

How Green Is The Apple? Understanding Apple's CSR Disclosure Practices

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Abstract

This research explores the transparency of Apple's Corporate Social Responsibility disclosure practices by providing an independent study of Apple's published reports. The main aim of this research lies in its proposal of finding whether Apple's social and environmental reports are consistent with the Global Reporting Initiative (GRI 4) guidelines and whether they satisfy stakeholders' disclosure requirements. Use of the GRI Standards is required for all reports or other materials published on or after 1 July 2018. A qualitative research strategy was implemented using public information available in the firm's published documents, namely: Environmental responsibility report 2018; Form 10-K; Apple Supplier Code of Conduct; Product Environmental Report; and Facilities Environmental Report. Apple's reports were analysed alongside the Global Reporting Initiative framework. A triangulation approach was used to integrate the findings with media claims and criticisms regarding their CSR disclosure. We expose 'discrepancies' between the requirements of the GRI Guidelines and Apple's sustainability disclosures. Focusing on the removal of these discrepancies and inclusion of environmental performance benchmarks can increase reporting transparency to stakeholders. This paper outlines disclosure gaps in CSR. Identification and 'filling' these gaps can enhance transparency to stakeholders and maintain institutional reporting legitimacy. Future research can be done by linking the reporting gaps with the organisation's strategic path. An evaluation of Apple's reporting strategy, CSR management policy and performance is outside the scope of this research – which can be addressed in future research.

Keywords: CSR reporting, Apple Inc., Greenpeace, Global Reporting Initiative (GRI), Stakeholders.

Introduction

Apple Inc. (hereafter Apple), an American multinational corporation, is one of the most innovative brands and a strong market player in the global electronic communications market. Apple's innovative products have changed consumers' experiences with electronic devices. In September 2019, its market cap hit \$ 1 Trillion (Pratap, 2019). Apple claims that it has made significant progress in its manufacturing and supply chain. By the end of 2018, it had achieved the goal of using 100 per cent renewable electricity for its operations. For its facilities in 34 countries around the world, the company is sourcing renewable energy. All final assembly sites for iPhone, iPad, Mac, Apple Watch, AirPods and HomePod are now certified Zero Waste to Landfill, while conserving billions of gallons of water and reducing greenhouse gas emissions (Apple's Supplier Responsibility Progress Report, 2019).

Despite Apple's worldwide success and the popularity of its products, in recent years, various social and environmental allegations have been raised (Greenpeace, 2017). This can create reputational damage to the company (Pérez, 2015). Already there has been criticism of Apple's Corporate Social Responsibility (CSR) strategy and transparency of social, environmental disclosures (Schechtman, 2012, Godelnik, 2012a, Greenpeace, 2017). According to Chartered Quality Institute, between January 2017 and June 2018, Apple faced allegations for (i) violating child labour laws 27 times; (ii) violating forced labour laws ten times and (iii) violating human rights law 54 times; an average of five alleged violations a month. Furthermore,, during the same period, Apple faced allegations that it violated Employment conditions rules 47 times, as well as Health and safety rules 33 times (Fogden, 2019).

The originality of the research lies in its proposal of finding whether Apple's social and environmental reports are consistent with the GRI guidelines and whether they satisfy stakeholders' disclosure requirements. The motivation for this research stems from the fact that despite being the top player in the electronic market, Apple is ranked 2nd out of the 17 major companies which include, but not limited to Google, Amazon, Microsoft, Sony, Samsung, and more (Greenpeace, 2018). The ranking of the companies is based on energy, resource consumption, and chemicals. As per Greenpeace (2018) "Apple's overall Greenpeace "grade" was a B-, but broken down, the company received an A- for the aforementioned environmental efforts, a B for chemicals, and a C for resources, due in large part to the lack of repairability of its devices and its use of proprietary parts". Thus the motivation behind our research effort is to explore the issue further, using GRI 4 guidelines for comparison. Apple's social and environmental reports, claim to follow the GRI 4 framework (i.e., 'comprehensive' and 'transparent'). This research explores the transparency of Apple's CSR disclosure practices and provides an independent perspective on the content of their reports regarding GRI benchmarks. This study seeks to answer the following two questions:

- i. *Are Apple's social and environmental reports consistent with the GRI guidelines?*
- ii. *Based on information available in the public domain, does Apple appear to satisfy the disclosure requirements of its main stakeholders?*

The paper is organised as follows. The next section discusses the literature on corporate social responsibility, reporting and disclosure in the electronic industry. It then outlines our research design and method. The following section includes details of the three stages of our analysis and is followed by a discussion. We then continue with the limitations of the study, and the conclusion completes our paper.

CSR Disclosure in Consumer Electronics Industry:

Growing expectations on organisations regarding CSR actions and increasing demands for transparency push organisations to measure, report, and continuously improve their environmental, social and economic performance (Tsoutsoura, 2004). However, not many CSR research has been done on the consumer electronics industry. Of these studies, Lee (2007) carried out an empirical analysis of 15 South Korean electronics companies to examine the relationship between corporate social responsibility strategy and stakeholders. The results demonstrate a consistency with

the four patterns of CSR responsiveness strategy, which are in line with Carroll's (1979) description of four management approaches: reactive, defensive, accommodative and proactive.

