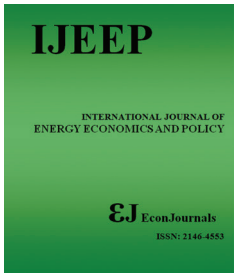

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A Sustainability Accounting: Case Study on Exploration, Production and Midstream Activities at Maersk Oil

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ABSTRACT

This paper gives a short introduction to sustainable accounting and its essential measurement problems. The greatest challenge seems to be how companies should create sustainability reports that achieve the demands for transparency and accuracy. Because the current frameworks vary considerably, the development of standards and guidance to report sustainability will most likely continue to evolve. This study proposes a model to Maersk Company allowing them to use a sustainability accounting framework as guidance for disclosure of material sustainability and accounting metrics to determine sustainability-related risks and opportunities it faces using the sustainability accounting standard for the oil and gas industries, particular to exploration, production and midstream activities.

Keywords: Sustainability Accounting, Measurement Problems, Oil and Gas Industries
JEL Classifications: M40, Q56, Q54, L72

1. INTRODUCTION

The early definition of sustainability report presented as "development that meets the needs of the present world without compromising the ability of future generations to meet their own needs" (Deegan and Unerman, 2011. p. 386) still exists, as does sustainable development itself. Christofi et al. (2012) explain that companies have integrated environmental and other surrounding aspects into their activities since the mid-1990s. Since stakeholders and people in general have begun taking more than profit-bound aspects into account when evaluating the responsibility and legitimacy of businesses, companies have increased their use of sustainable reporting in order to enhance their social and environmental credibility (Wheeler and Elkington, 2001). For many years the activities performed by humans have damaged earth's resources, a clearly unsustainable situation (Deegan and Unerman, 2011. p. 387-389). The 1992 Earth Summit in Rio de Janeiro engaged several organizations and government bodies in sustainable development, influencing the proposal that accounting should involve environmental impacts. The consideration that financial accounting often fails to embrace external effects such as social and environmental impacts is mentioned by Deegan and Unerman (2011. p. 418-420). This occurs in financial accounting when events have external impacts but no direct effect on the company, because of the entity assumption and the definition of expenses. Companies shall be separated from any stakeholder in the financial accounting, and the expenses to be accounted for are those that have an impact on the economy of the entity during a specific period.

Global reporting initiative (GRI) is a non-profit organization that publishes guidelines for sustainability reporting (Christofi et al., 2012). Since these Sustainability Reporting Guidelines were released, they have been voluntarily followed worldwide (Deegan and Unerman, 2011. p. 389). The Sustainability Accounting Standards Board (SASB) is an independent non-profit helping companies throughout the world develop sustainability accounting standards. The focus of this paper is on the measurement problems in reporting corporate social responsibility (CSR) and sustainability on the basis of the current guidelines and standards. Clearly the greatest issue concerns which measurements to perform rather than how, even though both questions must be solved.

While sustainability reporting as a whole is still voluntary, in many cases society and stakeholders expect companies to publish

social and environmental information along with their financial statements. The aim of sustainability reports is to measure and assess companies' environmental, social and governance performance separately from the financial accounting, to create a wider view of the companies (SASB, 2013). Reporting of CSR has increased recently, and sustainability reports are a common tool for companies to communicate their CSR (Fernandez-Feijoo et al., 2014). CSR is described by the European Commission (EC, 2001) as a voluntarily applied concept where companies integrate environmental and social concerns both in their business and operations and in the interaction with their stakeholders. Aras and Crowther (2008) assert that voluntary sustainability reporting causes companies to increase their responsibility for their social impact, but that they are also responding to the demands and pressures from stakeholders. And *viz*.: Stakeholders should be concerned if companies undertake this reporting. Furthermore, Aras and Crowther (2008) stress that the process to develop standards for reporting sustainability and CSR has begun, for example with the Sustainability Reporting Guidelines developed by GRI, which Fernandez-Feijoo et al. (2014) point out as essential to ensure transparency and credibility.

