

Environmental and Social Matters in Mandatory Corporate Reporting: an Academic Note

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ABSTRACT

This note provides an overview of mandatory corporate reporting for environmental and social matters in Canada, the United States and the European Union. When researchers and educators consider reporting on these matters, they often look to voluntary corporate reporting. However, we argue that a lot of related information exists in companies' mandatory reports, either in the disclosures dictated by securities regulators, or via other required channels. Our objective is threefold. First, to describe what currently exists regarding mandatory reporting on environmental and social matters (to inform). Second, to discuss several of the current ongoing debates regarding such reporting (to encourage discourse). Third, to encourage research into the mandatory reporting of environmental and social matters.

Keywords: Environmental accounting, corporate reporting, corporate governance, human rights

Forthcoming in *Accounting Perspectives* Vol. 17, Special Issue, Accounting for & Researching Corporate Social Responsibility.

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The objectives of this academic note are threefold. First, to describe what currently exists regarding mandatory reporting on environmental and social matters (to inform). Second, to discuss several of the current ongoing debates regarding such reporting (to encourage discourse). Third, to encourage research into the mandatory reporting of environmental and social matters. In order to achieve these objectives, this note presents and discusses the status of, and touches on the development of, mandatory environmental and social disclosure via the governments and securities regulators in Canada, the United States of America (US) and the European Union (EU).

Recent years have witnessed an increased level of activity relating to mandatory disclosure on environmental and social matters across the world. For example, we have seen demand for disclosure regulation on climate change, payments to governments (publish what you pay, extractive industries transparency initiative), executive compensation (say on pay), conflict minerals, clean-up costs (environmental provisions or asset retirement obligations), equal opportunity, diversity, human rights, and so on. Hence, there is now a blurred line between what is mandatory and what is voluntary when it comes to environmental and social disclosure. This is driven by the presence of regulation that, while mandating disclosure, leaves great managerial discretion with respect to the actual content of such disclosures (Peters and Romi 2013). For example, although disclosure rules that require the timely release of material information are common in securities markets (i.e. SEC Regulation F-D, CSA National Instrument 51-102), there has been room for discretion on what is material, who the stakeholders are, how environmental and social liabilities are valued (i.e. discount rates) and what channels these items should be reported through (i.e. annual report versus sustainability report). Further, boilerplate disclosure is a common complaint when it comes to things such as legal matters and risk exposure to future environmental and social regulations (PwC 1990, 1992; Surma and Pertraca 1992; US GAO 1993, 2004; OSC 2008; CSA 2010).

In the past decades, a number of regulations and guidance documents have been released on environmental and social reporting. There has also been guidance provided by various non-governmental organizations (NGOs), such as the Sustainability Accounting Standards Board (SASB) and Ceres (an investor/business driven lobby group that also advises several very large pension funds). Further, activist investors have had an effect on legislators and regulators. Regardless of stock exchange and country, there are requirements disciplining environmental and social reporting in companies' mandatory reports. In the EU, environmental and social reporting is mandatory in many jurisdictions, and will soon be mandatory for all large listed companies. Yet, there remains the issue of heterogeneity in reporting quality, with considerable disclosure discretion still left to the preparer. Further, some disclosures are subject to the annual audit, while others are verified separately (such as assurance for voluntary reports), which means different levels of diligence from the assurer (O'Dwyer and Owen 2005). The mandatory reporting of environmental and social matters has come a very long way in a relatively short time. However, subject to management discretion and incentives, mandated disclosure can be either a substantial source of information that is useful in supporting investors' and stakeholders' judgment, or simply a formal box-ticking task (Michelon, Bozzolan and Beretta 2015).

