a 'conversation guide' before the interview, so you are aware of the sorts of topics we may cover. You will be free to add new topics, or to decide there are certain topics you don't wish to talk about, at any stage before, or during the interview.

What will Happen to the Information?

At your choice, you will be provided with either an audio copy of the interview, or a transcript, for approval. You can change any aspects of the transcript or recording at this stage, to ensure you are comfortable with the information contained.
Information taken from the interview will be used to build thematic stories. It is likely that these will be both stories from individual participants, and stories from multiple participants.

The stories and excerpts from the interviews will be used in my final thesis, of which a copy will be publicly available through the University of Waikato Library. Material may also be used in subsequent conference papers and journal articles.

The original transcripts and taped interviews will be kept securely for an indefinite period. Access to this information will be limited to myself and my supervisors.

Confidentiality

All measures will be taken to ensure your confidentiality. Names will be changed in the transcripts and final documents, and sensitive information which may lead

to identification will be removed at the request of participants, during the transcription amendment phase.

Can I Withdraw?

You can withdraw your participation any time up until the transcripts are finalised – 2 weeks after copies of interview/transcripts are provided for feedback. After this point, it is likely the material will be woven through many stories, so the task of removing an individual participant from the project will be difficult.

What if I have any concerns or need more information?

If you have any concerns throughout the project (and after), please contact either myself, or my supervisor, at the contact details below.

Many thanks for your expression of interest. I look forward to meeting with you.

Kind Regards

Ruth Venter
Email: ruth.venter@hotmail.com
Phone: 02102967854

Supervisor:
Dr. Vida Bothes
Email: vidab@waikato.ac.nz

together we can do more

Green House Emission Inventory 2012

CBM International Office

Ruth

Date prepared: July 2013

Organisation information

CBM is an international Christian development organisation, committed to improving the quality of life of people with disabilities in the poorest communities of the world.

CBM has Member Associations raising funds and awareness of disability issues in 'industrialised' countries worldwide. In lower-income regions of the world, CBM strives to build the capacity of partner organisations. This is all done following proven core values and with more than 100 years of experience in the field of disability.

Together with support from over 850,000 active supporters / donors through 12 Member Associations, CBM, together with its 624 partner organisations have supported 714 projects in 73 countries in Africa, Asia, Latin America and the Middle East with a programme expenditure of EUR 62.1 million reaching more than 31 million people and providing a further 10 million treatments for non-blinding, disabling, neglected tropical diseases.

CBM Vision Statement

An inclusive world in which all persons with disabilities enjoy their human rights and achieve their full potential.

CBM Mission Statement

CBM is an international Christian development organisation, committed to improving the quality of life of persons with disabilities in the poorest countries of the world.

Based on its Christian values and over 100 years of professional expertise, CBM addresses poverty as a cause, and a consequence, of disability, and works in partnership to create a society for all.

CBM Emissions

CBM International is committed to reducing carbon emissions while providing quality service. This carbon report serves as a prototype which will be extended to the whole CBM family in the future. The base year, 2011, was chosen to ensure timely and accurate data. The recorded emissions – CO2 equivalent (CO2e) – are Carbon Dioxide (CO2), Methane (CH4), and Nitrous Oxide (N20). The emission factors are based on the Greenhouse Gas (GHG) Protocol and as well as Defra emission factors. The report follows the guidelines of the GHG protocol to enhance comparability. CBM continually aims to reduce air travel; however, due to the nature of CBM's work, staff travel is necessary to undertake planning and monitor of major projects. CBM is increasing online conferencing to reduce air travel.

Table 1

Table 1 shows the sum of CBM International's Greenhouse gas emission over 2 reporting years. Scope 1 and 2 is not applicable because CBM International does not own the office building or any staff vehicles in accordance with the GHG protocol. The scope 3 emissions are all the indirect emissions produced by CBM International.