In contrast, Wong (2009) examines CSR practices in mobile phone companies by focusing on consumers' perceptions. Using the three major CSR dimensions (ethical, discretionary, and relational practices), Wong (2009) examined consumers' perceptions of the three major CSR dimensions and related these to their attitudes to mobile phone companies. Results revealed that consumers favoured the ethical and relational practices dimensions of CSR that contribute to shaping positive attitudes to mobile phone companies. It can be implied in Wong's (2009) findings that management should develop more effective CSR communication, focusing on the ethical and relational dimensions of CSR practices.

In line with the ethical dimension of CSR, Oehmen *et al.* (2010) identify the importance of developing a Supplier Code of Conduct (hereafter, SCoC) to improve the ethical behaviour of a company. Their study focussed on defining the state-of-the-art in SCoCs and how it could be applied and customised for the development of a company-specific SCoC. Using the electronics industry as an example, the review of state-of-the-art SCoCs is based on the website disclosures of Forbes Fortune 2000 (Technology Hardware and Equipment) companies. It yielded 24 SCoCs covering five major categories (labour standards, health and safety, environment, ethics and compliance).¹

Since websites are becoming the main avenue of CSR communication for companies, Garre-Rubio and *et al.*, (2012) conducted an exploratory study analysing the CSR webpages of consumer electronics companies. In this study, the authors used the ISO 26000 standard (launched in 2010) to analyse core subjects that are explicitly mentioned on corporate websites. These core subjects were then related to the scores and rankings in the "Guide to Greener Electronics" (GGE), and other rankings and indices available. The results show a positive correlation between environmental issues and overall CSR behaviours, which communicated externally through corporate websites. Garre-Rubio and *et al.*, (2012) found that Apple does not disclose compliance with ISO 14001, and therefore appeared in the red zone of the GGE. Overall, the study revealed an interesting outcome. Inasmuch as Apple, Philips and Sony-Ericsson have an apparent information gap between their poor social responsibility web communication, and they do enjoy favourable scores in several indices and ranks. This could indicate a poor alignment between companies' processes and their CSR communication strategy. As Neu *et al.* (1998) pointed out, management communication may be influenced by public perceptions and media attention. Apple's CSR strategy has been described as "reactive" (Uhrh, 2012).

Two important theoretical considerations: (a) legitimacy theory and (b) stakeholder theory are important for this CSR study. Legitimacy theory is concerned with the actions of organisations and their relationship with community values. According to Suchman (1995, p. 574), organisational legitimacy is "a generalized perception or

¹ For a comprehensive review of the literature relating to sustainable supply chain management, see Seuring and Müller (2008).

assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions". Organisations continually endeavour to expand and maintain their legitimacy and as Bansal and Clelland (2004) assert, this legitimacy is related to stakeholders' expectations and their social and environmental performance.

Many CSR researchers have employed legitimacy theory; for example, Myers (2014) argued that if the perceived legitimacy of an organisation is low, it is less likely to provide social and environmental disclosure willingly. Patten (1991; 1992; 1995) used legitimacy theory to test disclosure, support and market reaction to CSR and accounting. Deegan (2002) and Deegan and Rankin (1996) also used the legitimacy theory to explain the motivations behind organisations' voluntary environmental disclosure. Other researchers indicate that the strategies of management relating to the firm's environmental disclosure, appear to align to the media's focus on environmental issues (Brown and Deegan, 1998; O'Donovan, 2002). Hybels (1995) argued that being legitimate allows organisations to attract resources, which are controlled by stakeholders, for example, the government, the public, the finance industry and the media.

The core of the legitimacy concept is the audience (Ashforth and Gibbs, 1990). Legitimacy is a process undertaken by the organization, and "the actions affecting relevant norms and values taken by other groups and organizations" (Dowling and Pfeffer, 1975, p. 125). Thus, legitimacy theory is similar to stakeholder theory as they both focus on the organisation and its operations (Neu *et al.*, 1998). Ashforth and Gibbs (1990) point out the process of legitimacy can be the 'double-edge' of organisational legitimacy, since the information that underpins legitimacy with one stakeholder group may reduce it for another group.

Therefore, Stakeholder theory, while also concerned with interactions between society and organisations, provides a different perspective on explaining complex social phenomena. Stakeholder theory has both an ethical (normative) strand and a managerial (positive) strand. As identified in several studies (Myers, 2014; Omran, and Ramdhony, 2015; Deegan, 2010; Deegan and Rankin, 1996), managers address the demands and interests of powerful stakeholders when they make voluntary social and environmental disclosures. Stakeholders, for example, investors, are concerned with the risk associated with corporate activities and corporate managers make a concerted effort to reduce the risk by changing a poor public image (Heard and Bolce, 1981; Neu *et al.*, 1998; Solomon and Lewis, 2002).