Our note provides some specific contributions. First, we offer an overview of current mandatory reporting on environmental and social matters in Canada, the US and the EU.¹ This overview further includes disclosures mandated within and outside of the financial statements. Hence, it can be useful as a framework for teaching in the areas of sustainability, social or environmental accounting. Further, by comparing and contrasting the different requirements, we provide several institutional details relevant to assess the impact of different regulatory approaches on the quality of the information disclosed, and on the actual impact on the corporate behavior underlying the disclosures. In doing so, we also caution researchers about the dangers of making conclusions based on voluntary disclosure, when mandatory requirements may be driving the observed disclosures. We also discuss several emerging issues (and related regulations), and note that a number of recent regulatory initiatives focus on human rights issues. Despite the fact that some research is already underway, these new disclosure areas represent fruitful venues for future research. Finally, this overview is useful to those who prepare disclosures, auditors, users and any others interested in disclosure legislation, regulation and discourse.

In the following section, we present a review of the development of regulations and disclosure on environmental and social matters in Canada, the US and the EU, outside of conventional financial statements. Section 3 provides an analysis of how accounting standards (US GAAP or IFRS) regulate the recognition of environmental and social liabilities in the financial statements. In Section 4, we discuss several human rights issues that have become objects of mandatory corporate disclosure, and highlight opportunities for future research. In the last section, we provide a summary and discussion of our overview of environmental and social matters in the context of mandatory corporate reporting, and its potential opportunities for accounting research.

THE DEVELOPMENT OF REGULATIONS AND MANDATORY DISCLOSURE ON ENVIRONMENTAL AND SOCIAL MATTERS IN CANADA, THE UNITED STATES OF AMERICA AND THE EUROPEAN UNION

The purpose of this section is to compare disclosure requirements outside of the financial statements, across Canada, the US and the European Union.

The development of regulation and disclosure in Canada

In Canada, securities regulation falls under the jurisdiction of the provinces and territories.² The main regulation affecting environmental and social disclosure is National Instrument (NI) 51-102 *Continuous Disclosure Obligations* and the main method of disclosure is via the annual report, including the financial statements and the management discussion and analysis. Other information can be found in the Annual Information Form (AIF). Also, NI 51-102 requires that any event occurring in a given year considered a material change must immediately be reported in a material

¹ We note that this paper is not meant to be comprehensive, as there are certainly some aspects of mandatory disclosure that we have passed over or are unaware of, and other countries have implemented mandatory disclosure on social and environmental issues, which we do not cover. However, it does provide an overarching picture that we believe has not been offered before.

²The Ontario Securities Commission (OSC) is the most dominant, with the Alberta Securities Commission (ASC) handling most aspects in relation to oil and gas and the British Columbia Securities Commission handling a significant portion of regulations in the mining sector. For national regulations, all of the securities regulators must agree under the umbrella of the Canadian Securities Administrators (CSA). A regulation agreed upon by the CSA is called a National Instrument (NI).

change report (such as oil spills, etc.). Aspects of environmental and social reporting relating to corporate governance and auditing are covered by *National Instrument 58-101 Disclosure of Corporate Governance Practices* (NI 58-101) and *National Instrument 52-110 Audit Committees* (NI 52-110; see CSA 2010, 5).

In 2008, the OSC released a staff report, OSC Staff Notice 51-716 – Environmental Reporting (OSC 2008), that reviewed the environmental reporting of 35 companies listed on the Toronto Stock Exchange (TSX) and its venture exchange (TSX-V).³ The OSC staff note that “*some companies did give good detail as to environmental risks and liabilities; however, many environmental reports are boilerplate and do not give meaningful information*” (OSC 2008, 4). Together with the issue of boilerplate information and heterogeneity in disclosure practice, another key focus of the staff report is on how to define materiality. OSC staff characterize the definition of materiality for environmental matters as no different than any other matter (“*likely material if a reasonable investor’s decision whether or not to buy, sell or hold securities of the issuer would likely be influenced or changed if the information was omitted or misstated*”, OSC 2008, 4). However, the notice suggests to “*consider both quantitative and qualitative factors in determining materiality generally, and particularly for disclosure relating to environmental matters.*” (OSC 2008: 1), without providing any further guidance on the nature of qualitative factors.