The main purpose of the GRI guidelines is to achieve global standardization for sustainability reporting. However, it is important to highlight that every individual entity may decide on its own if and how it will publish its report, since overall reporting is voluntary. An ongoing discussion asks whether it should be regulated and legislated, as the pressure from society and stakeholders, in combination with the state of the environment, leads to an increasing trend for companies to implement sustainability reporting (Christofi et al., 2012). Without official regulation, companies face big decisions concerning issues that they may not have the adequate knowledge to manage. Since there is no official right or wrong with this kind of reporting, the phenomenon has been called many different names, such as social and environmental reporting, triple bottom line (TBL) reporting, CSR reporting, etc. (Deegan and Unerman, 2011. p. 385-386).

2. LITERATURE REVIEW

2.1. GRI

Willis (2003) states that "The GRI succeeded in attracting a wide range of business, civil society, accountancy and other non-profit associations and individuals to its task," which is highlighted as one of GRI's greatest strengths. The GRI is a European not-for-profit organization of auditors, experts in concerned sectors and other representatives that develops guidelines for sustainability reporting of the environmental, social and economic dimensions (GRI, 2013). GRI offers two alternatives to report by the guidelines, the Core option and the Comprehensive option. The Core option is the basic way of reporting and covers the areas of environmental, social, economic and governance performance. An extension of the Core is provided by the Comprehensive option, which requires that the companies also perform a standard disclosure on the strategy and analysis, governance, ethics and integrity of the organization (GRI, 2013). The guidelines are designed to apply internationally, for all kinds of organizations, no matter the size, sector or geographic location. GRI has also developed guidance for specific sectors to complement the basic disclosures. According to Adams and McNicholas (2006), GRI guidelines may be perceived as too detailed, expensive or time consuming to utilize. This attitude towards guidelines and sustainability reporting overall is, however, often rooted in inadequate knowledge of the sustainability matter. To meet the global demand for sustainable reporting, Hedberg and von Malmborg (2003) found that it is common for companies to apply the GRI guidelines. The purpose of GRI is to develop globally accepted guidelines, in order to further standardize and legitimate sustainability reporting (Hedberg and von Malmborg, 2003). In order to reach legitimacy, the GRI guidelines encourage communication between companies and their stakeholders. In their study, Hedberg and von Malmborg (2003) found that even though companies applied the GRI guidelines, quality varied extensively. The variations could be explained by the level of utilization, as some of the companies followed the guidelines carefully, whereas others loosely used them as inspiration for the reports. Hedberg and von Malmborg (2003) stress that since the guidelines only provide recommendations and not demands, it is possible that careless usage can affect the reputation of the GRI guidelines, which may support the expressed need for further regulation in these matters. The GRI guidelines can help to shorten the distance between a company and its stakeholders (Hedberg and von Malmborg, 2003). Also, these guidelines provide managers with much needed tools for improving a company's environmental and social awareness, which in the long run creates a sustainable industry. Because of the user-friendly nature and the level of relevant education in sustainability, Hedberg and von Malmborg's (2003) paper ends by encouraging companies to thoroughly use the GRI guidelines. Christofi et al. (2012) take the speculation one step further, proposing that the U.S. Securities and Exchange Commission and SASB should join forces and take charge of the task of developing an American standardization for sustainability reporting.

2.2. Standardization and Indicators for Sustainability

Deegan and Unerman (2011. p. 99-102) find one benefit of international standardization to be a way to erase possible differences in accounting. Standardized International Accounting allows for comparison of reports of various countries internationally, due to the lack of differences in accounting standards. In reality this aim does not seem to have been achieved, at least not according to the findings of Isaksson and Steimle (2009), as comparison between sustainability reports written according to the GRI guidelines was incomplete. The G4 guidelines by GRI are, however, developed to allow for comparability, an improvement since the G3 guidelines (GRI, 2013).

Isaksson and Steimle (2009) state that each company must determine which aspects are important to its own business and set indicators based on it. The aim of indicators, according to Chee Tahir and Darton (2010) is to serve as a guide for monitoring and directing operations in companies towards sustainability. Therefore, it is crucial that sustainability reports include not only relevant information about how sustainable a company is but also its objects of sustainability. The result is that the optimal set of indicators will vary for each company. Homayoun et al. (2013) found that the content of CSR studies varies a lot, not solely in time but also by country and the characteristics of the entities and

trades. Adams and McNicholas (2007) emphasize that another circumstance that may influence the content of sustainability reports is the individuals who generate the report. The producers are likely to operate in different units of the organization and be concerned with various matters, as for example the function of public relations and the board of directors. Since the target audience of the sustainability reports is the stakeholders, management must respond to the demands of the stakeholders regarding the content of the report (Homayoun et al., 2013).