As explained by Deegan (2010), the ethical strand adopts the view that regardless of whether stakeholder management leads to improved financial performance, all stakeholders have intrinsic rights, and managers should manage the business in a way that does not violate these rights. According to this view, Stakeholder theory implies that business has true social responsibilities. However, the ethical strand of Stakeholder theory has a problem in establishing validity through empirical observation, which means that the normative perspectives on how organisations should act do not necessarily coincide with how organisations behave in the real world (Orts and Strudler, 2002).

The managerial (positive) branch of Stakeholder theory seeks to explain and predict how an organisation will react to various groups' demands. Freeman (1984) argued

that from a strategic perspective, it is necessary for organisations to understand the needs and interests of stakeholders in order to keep their support if they are to survive. Here, a major role of corporate management is to assess the importance of meeting stakeholder demands in order to achieve the firm's strategic objectives (Roberts, 1992). Since different stakeholder groups have different interests, priorities, and unequal power to influence institutions' actions, a successful organisation is considered to be one that satisfies the demands (sometimes conflicting) of the various powerful stakeholder groups (Deegan, 2010) and meet the double-edge of organisational legitimacy outlined by Ashforth and Gibbs (1990). Stakeholders apply pressure on organisations to address social issues relevant to their needs. However, GRI Guidelines were initially developed to support the consistent and comparable information and attestation needs of a variety of stakeholders.

Research Method

Qualitative research was identified as the most appropriate approach for this analysis as it enables rich understandings to be formed around a particular real-life topic or phenomenon (Patton, 2015). Unfortunately, Apple Inc. denied our requests for interviews to explore this area further. Therefore, to analyse Apple's overall CSR strategy, public information concerning Apple's social interactions was gathered from news articles, journals and other sources in the public domain.

We examined four Apple Inc. reports: Form 10-K, Suppliers Responsibility Report year 2013 to 2018, Environmental Responsibility Report, 2018, and Apple Supplier Code of Conduct 2018. The paper's investigation was augmented by additional web-based disclosures. GRI Sustainability Reporting Guidelines have been used in a number of studies as the framework for evaluating the quality of corporate social and environmental reports (Clarkson *et al.*, 2008; Hu *et al.*, 2011).

This research was conducted in three stages. Stage one used archival research which involves the collection, categorisation and summarisation of information from the company's administrative records and documents. This stage was mainly descriptive, and our aim was to establish an overall understanding of Apple's social and environmental disclosure practices. Apple's supplier responsibility reports from 2013 to 2018 were examined to detect changes made over the six-year period.

Stage two used content analysis to take advantage of the categorisation system already established in both GRI Guidelines and Apple's relevant reports, using the compilation requirement of each performance indicator referenced as a standard disclosure practice to determine relevant content reported by Apple. The data sources considered are: GRI Sustainability Guidelines (G4), Apple's Environmental Responsibility Report (including certain GRI-indexed web information), and external reports from Greenpeace.

Stage three (final stage) combined information derived from steps 1 and 2, reaching conclusions and attempting to interpret Apple's overall CSR strategy, as the information disclosed in the social and environmental reports is discretionary.

Research Analysis

Analysis of Apple's CSR Policies and CSR Disclosure Practice

Apple neither provides a separate CSR report, nor does it supply a “glossy” annual report. Instead, a Form 10-K/ 10-Q report is prepared in compliance with the United States Securities and Exchange Commission listing rules. Form 10-K/ 10-Q contains information on company background, organisational structure, products, risks, equity, executive compensation, and audited financial statements. Form 10-K represents the yearly report, and Form 10-Q represents the quarterly report. Apple reports its quarterly financial performance in the format of Form 10-Q.

Regarding CSR policies, Apple's 10-K report (Apple, 2018) includes a *Business Conduct* section which specifies policies about corporate governance, public relationships with customers, business partners, governments and communities, environmental, health and safety (EHS), information disclosure and employee conduct. Apple's EHS policies are also described in the EHS Policy Statement (2018). This document consists of a mission statement and several guiding principles. In the mission statement, Apple asserts management's commitment to protecting the environment, and also the health and safety of its employees and customers throughout its global operations (EHS Mission Statement, Apple, 2018). In terms of promoting EHS principles and responsible public policy, Apple claims to communicate its policies and programs with employees and stakeholders and to advocate the adoption of prudent EHS policies and practices by its contractors, vendors and suppliers.

Another relevant CSR policy document is the Apple Supplier Code of Conduct. This document deals specifically with suppliers' social and environmental responsibilities, and is the fundamental principle underlying Apple's supply chain management. The Apple SCoC and the Supplier Responsibility Progress Report are published on the “Supplier Responsibility” website, along with other miscellaneous information relating to supply chain management.

Apple uses its environmental website called “Apple and the Environment” as the primary source to communicate its environmental policies and report its environmental performance. Two environmental reports published on this website are (i) Product Environmental Report; and (ii) Facilities Environmental Report. The Product Environmental Report focuses on product environmental performance, while The Facilities Environmental Report evaluates environmental impacts generated by Apple-owned plants and facilities worldwide.