The OSC Staff Notice 51-716 consultation gathered four main feedback items from investors and other stakeholders: material information found in voluntary reports should be included in regulatory filings, boilerplate disclosure was too common (i.e. not providing meaningful information), disclosure was not always timely and there was a lack of integration with the financial statements. As a result of this OSC report, the CSA decided to develop guidance on environmental reporting. The resulting document is CSA Staff Notice 51-333, Environmental Reporting Guidance, released in October of 2010 (CSA 2010). The CSA makes it clear that if an item is material, it must be part of its continuous disclosure (CD) documents. If there is material information in a company’s voluntary reports, it must also be in the CD documents, which would also force disclosure of the information on a timely basis. However, determining what environmental issue might influence an investor to buy or sell a particular security is a difficult question. In closing their discussion on materiality, the CSA staff state: “***Err on side of materiality - If there is any doubt about whether particular information is material, we encourage issuers to err on the side of materiality and disclose the information***” (CSA 2010, 7, emphasis in the original).

In order to provide guidance on the boilerplate problem, CSA staff provide an appendix with examples of specific disclosures, which is useful to distinguish boilerplate vs. more substantial disclosure (CSA 2010, 27). Boilerplate disclosures are usually general, such that the reader is unclear about the specifics of an item. A hypothetical example of boilerplate disclosure reporting litigation on environmental matters would be: *The Company is currently subject to litigation regarding environmental matters, and may be involved in disputes regarding environmental matters which may result in litigation.* On the contrary, non-boilerplate disclosure would provide detailed item-by-item information. In many cases, a firm would have a number of legal proceedings underway, at various stages. Hence, non-boiler plate disclosure includes specifics on all litigation, such as the stage it is at, the amounts at stake and whether an accrual has

³ There is a grey area in determining what are social vs. environmental liabilities. Cleaning up a toxic waste site has both environmental and social implications. Thus, although we will often be referring to environmental liabilities specifically, in most cases there would be an analogue with regards to social items.

been made. Appendix 1 presents several firm specific disclosures. Disclosure 1 is an excerpt from an example of non-boilerplate disclosure on litigation as presented by CSA staff (CSA 2010, 27).

CSA Staff Notice 51-333 provides disclosure guidance on materiality, environmental risks and related matters, risk oversight and management, the impact of IFRS adoption and forward looking information. It also presents a section that covers governance structures around environmental disclosures. IFRS adoption is now a moot point since it has been in place in Canada since 2011, but the other aspects of CSA Staff Notice 51-333 remain the prevailing guidance for listed companies in Canada.

The development of regulation and disclosure in the United States

Although the purpose of this section is not to discuss mandatory environmental disclosure within the financial statements, much of the guidance developed on environmental matters originates from the problem of under-reporting of (and accounting for) environmental liabilities. Hence, we start by providing a brief overview of the key events that contributed to the release of Staff Accounting Bulletin (SAB) 92 on environmental liability disclosures (SEC 1993) which, similar to a Staff Notice in Canada, falls into the category of guidance.

In 1990 and 1992, Price Waterhouse (now PwC) conducted surveys on the recognition of environmental liabilities. Surma and Petracca (1993) discuss these surveys and provide valuable insight into the state of environmental reporting more than a quarter century ago. The surveys focused on companies expected to be exposed to environmental liabilities; 1,100 questionnaires were sent out to these companies, with 236 companies responding. The main result was that 62 percent of the respondents had known exposure to environmental liabilities that they had not recognized in the financial statements. However, the survey also found a marked change between 1990 and 1992, with environmental matters taking a higher priority within the organization for most of the survey respondents. In 1993, the US Government Accountability Office (GAO) released a report on property and casualty insurers (US GAO 1993), concluding that there was under-reporting of environmental risks and liabilities. US GAO (1993) noted that these could be material and if so, they should be reported under existing SEC regulations. However, the report showed that many companies had environmental liabilities in excess of 10 percent of assets, but did not report them because no single environmental liability was greater than the identified materiality threshold. Much of the discussion around these US GAO reports is reflected in the SEC release of SAB 92.⁴