Because content, according to Adams and McNicholas (2007), depends not entirely on the producers' preferences but also on their knowledge and understanding, standards may be essential to achieve the aim of the reports, such as benchmarking of the reports, feedback from stakeholders and practicing the guidelines as GRI frameworks. The problem Adams and McNicholas (2007) observed with implementing guidelines was the large number of indicators that had no relevance to the companies and sectors. This observation was also made in a study by Isaksson and Steimle (2009) based on GRI-structured sustainability reports, which revealed that many of the performance indicators for sustainability were inadequate. Chee Tahir and Darton (2010) state that although indicators are a common way to measure performance, frameworks are criticized for being incapable of mirroring the true state of the environment and socio-economic conditions properly. In contrast, Wilburn and Wilburn (2013) believe the performance indicators in the GRI guidelines are a means to evaluate the ethical base of a company and a great starting point. Chee Tahir and Darton (2010), on the other hand, write that indicators derived from a framework persistently seem to be a matter of double-counting and are obscure about what is measured, how and why.

2.3. SASB

SASB develops supporting sustainability accounting disclosure standards with focus on performance in the economic, social and governance dimensions (SASB, 2013). Gray and Milne (2002) label sustainability reporting as a whole as non-sense, since those who prepare sustainability reports seem to ignore the fact that measuring sustainability requires definitions of the issues being measured. "Determining ecosystem capacities, thresholds, and cumulative effects in practice is notoriously difficult and something ecologists, planners, geographers, environmental engineers and scientists have known for years. Apparently, these are concepts and issues business people and accountants have yet to understand, or choose to forget" (Grey and Milne (2002. p. 123)). However, sustainability reporting does influence the organizational structure to act in a more environmentally conscious fashion. The standards are addressed to companies publicly listed in the USA and are voluntary instruments accompanying the mandatory disclosure filing to the Securities and Exchange Commission. Standards of SASB are not generalized as the GRI guidelines are but are industry specific and developed by industry working groups, which consist of one-third market participants, one-third corporations and one-third other stakeholders (SASB, 2015).

Willis (2003) noted that in the late nineties companies increasingly received requests for social and environmental information from their stakeholders. This led to an early stage of attempts of reporting these matters, which generally resulted in incoherent and irregular reports that were not possible to compare, due to a lack of frameworks or guidelines. Studies have shown that sustainability reporting initially had its most rapid increase in high-risk and high-impact companies, for example with activities utilizing chemicals (Wheeler and Elkington, 2001). General mistrust characterized the business climate, which may explain the beginning of the demand for environmental reporting. As stakeholders such as investors recognize sustainability as an important issue for liability and risk management, companies use sustainability reporting as a competitive force. Through effective communication with stakeholders, a company is consequently able to strengthen stakeholders' loyalty and its legitimacy in the eyes of its stakeholders (Wheeler and Elkington, 2001).

Deegan and Unerman (2011. p. 396-407) argue that since the main perceivers of the reports are the stakeholders of the company, it is essential to determine their needs and expectations of the reporting. Yet the existing guidance or regulation of social and environmental reporting varies (SASB, 2015). Leszczynska (2012) discusses the importance of reliability and validity as requirements to create shareholder value from sustainability reports. To increase the trust from stakeholders, the companies must ensure the credibility of the reports by presenting accurate and complete information that they must be able to endorse. The growing popularity of CSR shows the agreement of the reports from the shareholders (Homayoun et al., 2013). Some reports studied also included statements that organizations are motivated to issue CSR reports because they improve the company's reputation and image (Leszczynska, 2012). This remark is in line with observations of Adams and McNicholas (2007), that sustainability reporting is a way to amend corporate legitimacy. The GRI guidelines aim to allow for standardization (GRI, 2013) and are designed to ensure transparency and consistency, as well as to gain usefulness and credibility.

This matter is also brought up by Wilburn and Wilburn (2013), who state that organizations such as GRI that present this kind of program and framework are increasing in popularity and respect because of the increase in initiatives to adopt CSR. This is no surprise, since all of the dimensions of CSR are covered by the performance indicators of the GRI. Because companies listen to stakeholder demands to be ethical, they can make a profit, of course given that the reports actually show ethical responsibility (Wilburn and Wilburn, 2013).