Product Environmental Reports

The Product Environmental Report documents the environmental performance of each ‘iProduct’ in respect to climate change (greenhouse emissions), energy and material efficiency, restricted substance and recycling. From 2003 to 2018, Apple published 40 product environmental reports, and 25 appeared in 2018 alone that covered 8 product lines. In each report, a product image is presented along with the date introduced and model number assigned. Each report starts with a general mission statement titled “Apple and the Environment” which reinforces Apple's focus on environmental management throughout the product life cycle, including the quality and types of materials used in manufacture. Apple products are also designed for energy efficiency and better recyclability, reflecting the company's concern to

manage e-waste (Apple, 2018). Measurement results for each performance category were presented.

Apple indicates their management considered GRI Sustainability Reporting Guidelines (G4) in the preparation of the product environmental reports. For the quantitative information required by this indicator, Apple presented information for each product on its: greenhouse gas emissions (breakdown and in total); power consumption (in different use modes); material use and packaging breakdown (by material) information. Regarding Restricted Substances, Apple declares it complies with the standards of the European Directive on Hazardous Substances (RoHS) in electrical and electronic equipment and also voluntarily applies more strict restrictions of its own.

The *Recycling* section of each report contained a descriptive passage with no quantitative data. The passage introduces the product take-back and recycling programs relevant to 95 per cent of regions where Apple products are sold.

Apple provides additional information on product life cycle assessment and environmental regulations concerning restricted substances in the Frequently Asked Questions section on its website. According to this section (Apple, 2018), a five-step approach is used in Apple's life cycle assessments. Apple states that the Fraunhofer Institute in Germany has checked its life cycle assessment instrument for quality and accuracy. However, this cannot be verified as no relevant documentation has been disclosed.

Concerning its product life cycle, Apple has developed a Regulated Substances Specification document detailing all substances, restricted or banned, in Apple products, packaging and manufacturing (Apple, 2018). This undisclosed document is also specified in Apple's SCoC. Additionally, Apple states that external assurances such as, firstly, the European RoHS Directive and Registration, Evaluation, Authorisation, and secondly, Restriction of Chemicals Regulation EC 1907/2018 have been granted for its products. These two regulations restrict the use of lead and other dangerous substances. In addition, Apple phased out Brominated Flame Retardant, and Polyvinyl Chloride covered in December 2018.

Facilities Environmental Reports

The Apple Facilities Environmental Footprint Report documents the activities undertaken by Apple for energy reduction, water consumption and waste production. According to Apple's GRI Index webpage (Apple, 2018), G4 environmental performance indicators were considered in the preparation of this report. Apple's first facilities environmental report was released in 2009. Apple did not provide an archive of the facilities reports on its website. Apple Facilities Report 2018 can be accessed directly from its environmental website.

Apple's Facilities Report, 2018 is more comprehensive than the previous four editions. In this report, Apple provides information about its *Energy Policy* and *Renewable Energy programs*. Regular reporting items breakdowns, such as electricity usage by business unit, and water usage for different business activities, were added. The most significant improvement is the inclusion of the "*Worldwide Facility Electricity and Green House Gas (hereafter GHG) Scope Summary*" chart.

Analysis of Apple's GRI-indexed Social and Environmental Disclosure

GRI Sustainability Reporting Guidelines (G4) were used to identify transparency issues and information gaps in Apple's social and environmental reports. Currently, there are three versions of the Guidelines, namely G3 (2006), G3.1 (2011) and G4 (2018), which are readily available on the GRI website. To indicate that a report is GRI-based, report makers should declare the level to which they have applied the GRI Reporting Framework via the "Application Levels" system (Veltri and Nardo, 2013). Application Levels indicate the extent to which the G3/G3.1/G4 Guidelines have been applied in an organisation's sustainability reports.

Apple has considered the GRI G4 indices for the reports that we examined. The G4 Guidelines consist of six sections. Section 1 – The purpose of the GRI sustainability reporting guideline; Section 2 –How to use the guideline,; Section 3 – Criteria to be applied by a organisation to prepare its sustainability report 'in accordance' with the guidelines; Section 4 - Reporting Principles; Section 5 – Standard Disclosure and Guidance features guidance on 'how' to report. Part 2 - Standard Disclosures; Section 6 – Quick Links. Among these sections, our main focus is on section 5- specifically different categories of disclosures mentioned in page 48 – 80. We compare this with Apple's GRI Index webpage information, which provides details of Apple's GRI-indexed reporting content. According to this webpage, a range of indices are considered in its social and environmental disclosure. These indices include performance indicators relating to: Environment (EN); Human rights (HR); Society (SO), and Labour practices (LA) as shown in Table 1.

Apple indicates that the environmental performance data contained in the Facilities Environmental Report covering energy, water consumption, greenhouse gas emissions and waste production have been prepared in accordance with relevant GRI Guidelines (G4).

Identified Gaps in Comparison to GRI Reporting Guidelines

Although Apple briefly mentions that its disclosure is consistent with G4 guidelines, this is difficult to verify as it is not specified which report contains such information. A complete list of GRI indices and related information disclosed by Apple is constructed for further analysis in the following section.