Although guidance is one notch below regulation, it is used when regulators review disclosure to cite companies for non-disclosure or poor quality disclosure. In the preamble of SAB 92, the differences in practice and under-reporting of environmental liabilities are highlighted: *“The SAB is intended to promote timely recognition of contingent losses and to address the diversity in practice with respect to [the] accounting for and disclosure [of contingent liabilities].”* (SAB 92, as cited in Roberts and Hohl 1993). If we turn to a US GAO report from 2004, they continue to report on differences in practice. The US GAO argues that adequate regulation is in place, but it is difficult to know just how well companies are disclosing, stating the following: *“The problem in evaluating the adequacy of disclosure is that one cannot determine whether a low level of disclosure means that a company does not have existing or potential environmental*

⁴ The US GAO reports refer regularly to communications with SEC staff.

liabilities, has determined that such liabilities are not material, or is not adequately complying with disclosure requirements.” (US GAO 2004, 2).

Currently, in the US, environmental and social matters must be covered in regulation S-K (reg S-K) Item 101: Business, Item 103: Legal Proceedings, Item 303: Management Discussion and Analysis and Item 503c: Risk Factors. SEC guidance exists on disclosure of environmental liabilities (SEC 1993) and more specifically on climate change (SEC 2010). Along with the disclosures that come via securities regulators, there are environmental and social disclosures required by federal agencies such as the US Environmental Protection Agency (EPA) and the Mine Safety and Health Administration (MSHA). For example, the EPA has rules that require companies releasing significant amounts of toxic chemicals (the Toxic Release Inventory) and greenhouse gas emissions (greenhouse gas reporting program) to provide public disclosure on their emissions.⁵ Such information has been used in previous research (i.e. Clarkson et al. 2004; Clarkson et al. 2008 and Schneider 2011), but these data are reported on a facility-by-facility basis, and aggregation up to the company-level can be quite difficult.⁶ The Mine Safety and Health Administration requires the disclosure of mine safety violations, which research has shown to be material and useful to investors (Christensen et al. 2017).

The US also has the so-called Superfund, which is strong legislation on the clean-up of toxic waste sites, and is very often referred to on environmental matters in forms 10-K. It has been the focus of much of the earlier academic research on the reporting of environmental liabilities⁷. The origins of this legislation can be traced back to the 1970s, when national outrage grew over the legacy of toxic waste sites spread throughout the U.S., mainly set off by the “Love Canal” tragedy.⁸ The two key pieces of legislation from this era are the Resource Conservation and Recovery Act (introduced in 1976) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, introduced in 1980). CERCLA was followed up by an amendment, the Superfund Amendments and Re-authorization Act (commonly known as SARA, introduced in 1986). Decades later, these laws are still the EPA’s primary tools in cleaning up contaminated sites, holding parties responsible for these clean-ups, and forcing compliance with environmental laws and regulations. The EPA identifies sites for clean-up, which become part of the National Priority List (NPL) and are commonly known as Superfund sites. When the EPA identifies a Superfund site, it will identify potentially responsible parties (PRPs). The PRPs will ultimately be held liable for the cost of site remediation. Disclosure 2 in Appendix 1 is an example of disclosure from Weyerhaeuser Corporation, a US lumber company, mentioning the Superfund and being a PRP. It is an example of common disclosure and language from US reporting entities.

A final point to discuss with respect to US regulations is the SEC guidance on the disclosure of climate change risk released in 2010 (SEC 2010).⁹ The implication of this guidance was that the SEC would focus more on climate change disclosure, and follow-up with comment letters to companies that do not follow it. In 2014 Ceres published a report on the SEC follow-up to the 2010 guidance (Ceres 2014). It found that in 2010 and 2011 there were 49 comment letters sent out regarding climate change disclosure, out of the thousands of SEC comment letters sent out in these years (Ceres 2014, 21). In 2012, this number went down to three, and in 2013, no comment

⁵ <https://www.epa.gov/toxics-release-inventory-tri-program>, <https://www.epa.gov/ghgreporting>.