The SASB standards are developed for specific industries based on the diverse characteristics of organizations (SASB, 2013), and the GRI guidelines are designed to be adoptable by any company (GRI, 2013). The key performance indicators (KPI) in the guidelines and standards will therefore differ, so Isaksson and Steimle (2009) who stated that companies should set their KPIs based on the organization, are most likely to approve of SASB. Isaksson and Steimle's study (2009), was conducted on sustainability reports of companies that were GRI reporters on the basis of the TBL dimensions: Economic, social and environmental. In the assessment of the sustainability reports they focused on four different criteria: (1) The relevance of the chosen KPIs, (2) the level of clarity, (3) the clarity of improvement and (4) the system

view. Those KPIs chosen were the indicators of customer value, social harm and environmental harm. Level of clarity indicated the level of sustainability of the company compared to others in the same industry, and the level of improvement described the valid indicators. The purpose of the system view is to clarify whether benchmarks have been defined, so indicators are associated with the sustainability requirements. Isaksson and Steimle's (2009) findings conclude:

1. Emissions and energy consumption are reported together as ensembles, as was the value of sales. The social indicators concerned the human resources of the companies. Poverty and charity are scarcely mentioned
2. None of the reports contained comparatives with any main social indicators or main indicators of environment apart from the total CO_2 emissions
3. Most of the companies had set their environmental main indicators for 3-5 years, and none of them were benchmarked to other companies
4. All of the reports stated the objectivities of reducing the CO_2 emissions as a percentage during a specific time period, but none of them were related to any sustainability requirement externally.

Isaksson and Steimle (2009) conclude that the reported indicators are not entirely relevant, and they argue that some relevant indicators were omitted. An example is that the main market of these companies is located in poor and developing countries, so the social reporting does not appear to be as prominant in the companies as is should be.Leszczynska (2012) performed a study based on the content of sustainability reports and observed similar results. Although a conclusion was that the complexity and coverage has increased over the past years in the majority of the studied reports, issues as human rights were excluded in many cases. How to interpret this is a complex matter, especially since human rights are mentioned by Leszczynska (2012) as an indicator for social performance, yet she points out that companies have the freedom to report what they want even if they follow the G4 guidance. This framework should provide enough coverage of relevant issues (Leszczynska, 2012).

3. PROPOSED MODEL FOR MAERSK OIL COMPANY: SUSTAINABILITY AND ACCOUNTING METRICS

This study proposes a model for Maersk Oil Company to use as guidance for the disclosure of material sustainability and accounting metrics. The study proposes that Maersk conduct an assessment to determine sustainability-related risks and opportunities it faces using the SASB Sustainability Accounting Standard for Oil and Gas Exploration and Production (E and P). For ease of interpretation, Table 1 summarizes all the sustainability disclosure topics and metrics presented throughout this section. SASB has separate sustainability accounting standards for each of E and P, midstream, and downstream, considering their "pure-play" activities (SASB, 2013; 2015).

3.1. Oil and Gas – E and P

Oil and gas E and P companies explore for, extract or produce energy products such as crude oil and natural gas, in the upstream operations of the oil and gas value chain. Integrated oil companies conduct upstream operations but are also involved in the transport and/or refining or marketing of products. These have different financial and sustainability-related risks and opportunities. Sustainability disclosure topics specific to the three components of the oil and gas value chain are discussed in separate SASB Industry Briefs (SASB, 2013; 2015). For the Oil and Gas – E and P industry, SASB has identified the material sustainability topics shown in Table 2.

3.2. Oil and Gas - Midstream

The Oil and Gas - Midstream industry consists of companies involved in the transportation or storage of natural gas, crude oil, and refined petroleum products. Midstream natural gas activities involve gathering, transport, and processing of natural gas from the wellhead, as well as the removal of impurities, production of natural gas liquids, storage, pipeline transport, and shipping, liquefaction or regasification of liquefied natural gas. Midstream oil activities mainly involve transport of crude oil and refined products over land, using a network of pipes and pumping stations, as well as trucks and rail cars, and overseas and rivers via tanker ships or barges. Companies that operate bulk stations and terminals, as well as those that manufacture and install storage tanks and pipelines, are also part of this industry (SASB, 2013; 2015). SASB has identified the following material sustainability topics for Midstream shown in Table 3.