GRI Environmental Performance Indicators versus Apple's Environmental Disclosure Strategy and analysis: G4-1 requires a statement from the most senior decision-maker (i.e., CEO, Chair or from a person possessing a similar position) about the relevance of sustainability to the organisation. Apple provided this statement in their report. Apple Inc. also describes key impacts, risks and opportunities as mentioned in G4-2.

Commitments to external initiatives: Under G4-14, Apple Inc. provide a report on whether and how the organisation addresses the precautionary approach. Again, as per G4-22, Apple report the effect of any restatements of information contained in previous reports, and the reasons for such restatements.

Table 1: Apple GRI Index Navigation

Reporting Aspects	GRI Performance Indicators	
	Report breakdown	Indicators (G4 = Sustainability Reporting Guideline, Environment = EN, Product responsibility = PR, Labour practices = LA, Human rights = HR, and Society = SO)
Environment	Environmental Responsibility Progress Report	G4-1, G4-2, G4-14, G4-22, G4-24, G4-25, G4-26, G4-27, G4-28, G4-29, G4-30, G4-33, G4-35, G4-36, EN3, EN4, EN5, EN6, EN7, EN8, EN15, EN16, EN17, EN18, EN19, EN22, EN23, EN25, EN30, PR1
	Product Environmental Reports	EN1, EN2, EN7, EN27, EN28, PR3
Supplier Responsibility	Apple Inc.'s Suppliers	G4-12
	Supplier Responsibility Progress Report	G4-1, G4-2, G4-15, G4-16, G4-24, G4-25, G4-26, G4-27, G4-28, G4-29, G4-30, G4-35, G4-36, EN32, EN33, EN34, LA14, LA15, LA16, HR2, HR4, HR5, HR6, HR9, HR10, HR11, HR12, SO2, SO4, SO9, SO10, SO11

Stakeholders Engagement: Under G4–24, Apple inc. provide a list of stakeholder groups engaged by the organisation. As per G4–25, Apple report the basis for identification and selection of stakeholders with whom to engage and to follow G4-26, they report the organisation's approach to stakeholders engagement, including frequency of engagement by type and stakeholder group. Under G4-27, Apple report key topics and concerns that have been raised through stakeholder engagement.

Report profile: Following G4-28 Apple report period (i.e., fiscal or calendar year) for information provided and also data from the most recent previous report (G4-29), and reporting cycle (i.e., annual, biennial) (G4-30).

Note on Reporting that are not Prepared 'In Accordance' with the guideline: As per G4-33, Apple report on the organisation's policy and current practice regarding external assurance; the governance structure and its composition, the role of the highest governance body in setting the organisation's purpose, values and strategy etc. According to G4-34, Apple report the governance structure of the organisation, including committees of the highest governance body; as per G4-35, Apple report the process for delegating authority for economic, environmental and social topics from the most upper governance body to senior executives and other employees; as per G4-36 Apple report whether the organisation has appointed an executive-level position with responsibility for economic, environmental and social topics, whether post holders report to the highest governance body.

A list of essential indices derived from G4 Environmental (EN) Performance Indicators and matching reporting items by Apple is illustrated in Table 2.

Table 2: Content Analysis: GRI (G4) Environmental vs Apple's Environmental Reports

Source: Constructed from GRI (G4) and Apple's Environmental Reports.