⁶ Similar required disclosures on the release of toxic chemicals and greenhouse gases exist in Canada and the EU.

⁷ For more detail on the Superfund see, among others: Barth and McNichols (1994); Barth et al. (1997); Campbell et al. (1998); Johnston and Rock (2005).

⁸ <https://archive.epa.gov/epa/aboutepa/love-canal-tragedy.html>

⁹ This guidance document provides a good historical overview of the reporting on environmental matters in the US for those interested in more detail.

letters were issued. The Ceres report contends that there has been poor adherence to the guidance and there seems to be no incentive at the SEC to move things forward. Although the federal level in the US is currently quite complacent on mandatory environmental and social reporting, at the state level there is a lot of activity. For example, various cap and trade systems are in place at the state and region level (i.e. California and New England), which must be reported on by affected companies. Thus, there will continue to be many material environmental and social items reported in the mandatory reports of US companies, possibly even increased disclosure, although the level of enforcement of this mandatory disclosure seems to be low (Peters and Romi 2013). We present a comparison of the Greenhouse Gas reporting regimes for Canada, the US and the EU in Table 1.

TABLE 1
Comparison of Climate Change guidance in Canada, the US and the EU

Country	Legislation or regulation	Brief Description
Canada	CSA Staff Notice 51-333: Environmental Reporting Guidance	Climate Change guidance is encompassed in CSA Staff Notice 51-333. If material, a climate change related item should be disclosed. Trends and uncertainties are also covered, which often relates to GHG emissions and relating proposed or pending regulations.
	Section 46 of Canadian Environmental Protection Act	Large emitters must disclose based on facility(outside of the financial markets channel). Thus, can be difficult to aggregate.
United States	SEC guidance regarding disclosure related to climate change (SEC 2010)	The guidance follows the various sections of Reg S-K where climate change related items should be disclosed. As in Canada, materiality and future trends and uncertainties are key areas, which leave a good deal of management discretion.
	EPA Greenhouse Gas Reporting Program	Large emitters must disclose based on facility (outside of the financial markets channel). Thus, can be difficult to aggregate.
European Union	The union has numerous regulations specifically targeting climate change which can be found at https://ec.europa.eu/clima/about-us/climate-law_en	These rules are Greenhouse Gas Monitoring and Reporting, the EU Emission Trading System, Effort Sharing Decision, Carbon Capture and Storage, Transport/Fuels, Ozone Layer Protection, Fluorinated gases, and Forest and Agriculture.

The development of regulation and disclosure in the European Union

The first efforts to create environmental policies in the EU were made in the 1970s and the first concrete outcome of these efforts was the adoption of a declaration on environmental and consumer policy at the Paris Summit in October 1972. This declaration was later followed by the Environmental Action Programme in 1973 (Knill and Liefferink 2012). The initiatives towards common policies were mainly driven by concerns that different policies in member countries could result in trade barriers and distort competition in the Common Market. However, it took until the mid-1980s before environmental objectives were established by the Single European Act 1986 (SEA). Later on, after a crisis caused by the Dutch and the French rejection of the EU Constitution in 2005, a new Sustainable Development Strategy (SDS) was adopted by the EU Council in 2006

(European Commission 2006).^{10,11} The new SDS laid out guiding principles on how to tackle challenges such as climate change and green energy, sustainable transport, sustainable consumption and production, threats to public health, social exclusion, demographics and migration, conservation and management of natural resources, the war on poverty in the world and the challenges in terms of sustainable development.

It is evident that the EU has moved beyond the concept of having regulatory reporting based on investor needs only. In Canada and the US, the stakeholder is generally taken to be the investor with materiality being driven by their information needs. The EU has the same reporting thresholds in the context of having to report any items that are material to investors, but there is also a broader view, with an expectation that companies must report to society as well. This puts materiality in a different light, since the reporting decision is based on a much larger stakeholder group.