CBM International

	CO2-e (metric	CO2-e (metric	%

	tonnes)	tonnes)	change
	2011	**2012**	
Scope 1 emissions	**0.0000**	**0.0000**	**0%**
Scope 2 emissions	**0.0000**	**0.0000**	**0%**
Scope 3 emissions	**310.6587**	**393.8845**	**27%**
Business Travel	60.9398	83.7645	37%
Heating Oil	11.1784	11.1784	0%
Mains Natural Gas	8.6573	9.0849	5%
Office paper	1.2368	1.2368	0%
Staff commuting	175.3575	213.5375	22%
Waste	4.0480	4.3400	7%
Water	0.2349	0.2709	15%
Purchased Electricity	49.0061	65.9397	35%
Total emissions	**310.6587**	**393.8845**	

Notes:

Business travel consists of:

Type	Sum of CO_2 (metric tonnes)
Air	75.6346
Taxi	2.6374
Train	5.4481
Car	0.0445
Grand Total	**83.7645**

Staff commute consists of:

Type	Sum of CO_2 (metric tonnes)
Car	190.7979
Train	19.7965
Bus	2.6970
Taxi	0.2461
Grand Total	**213.5375**

Waste consists of:

Type	Sum of CO_2 (metric tonnes)
Recycled	0.66
Landfill	3.68
Grand Total	**4.34**

Data Business travel data was collected from travel invoices to enhance the accuracy and completeness of data. The commute data was based on internal system data to

determine number of days commuted to enhance reliability and accuracy of data. All other data was collected from supplier invoices to ensure accuracy.

% changes

Business travel increased due to increased assessment of regional office to facilitate the development of the CBM Global Program Strategy.

The increase in heating oil usage is due the extended winter experienced which increased heating requirements.

Waste, water, electricity, and staff commuting is attributable to increase in staff members.
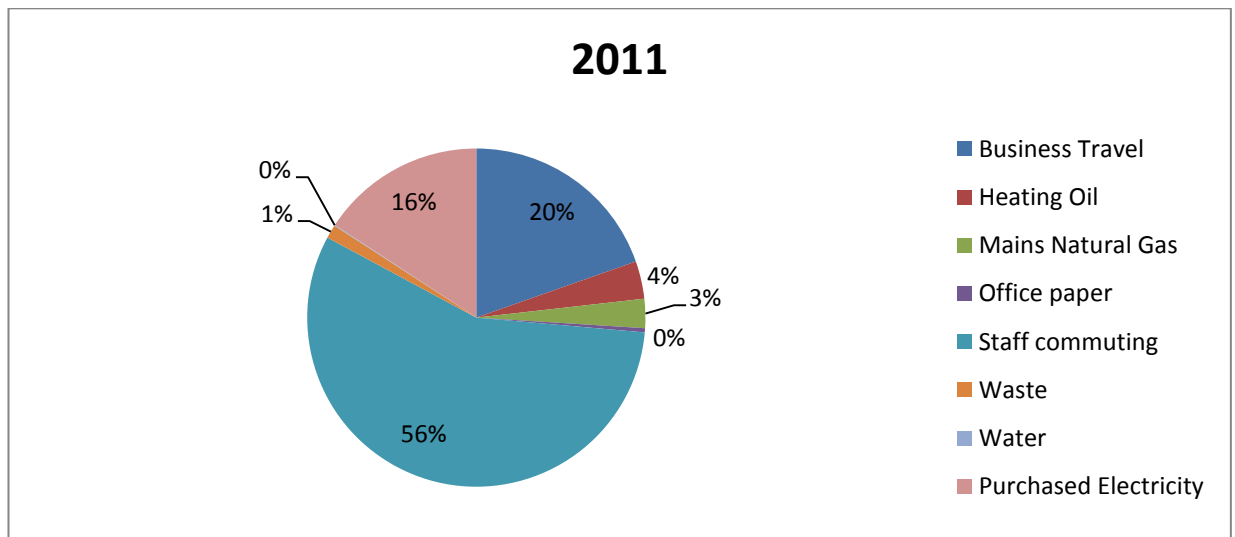