4. DISCUSSION AND CONCLUSIONS

Corporations engaged in sustainable development receive support from standard-setting organizations that provide guidance on measuring and reporting sustainable performance. Since this kind of report is largely unregulated, the disclosed information may vary in quality and relevance. The greatest challenge seems to be how companies should create reports that achieve the demands for transparency and accuracy. One of the largest obstacles in standardizing the reporting is to find a general disclosure of information that fits all stakeholders, external as well as internal. This matter requires further discussion and possibly theorization that would assist in developing a standard for sustainability reporting that is universally accepted.

Sustainability reporting is important for companies to embrace, mainly because of legitimacy aspects. If a company doesn't publish a sustainability-themed report, stakeholders will most likely perceive it as not credible. Taking a larger view as the 1987 Brundtland Report suggests, it is essential that today's business does not compromise the environment for future generations. While the concept has been criticized, all researchers studied seem to agree that work must be done in the sustainability department. However, sustainability guidelines, when used correctly, may steer companies away from their initial purpose of gaining legitimacy. Companies publishing sustainability reports may even subconsciously do some "soul-searching" that result in increased environmental awareness. As of today, it seems that the responsibility of creating sustainability guidelines belongs to

Table 1: Guidance for disclosure of material sustainability and accounting metrics for oil and gas – exploration and production, midstream, and downstream

Oil and gas – E and P	Oil and gas – Midstream	Oil and gas – Refining and marketing	Oil and gas - Services
Environment			
• GHG emissions • Air quality • Water management • Biodiversity impacts	• GHG and other air emissions • Ecological impacts	• GHG emissions • Air quality • Water management • Hazardous materials management	• Emissions reduction services and fuels management • Water management services • Chemicals management • Ecological impact management
Social capital			
• Community relations • Security, human rights and rights of indigenous peoples			• Community relations and rights of indigenous peoples
Human capital			
Business model and innovation		• Product specifications and clean fuel blends	
Leadership and governance			
• Business ethics and payments transparency • Health, safety and emergency management • Reserves valuation and capital expenditures • Management of the legal and regulatory environment • Contractor and supply chain management	• Competitive behavior • Operational safety, emergency preparedness and response	• Pricing integrity and transparency • Health, safety and emergency management • Management of the legal and regulatory environment	• Business ethics and payments transparency • Health, safety and emergency management • Management of the legal and regulatory environment

Source: (SASB.ORG), E and P: Exploration and production, GHG: Greenhouse gas

Table 2: Guidance for disclosure of material sustainability and accounting metrics: Oil and gas: E and P

GHG emissions

E and P activities generate significant direct GHG emissions, from combustion in stationary and mobile internal combustion engines and from gas processing equipment, venting, flaring, and fugitive methane

Accounting metrics

NR0101-01: Gross global Scope 1 emissions, percentage covered under a regulatory program, percentage by hydrocarbon resource

NR0101-02: Amount of gross global Scope 1 emissions from: (1) combustion, (2) flared hydrocarbons, (3) process emissions, (4) directly vented releases, and (5) fugitive emissions/leaks

NR0101-03: Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets

Air quality

Other air emissions from E and P operations include hazardous air pollutants, criteria air pollutants, and VOCs, which can have significant, localized human health and environmental impacts

Accounting metrics

NR0101-04: Air emissions for the following pollutants: NOx (excluding N_2O), SOx, VOCs, and PM

Water management

Depending on the extraction technique, E and P operations need relatively large quantities of water, which may expose companies to the risk of reduced water availability, regulations limiting usage, or related cost increases, particularly in water-stressed regions

Accounting metrics

NR0101-05: Total fresh water withdrawn, percentage recycled, percentage in regions with high or extremely high baseline water stress

NR0101-06: Volume of produced water and flowback generated; percentage (1) discharged, (2) injected, (3) recycled; hydrocarbon content in discharged water

NR0101-07: Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used

NR0101-08: Percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline

Biodiversity impacts

The E and P industry's activities can have significant impacts on biodiversity. These include habitat loss and alteration through land use for exploration, production, disposing of drilling and associated wastes, and decommissioning of onshore and offshore wells. Oil spills and leaks are a threat to many species and habitats