The main recent development in terms of regulation of environmental and social issues in the EU is the adoption of Directive 2014/95/EU *Non-financial reporting* (European Commission, 2014).¹² It mandates that large publicly traded EU companies disclose information about how they manage and operate environmental and social challenges (in the regular annual financial report or alternatively in an annex to the annual report, by 2018); and specifies that information of company policies on the following topics has to be disclosed: environmental protection, social responsibility and treatment of employees, respect for human rights, anti-corruption and bribery, and diversity on company boards in terms of age, gender, educational and professional background). However, the Directive allows significant room to manoeuvre in terms of what to disclose, as it is left to the reporting companies to judge what information is relevant. Companies can use international or European guidelines such as UN Global Compact, OECD guidelines for multinational enterprises, or ISO 26000. Further, the European Commission has also provided guidelines related to the Directive 2014/95/EU.¹³

The fact that environmental and social reporting has come out as a directive rather than a regulation is evidence that there was some contestation over whether companies should be forced to report on their environmental and social performance in the context of society as a whole. As with prior directives, we expect to see differences across the EU countries on timing and manner of implementation. The implementation of the new Directive has now begun and we are indeed seeing differences as it is incorporated into local law. The deadline to adopt was December 2016, however only 19 states (68%) had adopted it by April 2017 (Mungall 2017). Finally, the actual incorporation into law differs greatly across EU countries, for instance the Directive 2014/95/EU affects 39 national laws in Portugal while only one in Belgium, Denmark, Germany, Greece, Italy, Cyprus, Luxembourg, Malta and Austria.¹⁴ Indeed, the incorporation into local law is a phase during which coalitions of different interests promote their own interpretation of Directive

¹⁰ ‘Dutch say ‘devastating no’ to EU constitution’ The Guardian June 2, 2005. Available at: <https://www.theguardian.com/world/2005/jun/02/eu.politics>

¹¹ ‘French say firm ‘No’ to EU treaty’ BBC News May 30, 2005. Available at: <http://news.bbc.co.uk/2/hi/europe/4592243.stm>

¹² Regulations are legally binding acts, which must be applied as issued at inception date across EU countries. Directives are also legislative acts, but they set goals all EU countries are to achieve. It is left to the individual countries to formulate their own laws on how to reach the goals.

¹³ Guidelines on non-financial reporting (methodology for reporting non-financial information). Available at: [http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017XC0705\(01\)](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017XC0705(01))

¹⁴ Please refer to <http://eur-lex.europa.eu/legal-content/EN/NIM/?uri=CELEX:32014L0095> for the actual implementation status among all member countries.

2014/95/EU. That is, civil society activists, socially responsible investors, and other pressure groups are pushing for an extensive interpretation of companies' disclosure responsibilities, while business associations and conservative politicians promote a minimalistic interpretation allowing managerial autonomy. The outcome of this process will ultimately reveal whether the new Directive changes companies' environmental reporting or is merely a 'paper tiger' (Kinderman 2015; Monciardini 2016). Although there will be differences by country and company in how this Directive is applied, we do see an expanding vision of who the stakeholder is when it comes to the reporting of listed companies in the EU. In Canada and the US, it is clear that the stakeholder is a 'reasonable investor'. In the EU, there is now a built-in regime that requires companies to think of the stakeholder as society as a whole. To give a deeper perspective on how European countries implemented the Directive, we present an overview for France, Germany and the UK in Appendix 2. Table 2 below presents a general overview of the above discussion of mandatory regulation of environmental and social issues across regions.