Reporting Aspect /Content (GRI Guidelines)		Apple Environmental Reports		
EN 2	Percentage of materials used that are recycled input materials	Facilities Environmental Reports/Recycling	Apple reported 70% recycling rate of total products sold and 5,200 metric tons of materials recycled from daily operation. More information is required	EN 2 (Partially Reported)
EN 3	Direct energy consumption by primary energy source	Energy Consumption and Renewable Energy Disclosure	Apple only reported energy consumption of natural gas and electricity in total volumes. EN3 and EN4 require breakdowns of data by energy sources and types	EN 3 (Partially Reported)
EN 4	Indirect energy consumption by primary source			EN 4 (Partially Reported)
EN 5	Energy saved due to conservation and efficiency improvements			EN 5 (Partially Reported)
EN 7	Initiatives to reduce indirect energy consumption and reduction achieved	Facilities Environmental Report – Transportation	Apple reported a total energy reduction of 93 metric tonnes of CO ₂ emissions due to renewable energy programs for EN 5 and some quantitative data for EN 7. However, assumptions and methodologies for calculation are not provided	EN 7 (Partially Reported)
EN 8	Total water withdrawal by source	Facilities Environmental report – Water Use	Apple reported a total amount of 1.4 million cubic meters of water without identifying the sources associated with this withdrawal	EN 8 (Partially Reported)
EN 10	Percentage and total volume of water recycled and reused		Apple reported water recycling activity in Maiden data centre that resulted in a 20% water reduction and 40% reduction in landscape water in Cupertino and Austin. A total volume of water recycled/reused not provided	EN 10 (Partially Reported)
EN 16	Total direct and indirect greenhouse gas emissions by weight	Facilities Environmental Report – Renewable Energy	Apple reported a total amount of direct and indirect GHG emissions (Scope 1 and 2) in tonnes of CO ₂ equivalent for FY 11 and FY 12	EN 16 (Fully Reported)
EN 17	Other relevant indirect greenhouse gas emissions by weight	Facilities Environmental Report – Renewable Energy/Transportation	Apple reported total GHG emissions resulting from employee commute, fleet vehicles and business travel for FY 11 and FY 12	EN 17 (Fully Reported)
EN 18	Initiatives to reduce greenhouse gas emissions and reductions achieved	Facilities Environmental Report – Renewable Energy/Transportation	Reported energy savings through renewable energy programs of 93,000 metric tonnes of CO ₂ emissions and through use of electric vehicle charging stations of 102,500 kilograms of CO ₂ emissions	EN 18 (Partially Reported)
EN 21	Total water discharge by quality and destination	Facilities Environmental Report	No information disclosed by Apple	EN 21 (Not Reported)
EN 22	Total weight of waste by type and disposal method	Facilities Environmental Report – Waste and Recycling/Recycling	Apple reported total amounts of hazardous and solid waste and material recycled by weight resulting from daily operations without specifying disposal methods	EN 22 (Partially Reported)
EN 24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally		Apple claims all e-waste is processed in the region where it is collected	EN 24 (Fully Reported)
EN26	Initiatives to mitigate environmental impacts of products and services and extent of impact mitigation	Product Environmental Report	This is the only EN indicator considered in Product Environmental Reports. However, information disclosed by Apple is not relevant	EN26 (Not Reported)
EN 27	Percentage of products sold and their packaging materials that are reclaimed by category	Facilities Environmental Report	Apple referenced this indicator in the Recycling section but no information is disclosed	EN 27 (Not Reported)
EN 29	Significant environmental impacts of transporting products and other goods and materials used for the organisation's operations, and transporting numbers of the workforce	Recycling/Transportation	Apple reported total GHG emissions resulting from employee commute, fleet vehicles and business travel and product transportation	EN 29 (Partially Reported)

Several discrepancies in reporting format and content have been identified in this set of indicators. EN2 requires the reporting entity to determine the *total weight or volume of materials used* as reported under EN1 and the *total weight or volume of recycled input materials*. These two figures are used to calculate the percentage of materials used that are recycled input materials.

Apple claims to have considered this guideline in its Product Environmental Report and web disclosure in relation to recycling. However, the only information provided is the percentage of post-consumer recycled content in product environmental reports, an overall 75% recycling rate from various recycling programs, and the total volume

of materials recycled from daily operations. For this indicator, Apple could disclose more quantitative data to support the breakdown of the percentage rates reported.

Instead of following the compilation format specified in EN3, EN 4, EN6 and EN7, Apple reports electricity and natural gas consumption as grand totals but does not break these down into direct and indirect, renewable and non-renewable, or energy types. The omission of such data directly impacts on the accuracy of subsequent calculations of Scope 1 and 2 GHG emissions (EN15, EN18 and EN 19).

Similar problems were also found in water and waste generation data reported by Apple. EN10 requires quantitative data of total water recycled in cubic meters per year and as a percentage of the total water withdrawal reported under EN8. Apple publishes a total amount of 1.4 million cubic meters of water usage, without identifying the source of the water withdrawal. Recycled water and water reduction are reported by the percentage that, without additional supporting data (total volume of water reduced or recycled), cannot be easily identified. In reporting waste type and disposal method (specified in EN23, EN25), Apple did not report waste volume by disposal types and techniques.

Overall, Apple only reports fully on three indicators; EN 16, EN17 and EN24. Partial reports on EN 2, EN3 and a further nine indicators are evident. However, the announcements contain no information as required in EN 21, EN26 and EN27.

GRI Society, Human Resource and Labour Practices Indicator and Decent Work vs. Supplier Responsibility Disclosure

Apple listed a range of performance indicators derived from the GRI indicator protocols set of Society (SO), Human Rights (HR), and Labour Practices and Decent Work (LA) in the preparation of supplier responsibility reports, and other information contained on the Supplier Responsibility website. A complete list of these indicators and matching information disclosed by Apple is shown in Table 3.

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Table 3: Content Analysis: GRI (G4) Social, Human Rights, Labour Performance Indicators vs Apple's Supplier Responsibility Report