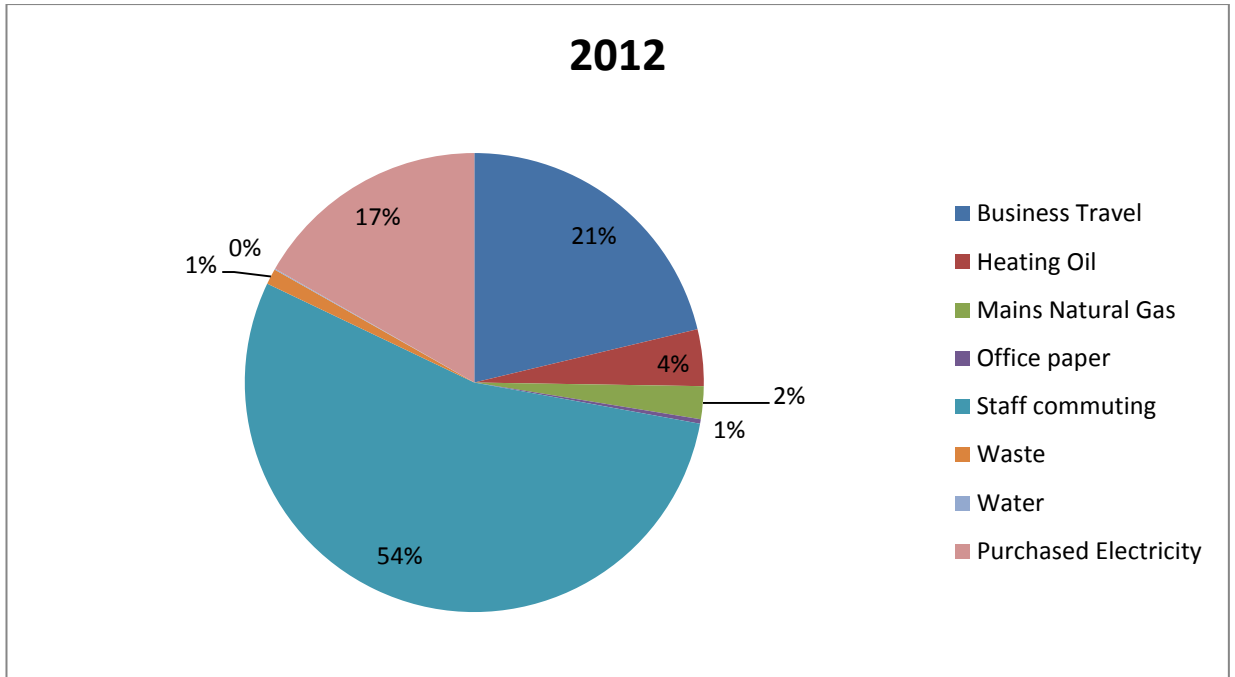**Figure 2: % of total emissions 2011**

2012

- Business Travel
- Heating Oil
- Mains Natural Gas
- Office paper
- Staff commuting
- Waste
- Water
- Purchased Electricity

21%
4%
2%
1%
1%
0%
17%
54%

Figure 3: % of total emissions 2012

.

Supply chain

CBM International is committed to ensure that supplies are sourced from reputable and quality manufacturers based on selection criteria. All the products and suppliers are well known and tried and tested by both Sightsavers and CBM. The products should be designed to reduce maintenance and the need for spare part and serviced by local representatives to minimise carbon emissions. Manufacturers should also adhere to the International Agency for the Prevention of Blindness (IAPB) ethical standards as well as maintain a good reputation. CBM International also utilises logistic services that are adhere to climate protection goals to reduce carbon emissions. The emissions from the supply cannot be calculated due to insufficient data; however, the current systems are being analysed in order to incorporate the data in future.

CO2 Reduction management

Air travel

CBM International Office advocates the use of video-conferencing technology where a face-to-face meeting is not strictly necessary to reduce air travel within the CBM family.

Paper

CBM International Office encourages staff to utilise online filing tools along with utilising a double sided printing policy.

Recycle

CBM International Office utilises a strict recycling policy to encourage staff to purchase recyclable material where possible as well as having onsite recycling bins.

Electricity

CBM International Office will be moving in 2015 to a new building which will increase energy efficiency to reduce carbon emissions. CBM encourages staff to reduce electricity usage by de-lamping and utilising energy efficient office equipment.

Water

CBM International will be moving to a new building which will decrease water usage to reduce carbon emissions. CBM encourages staff to reduce water usage as well as utilises low flow taps.

Heat Oil

CBM International will be moving to a new building equipped with modernised facilities which does not utilise heating oil. CBM has automatic door systems to reduce heating usage.