TABLE 1
Comparison of social and environmental disclosure regulations and guidance in Canada, the US and the EU

Country/Region	Main Regulation and/or Guidance	Brief Description
Canada	National Instrument 51-102: Continuous Disclosure Obligations	NI 51-102 requires timely disclosure of any material information. The key question is what is material?
	CSA Staff Notice 51-333: Environmental Reporting Guidance	CSA Staff Notice 51-33 provides disclosure guidance on materiality, environmental risks and related matters, risk oversight and management, the impact of IFRS adoption and forward looking information. It also presents a section that covers governance structures around environmental disclosures.
United States	Staff Accounting Bulletin No. 92. It mainly covers Regulation S-K: Item 101 – Business Item 103 – Legal Proceedings Item 303 – Management Discussion and Analysis Item 503c – Risk Factors	In all of these sections of the form 10-K, social and environmental issues deemed material must be disclosed. For example, if future environmental regulations might affect the business model, this must be discussed in Item 101 - Business and Item 503c – Risk Factors. If a company is a Potentially Responsible Party (PRP) at a Superfund site, this must be disclosed in Item 103 – Legal Proceedings. Environmental capital expenditures must be discussed in Item 303, etc.
European Union	Directive 2014/95 Non-financial reporting	Requires large publicly traded companies to disclose how they manage and operate environmental and social challenges.
	These issues are also regulated/monitored on a stock exchange by stock exchange basis. Although some of the disclosures are mandatory, most exchanges only provide guidance.	One example of such guidance is that London Stock Exchange provides guidance and provides recommendations for good practice in environmental, social, and governance reporting (https://www.lseg.com/esg).

As this brief overview highlights, environmental and social matters enter into the realm of mandatory disclosures not only through security regulation and guidance, but also through specific

items reported in the financial statements based on accounting standards. Hence, the next section provides a presentation of the main differences in accounting standards for environmental and social matters in our three regions of interest.

ACCOUNTING STANDARDS FOR ENVIRONMENTAL AND SOCIAL REPORTING IN CANADA, THE US AND THE EU

In Canada and the EU, IFRS is the governing accounting standard for publicly traded companies, while US GAAP prevails in the US. The recognition and disclosure requirements regarding existing environmental liabilities are dictated by IAS 37, *Provisions, Contingent Liabilities and Contingent Assets* (IAS 37) under IFRS and ASC 410, *Asset Retirement and Environmental Obligations* (AROs) (ASC 410) and ASC 450, *Contingencies* (ASC 450) under US GAAP. IAS 37 came into effect in 1999, ASC 410 began as Statement of Financial Accounting Standard 143 (SFAS 143), *Asset Retirement Obligations*, in 2001, and ASC 450 originates from SFAS 5 *Contingencies*, from 1975.

The overall idea under ASC 410 and IAS 37 is to put a fair value on environmental and social liabilities. However, putting a fair value on these liabilities is a difficult task, since getting a third party to take them over is near impossible. Given the lack of a liquid market in environmental liabilities, AROs and provisions come onto the balance sheet using a present-value calculation based on the time between the balance sheet date and the expected clean-up cost. The present-value amount is recognized as a liability, with an offsetting addition to property, plant and equipment on the asset side. As time passes, the original asset amount is depreciated (or depleted). The increase in the present-value of the liability due to the passage of time is charged to income as accretion expense, with an offsetting increase in the recorded liability. By the time the clean-up is to occur, the entire cost has been expensed, with a matching liability sitting on the balance sheet. However, there are various adjustments and changes in discount rate that make this less straight forward. In general, US GAAP provides more opportunities to keep environmental liabilities off balance sheet. For example, one of the more obvious differences between US GAAP and IFRS revolves around the term *indeterminate useful life*. Indeterminate useful life is an acceptable reason not to recognize an ARO under US GAAP. Under IFRS this is not allowed. Disclosure 3 in Appendix 1 reports an example related to the future clean-up costs for the ongoing assets of US GAAP reporter Chevron Corporation (mainly an oil and gas company). No accrual is made because of the indeterminate settlement date, while under IFRS, an accrual would be required. Table 3 below summarizes the main differences between IAS 37 and ASC 410.

Another significant difference between the standards is the choice of discount rate. Under ASC 410, the discount rate used includes an adjustment for “own credit risk”, which is the credit risk of the company over and above the risk-free discount rate. Under IAS 37, the risk-free rate is generally, but not always, used. Detail on provisions and AROs must be disclosed in companies’ annual reports since they are considered a key accounting estimate. This includes reporting the accrued discounted amount to date, as well as any additions, reductions and other changes (such as a change in estimate). The undiscounted amount of the liability and the discount rate used are generally disclosed, although not always.