Reporting Aspect / Content (GRI Guidelines)		Apple Supplier Responsibility Report
Social Performance Indicators		
Corruption		
SO2	Percentage and the total number of business units analysed for risks related to corruption	The Supplier Responsibility Report documented a 98% practice compliance rate and a 92% management system compliance rate under " <i>Business Integrity</i> ". No specific information related to corruption reported
SO4	Actions are taken in response to incidents of corruption	
Human Rights Performance Indicators		
Investment and Procurement Practices		
HR 2	Percentage of significant suppliers, contractors, and other business partners that have undergone human rights screening, and actions are taken	Apple published its complete list of suppliers and disclosed a number of criteria under Labour and Human Rights in the SCoC, percentage rate required by this indicator not reported
Non-discrimination		
HR 4	Total number of incidents of discrimination and corrective actions are taken	Apple reported 34 factories requested pregnancy testing and 24 factories asked for medical examination (Hepatitis B) as discrimination practice, corrective actions reported but with no further information regarding the review process
HR 5	Operations and a significant supplier identified in which the right to exercise freedom of association and collective bargaining may be violated or at substantial risk, and actions are taken to support these rights	Apple reported 98% practices in compliance and 95% management systems in compliance, compilation requirement not satisfied
Child Labour		
HR 6	Operations and significant suppliers identified as having significant risk for incidents of child labour, and measures taken to contribute to the effective abolition of child labour	Eleven factories were found employing underage labour (a total of 106 active cases and 70 historical cases). Apple terminated its contract with one business and enforced corrective actions on others
Forced and compulsory labour		
HR 7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of all forms of forced or compulsory labour	8 factories were found with bonded labour and corrective actions taken were reported, compilation requirement not satisfied

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Labour Practice and Decent Work		
Labour/Management Relations		
LA 5	Minimum notice period(s) regarding operational changes, including whether it is specified in collective agreements	No information disclosed
Occupational Health and Safety		
LA 8	Education, training, counselling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	Miscellaneous information disclosed under the “ <i>health and safety</i> ” section of the current Supplier Responsibility Report. No training programs regarding serious diseases are disclosed

Source: GRI (G4) Social, Human Rights, Labour Performance Indicators and Apple's

Overall, the reporting discrepancies mostly relate to compilation. Apple's supplier responsibility report documents the number of audits conducted during the year - without specifying the total number of suppliers being audited that year. GRI indices require the disclosure of the organisation's overall management of business units/suppliers in each social aspect being held accountable. For example, the group of GRI indicators (SO2 and HR2) typically requires the reporting entity to disclose the number of business units/suppliers being analysed for risk assessments in each social reporting characteristic. Based on the risk assessments, the reporting entity could identify high-risk operations, and report either the types of operations, or the countries or geographical areas (HR5, HR6 and HR7).

In addition, when reporting non-compliance incidents, the indicators require the status of the incidents and details of corrective actions, for example, the number of employees dismissed, or disciplined and the number of contracts terminated (SO4 and HR4). Apple does report on non-compliance incidents, and in one situation with reference to underage workers, Apple reported the supplier's name and action taken.

The other two indicators considered by Apple are LA5 and LA8. These two indicators measure the practice of timely discussion of significant operational changes and the preventative strategy for managing health and safety in the workplace. The compilation requirement of LA5 is to report the minimum number of weeks' notice provided to employees (or their representatives) before implementing significant operational changes that could potentially affect them. However, no relevant information has been included in Apple's Supplier Responsibility Report in regard to this indicator. For LA8, the organisation is required to report on assisted programs relating to severe diseases caused by occupational activities. Preferably, this report could be presented in a specific format. Apple reported a number of occupational health and safety training programs, but these programs are for employees only (not subcontractors) and are not related to severe disease. Therefore, Apple did not provide sufficient information relevant to the requirement of this performance indicator.

Third Party Report and interaction

Greenpeace

Greenpeace is one of the world's largest environmental activist groups. It was noted that Apple responded and improved the problems addressed by Greenpeace. For example, Greenpeace highlighted that Apple did not provide information in terms of Clean Energy Policy Advocacy. This information has now been provided under the *Renewable Energy Principles*.

Greenpeace indicated that Apple's disclosure in some areas could be more transparent. For example, Apple has not yet provided external verification for the life cycle assessment tool used for estimating Scope 3 GHG emissions or the Regulated Substances Specification 069-0135 specified in the SCoC. No targets were set to reduce operational or supply chain GHG emissions, and no quantitative data relating to 70% product recycling and recycled input materials were provided.

The criticisms by Greenpeace focused on the company's weak recycling programs and hazardous chemical substances. Furthermore, Schulz and Heloid (2010) pointed out that Apple's slow improvement in GGE, but fast-growing market

competition are perhaps the reasons for Greenpeace “singling out” Apple for special attention on toxic compounds, and waste from discarded products.

Apple has gradually improved its ranking in the more recent editions of GGE, although communication with Greenpeace does not appear to have significantly improved. Greenpeace’s report on “how clean is your cloud” has included wrong calculations and estimations relating to energy consumption in Apple’s iCloud data centre (Godelnik, 2012 b,c). To this accusation, Apple quickly reacted by releasing its own sets of data, which were much lower than Greenpeace’s estimates. The argument presented by Godelnik (2012 b,c) is that Apple should have taken a more active role in engaging stakeholders, rather than taking a reactive approach which it appears to have done with Greenpeace and many other stakeholders.

Fair Labour Association (FLA): Foxconn

In February 2013, FLA launched an independent investigation into labour rights allegations at Foxconn, one of Apple’s major final assembly suppliers located in China. Though it does not provide a direct evaluation of Apple’s supply responsibility reports, FLA’s independent investigation made some significant findings of Foxconn. FLA’s independent report offers an objective measure of the effectiveness of Apple’s audits and relevant reports.