Accounting metrics

NR0101-09: Description of environmental management policies and practices for active sites

NR0101-10: Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume near shorelines with ESI rankings 8-10, and volume recovered

(*Contd...*)

Table 2: (*Continued...*)

NR0101-11: (1) Proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat
Security, human rights, and rights of indigenous peoples
E and P companies face additional community-related risks when operating in conflict zones; in areas with weak or absent governance institutions, rule of law, and legislation to protect human rights; or in areas with vulnerable communities such as indigenous peoples
Accounting metrics
NR0101-12: (1) Proved and (2) probable reserves in or near areas of conflict
NR0101-13: (1) Proved and (2) probable reserves in or near indigenous land
NR0101-14: Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict
Community relations
E and P activities take place over a number of years, and companies may be involved in multiple projects in a region that can have a wide range of community impacts. Community rights and interests may be affected by environmental and social impacts of E and P operations, such as competition for access to local energy or water resources, air and water emissions, and waste from operations
Accounting metrics
NR0101-15: Discussion of process to manage risks and opportunities associated with community rights and interests
NR0101-16: Number and duration of non-technical delays
Health, safety and emergency management
Workers involved in E and P activities face significant health and safety risks due to the harsh working environments and hazards of handling oil and gas. In addition to acute impacts resulting from accidents, workers may develop chronic health conditions, including those caused by silica or dust inhalation, as well as mental health problems
Accounting metrics
NR0101-17: (1) TRIR, (2) fatality rate, and (3) near miss frequency rate for full-time employees, (4) contract employees and (5) short-service employees
NR0101-18: PSE rates for LOPC of greater consequence (Tier 1)
NR0101-19: Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout the E and P life cycle
Business ethics and payments transparency
Managing business ethics and maintaining an appropriate level of transparency in payments to governments or individuals are significant issues for the E and P companies. This is due to the importance of government relations to companies' ability to conduct business in this industry and to gain access to oil and gas reserves
Accounting metrics
NR0101-20: (1) Proved and (2) probable reserves in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index
NR0101-21: Description of the management system for prevention of corruption and bribery throughout the value chain
Reserves valuation and capital expenditures
Estimates suggest that E and P companies are unlikely to be able to extract a significant proportion of their proved and probable oil and gas reserves if GHG emissions are to be controlled to limit global temperature increases to 2°C
Accounting metrics
NR0101-22: Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions
NR0101-23: Estimated carbon dioxide emissions embedded in proved hydrocarbon reserves
NR0101-24: Discussion of how price and demand for hydrocarbons and/or climate regulation influence the capital expenditure strategy for exploration, acquisition and development of assets
Management of the legal and regulatory environment
The interaction of companies in the E and P industry with their legal and regulatory environment can have material impacts on shareholder value. This can be a result of E and P companies' significant spending on lobbying and political contributions or as a result of changes in laws or policies that can affect their operations
Accounting metrics
NR0101-25: Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations
NR0101-26: Five largest political, lobbying, or tax-exempt group expenditures

Source: (SASB.ORG). VOC: Volatile organic compounds, PM: Particulate matter, TRIR: Total recordable injury rate, PSE: Process safety event, LOPC: Loss of primary containment, GHG: Greenhouse gas, E and P: Exploration and production

no-one. However, some argue that regulations should be legislated, since some companies may be negligent about the guidelines and therefore misleading in their sustainability reports. Since these reports are used to enhance a company's credibility, any misleading may create a general distrust towards the guidelines.

According to Isaksson et al. (2014) the best definition and description of sustainable development has not yet been determined, which leads to uncertainty with the objectives. Many companies fail to define sustainable development in their reports (Leszczynska, 2012), which may indicate that companies are not exactly aware of what they are striving for. Maybe they began to report sustainability from a legitimacy perspective and are just applying an approved framework, but they want to be sustainable. Isaksson and Steimle (2009) add that companies must subsequently pursue the matter of translating the objectives to how they shall be accomplished. This may be essential for the companies or the standard developers to determine, to be able to ensure the same starting conditions when determining what should be measured and how. Isaksson and Steimle (2009) also found that one reason

Table 3: Guidance for disclosure of material sustainability and accounting metrics: Oil and gas: Midstream