FLA identified several key issues relating to working hours, compensation, implementation and communication of policies and procedures, and health, safety and environment at Foxconn. FLA discovered that all three Foxconn factories being investigated had exceeded the FLA Code Standard (60 hours in total per week) and the requirements of Chinese Labour Law (40 hours and a maximum of 36 hours overtime per month) in the 12 months prior to the investigation. Though this finding coincides with the relevant low compliance rate reported in Apple’s audit results, and the results of preceding years, the matter has not been adequately emphasised.

Another key issue discovered by FLA is defined as Worker Integration, the score of which reflects the degree of implementation and communication of company policies and procedures amongst workers. G3 LA5 requires the disclosure of the minimum number of weeks notice before the implementation of significant operational changes. In this area, FLA identified that workers had minimal knowledge of the structure, function and activities of the worker participation bodies within Foxconn. They are thus indicating that workers may not have been consulted when policies and procedures that directly affect them were designed.

Apple actively facilitated communications with Chinese environmental groups after the company’s suppliers in China were accused of various environmental violations. Apple’s Supplier Progress Report included a statement from Ma Jun, Director of the Institute of Public and Environmental Affairs, praising Apple’s rigorous effort in monitoring suppliers and high level of transparency.

Discussion

This study has yielded a number of interesting findings: Apple does not appear to have fully reported on GRI performance indicators referenced in its CSR reports. Information gaps have been identified in both environmental and social reports prepared by Apple. Out of the 17 environmental performance indicators referenced in

Apple's environmental reports (Facilities and Products), Apple reported three indicators in full, provided incomplete information for nine, and provided no data for the remaining four. For indicators derived from the SO, LA, HR protocol sets, Apple's social reports (supplier responsibility) provided relevant information but failed to comply with the compilation requirement specified in each indicator.

On its GRI index webpage, Apple indicated that its reporting is consistent with G4 requirements (Apple, 2013). According to the application level criteria specified in G4, level C is an entry-level requiring the entity to fully report on a minimum of ten performance indicators. Based on the assessment results, Apple does not appear to qualify for this application level.

Public stakeholders (i.e., governments and communities) and specific primary stakeholders (customers and suppliers) wield more significant influences over Apple's CSR-related decisions than individual activist groups like Greenpeace. The miscommunication between Greenpeace and Apple on energy consumption demonstrates the issues that can arise in stakeholder relationships. In contrast, Apple seems to have adopted a more proactive and stakeholder-inclusive CSR strategy in dealing with the Institute of Public and Environmental Affairs and other NGOs in China. However, given Apple's defensive response to most public criticisms and allegations (Neu *et al.*, 1998), is perhaps a sign of a reactive strategy, which is consistent with Uhrh (2012).

Research Limitations and Future Direction

There are a number number of limitations associated with this research. First of all, the content analysis focuses on detecting compilation discrepancies in Apple's GRI-indexed reporting content. For those excluded GRI indicators, the content has not been reviewed to identify Apple's reasons for exclusion. Furthermore, the specific evaluation of Apple's strategy, profile and performance is outside the scope of this research. Secondly, this analysis only considered external reports prepared by Greenpeace as part of the overall evaluation. This is due to the limitation of external investigations of Apple's social and environmental disclosure practices. Also, CSR management policy and performance is outside the scope of this research.

Future research can and should be done in the above limitation areas, including linking the reporting gaps with the organisation's strategic path. Also, since Apple places significant reliance on offshore suppliers for the manufacturing and assembling of products, examination of supply chain information and disclosure of environmental performance of suppliers offer fertile research areas.

Conclusion

It is evident in the reports examined, Apple does not appear to communicate information that is entirely consistent with GRI guidelines. Apple does not include estimations or make any forward-looking disclosures - other than those mandated by law. This has cost the firm ratings, which has implications for its reputation and public image.

The geographical distance between the place of manufacture and consumers who use a company's products and their ultimate disposal does prompt concern from some global stakeholders. This is evident in Apple's dialogues with Greenpeace.

Apple consistently does not appear to provide timelines for the reduction or elimination of any particular substances in its products. At times it discloses much more than is asked for, and at other times management appears to choose to communicate issues in a manner that is not consistent with those preferred by external parties. Apple has argued that most measures of a product's "greenness" fail to accurately measure the impact of customers keeping a product longer – a 'cradle-to-grave' approach. Again, Apple's accountability to multiple parties can sometimes create a problem of 'double-edge of organisational legitimacy' as an attempt to increase legitimacy with one group can decrease it with others.

Overall, the results of this study indicate that Apple could add more value in its communication with stakeholders by: (a) including in its reports a wider range of supply chain and product life cycle performance targets; (b) registering its reports with GRI; (c) seeking external assurances for areas of self-declaration; and (d) including social issues in its sustainability reports. To add value to its corporate reputation, enterprise risk management, Apple could facilitate stakeholder communication in terms of global supply chain estimations and actual comparisons, particularly concerning the hazardous substances used by the organisation and its contractors.

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