GHG and other air emissions
The midstream industry generates significant quantities of GHGs and other air emissions from compressor engine exhausts, oil and condensate tank vents, natural gas processing, and fugitive emissions, in addition to emissions from mobile sources
Accounting metrics
NR0102-01: Gross global Scope 1 emissions, percentage covered under a regulatory program
NR0102-02: Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets
NR0102-03: Air emissions for the following pollutants: NOx (excluding N2O), SOx, VOCs, and PM
Ecological impacts
The storage and transport of crude oil, natural gas, and related products through a vast system of maritime transportation vehicles, pipelines, trains, and trucks presents considerable risk to the environment and to local communities
Accounting metrics
NR0102-04: Description of environmental management policies and practices for active operations
NR0102-05: Percentage of land owned, leased, and/or operated within areas of protected conservation status or endangered species habitat
NR0102-06: Terrestrial acreage disturbed, percentage of impacted area restored
NR0102-07: Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume in unusually sensitive areas, and volume recovered
Competitive behavior
Companies that own natural gas pipelines and storage facilities face numerous and constantly changing regulations from the U.S. FERC in all aspects of their operations, including rates charged, access offered to pipelines, and siting and construction of new facilities
Accounting metrics
NR0102-08: Amount of legal and regulatory fines and settlements associated with federal pipeline and storage regulations
Operational safety, emergency preparedness and response
Midstream companies operate a vast network of assets that face risks of spills and accidents. Any incident that results in the unintended releases of hydrocarbons could have wide-ranging impacts on the environment, employees and local communities
Accounting metrics
NR0102-09: Number of reportable pipeline incidents, percentage significant
NR0102-10: Number of (1) accident releases and (2) non-accident releases from rail transportation
NR0102-11: Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout project life cycles

Source: (SASB.ORG). PM: Particulate matter, FERC: Federal energy regulatory commission, GHG: Greenhouse gas

for the measurement problems in sustainable reporting are that it is complicated for companies to decide what to measure and how. Since carbon emissions are fairly easy to measure, a possible effect could be that what is simply measured becomes measured (Isaksson and Steimle, 2009). The aim could in this case be an attempt to present an extensive sustainability report to improve the company's image, as Leszczynska (2012. p. 17) pointed out.

The GRI is being developed by a wide range of business, civil society, and accountancy and other non-profit associations and individuals, which probably makes it one of the current most reliable providers of guidelines. When the issue of what to measure is solved by applying frameworks of indicators as GRI-guidelines, Adams and McNicholas (2007) have observed that many of these indicators lack relevance to the business, even though Leszczynska (2012) suggests that the G4 guidelines are sufficient. To apply frameworks thus does not seem like the best solution. Nor does letting the organization be responsible, since preferences and knowledge are significant factors. It seems that the guidelines of the GRI may not be as beneficial as many state; perhaps the harmonizing approach by SASB is more fitting, to obtain quality and measure the right things instead of obtaining quantity and measuring many things. Important to consider, however, is that the release of G4 occurred not so long ago and may have changed the opinions of some of the authors discussed. Nonetheless, the KPI clearly differ from the standard or guidelines practiced, which makes it difficult to compare the sustainability of one company to another. Apparently the measurements in the reports differ even when the same framework is applied (Leszczynska, 2012). Despite these differences, publishing the reports allows for reactions and contributes to the development of the right standards and getting rid of the indicators that are not relevant.

Even though GRI provides clear instructions for applying the guidelines, there seem to be a general need for training or instruction in the purpose of sustainability reports. The kind of data to disclose in sustainability reporting seem to vary depending on factors such as company size and industry. It is clear, though, that a common denominator in most perceptions is that the information is tailored to the interests of external stakeholders. While this is criticized, they seem to be the main target group. Of course, the quality of the reports is dependent on the internal interactions, and other indirect stakeholders must be taken into account. Therefore, not only must companies adjust to external stakeholders such as influential investors when preparing sustainability reports, they also need to take into account indirect stakeholders such as employees and customers. These critics request information that is characterized by diversity. However, the question of diversity is also singled out as one of GRI's biggest obstacles. How is it possible to standardize the information disclosure so that it fits all kinds of stakeholders?

Determining what information should be disclosed and with whom it should be shared is a matter in need of further academic research. This could enable theorization that provides a broader understanding, to develop a standard for sustainability reporting that is universally accepted. Overall, it is evident that the

recognition issues of sustainability reporting need to be discussed further, whether on a theoretical or a practical level. There is an apparent demand for clarification regarding the use and purpose of sustainability reporting, which will guarantee many discussions ahead. In the future the field would benefit from more specific studies that handle problems such as what content stakeholders value in sustainability reports or how well GRI-based reports reflect the frameworks. Another approach would be to study standard-setting organizations other than GRI, such as the SASB. We have found that this subject is not only wide but also quite complex and still under development.

REFERENCES

Adams, C.A., McNicholas, P. (2006), Making a difference: Sustainability reporting, accountability and organizational change. Accounting, Auditing & Accountability Journal, 20(3), 382-402. Available from: http://www.ejournal.narotama.ac.id/files/Making%20a%20difference.pdf.

Adams, C.A., McNicholas, P. (2007), Making a difference. Accounting, Auditing & Accountability Journal, 20(3), 382-402.

Aras, G., Crowther, D. (2008), Developing sustainable reporting standards. Journal of Applied Accounting Research, 9(1), 4-16.

Chee Tahir, A., Darton, R.C. (2010), The process analysis method of selecting indicators to quantify the sustainability performance of a business operation. Journal of Cleaner Production, 18, 1598-1607.

Christofi, A., Christofi, P., Sisaye, S. (2012), Corporate sustainability: Historical development and reporting practices. Management Research Review, 35(2), 157-172.

Deegan, C., Unerman, J. (2011), Financial Accounting Theory. 2nd European ed. London: McGraw-Hill Higher Education. p99-102, 385-389, 396-407, 418-420.

European Commission (EC). (2001), Green Paper – Promoting a European Framework for Corporate Social Responsibility. Brussels: European Commission.

Fernandez-Feijoo, B., Romero, S., Ruiz, S. (2014), Commitment to corporate social responsibility measured through global reporting initiative reporting: Factors affecting the behavior of companies. Journal of Cleaner Production, 81, 244-254.

Gray, R., Milne, M.J. (2002), Sustainability Reporting: Who's Kidding Whom? Centre for Social and Environmental Accounting Research. p153.

Global Research Initiative (GRI). (2013), Reporting principles and standard disclosures. Available from: https://www.globalreporting.org/resourcelibrary/GRIG4-Part1-Reporting-Principles-and-Standard-Disclosures.pdf. [Last accessed on 2015 Feb 23].

Hedberg, C.J., von Malmborg, F. (2003), The global reporting initiative and corporate sustainability reporting in Swedish companies. Corporate Social Responsibility and Environmental Management, 10(3), 153-164.

Homayoun, S., Johansson, J., Malmström, M., Zabihollah, R. (2013), Research opportunities for internet corporate social responsibility disclosure. Asian Journal of Research in Business Economics and Management, 3(1), 1-20.

Isaksson, R., Steimle, U. (2009), What does GRI-reporting tell us about corporate sustainability. The TQM Journal, 21(2), 168-181.

Isaksson, R.B., Garvare, R., Johnson, M. (2014), The crippled bottom line – Measuring and managing sustainability. International Journal of Productivity and Performance Management, 64(3), 168-181.

Leszczynska, A. (2012), Towards shareholders' value: An analysis of sustainability reports. Industrial Management & Data Systems, 112(6), 17, 911-928.

SASB. (2013), Conceptual framework of the Sustainability Accounting Standards Board. Available from: http://www.sasb.org/wp-content/uploads/2013/10/SASB-Conceptual-Framework-Final-Formatted-10-22-13.pdf. [Last accessed on 2015 Mar 05].

SASB. (2015), Join an Industry Working Group | Sustainability Accounting Standards Board. Available from: https://www.navigator.sasb.org/. [Last accessed on 2015 Mar 05].

Wheeler, D., Elkington, J. (2001), The end of the corporate environmental report? Or the advent of cybernetic sustainability reporting and communication. Business Strategy and the Environment, 10(1), 1-14.

Wilburn, K., Wilburn, R. (2013), Using global reporting initiative indicators for CSR programs. Journal of Global Responsibility, 4(1), 62-75.

Willis, A.C.A. (2003), The role of the global reporting initiative's sustainability reporting guidelines in the social screening of investments. Journal of Business Ethics, 43, 233-237.