The appropriate discount rate to use under IAS 37 became the main debate with the move to IFRS in Canada (Schneider et al. 2017; Wagoner and LaBelle 2017). Schneider et al. (2017) find evidence that larger firms, with larger environmental liabilities, and with more exposure to the US equity market tend to include own credit risk in the estimation of the discount rate.

TABLE 2
Comparison of IAS 37, Provisions, Contingent Liabilities and Contingent Assets versus ASC 410, Asset Retirement and Environmental Obligations

Item	IAS 37	ASC 410
Discount rate	Majority of companies use risk-free rate, but some include own credit risk	Risk-free rate plus own credit risk
Re-valuation	Entire liability is re-valued at each measurement date based on current discount rate	Only new liabilities enter the balance sheet based on current discount rate. Old liabilities remain with old discount rate
Change of estimate	Adjust based on current discount rate (after re-valuation)	Adjust based on discount rate at time of original estimate
Recognition	Exceptional not to be able to make an estimate.	Indeterminate useful life allowed for not recognizing the liability – such as many long-lived assets (i.e. a chemical plant or oil refinery)
Recognition of accretion expense	Finance expense	Operating expense

Schneider et al. (2017) further argue that environmental liabilities are of a different nature from financial liabilities and that including own credit risk in the discount rate is not appropriate, especially if the standards dictate that all environmental liabilities are re-valued at each reporting date. Under IFRS, when a change in the discount rate occurs, all environmental provisions are re-valued based on the new discount rate, while under US GAAP, once a discount rate is used it stays with the original ARO. A change in the discount rate is only reflected in new AROs (including increases in previous AROs). As a result, AROs (US GAAP) fluctuate less than environmental provisions (IFRS). This fluctuation can be much higher when own credit risk is included in the discount rate under IFRS. For example, Disclosure 4 in Appendix 1 presents an excerpt from the notes to the financial statements of ENI Spa, Italy’s major oil and gas company, and an IFRS reporter. It bases its discount rate on its cost of borrowing (ENI Spa 2016 20-F, F-21), which overall curve increased in 2016 (i.e. ENI includes own credit risk in the discount rate). This can be noted in the excerpt reported in Appendix 1, and contributed to a decrease in the balance sheet liability of ENI’s environmental provisions by €647 million. The overall effect is that for IFRS firms including own credit risk in the discount rates, as they become more and more risky, the higher their cost of debt and the lower their on balance sheet environmental provisions.¹⁵ If a firm including own credit under IFRS were to approach bankruptcy, it would continue to lower its environmental provision. Under US GAAP, such adjustments cannot be made, since the discount rate stays with the liability once it is established on the balance sheet.

As a final note on AROs versus provisions, accretion expense is an operating expense under US GAAP and a finance expense under IFRS. This might be material in particular analyses based on companies’ financial statements. We now move on to discussing several emerging initiatives that address human rights issues in relation to company mandatory disclosure. Interestingly, some of this legislation is directly related to public and activist pressures, which *per se* represents a

¹⁵ ENI does not state whether its cost of borrowing goes up due to changes in the underlying risk-free rate or its own credit risk.

potential research setting. As we discuss these emerging issues, we will point out this and other potential venues for future research.

EMERGING ISSUES: HUMAN RIGHTS RELATED DISCLOSURE LEGISLATION

Human rights related disclosures in the US are included in the Dodd-Frank Wall Street Reform and Consumer Protection Act, but have also been part of the development of environmental and social disclosure in the EU and Canada in recent years. An interesting aspect in this legislation is the involvement of non- governmental organizations (NGOs) trying to affect corporate behavior through securities and accounting regulation. These groups have realized that a potential way to get action is to work through regulators and legislators to mandate *cause* specific disclosure. We will discuss three of them here, starting with what is known as *Publish What You Pay*.

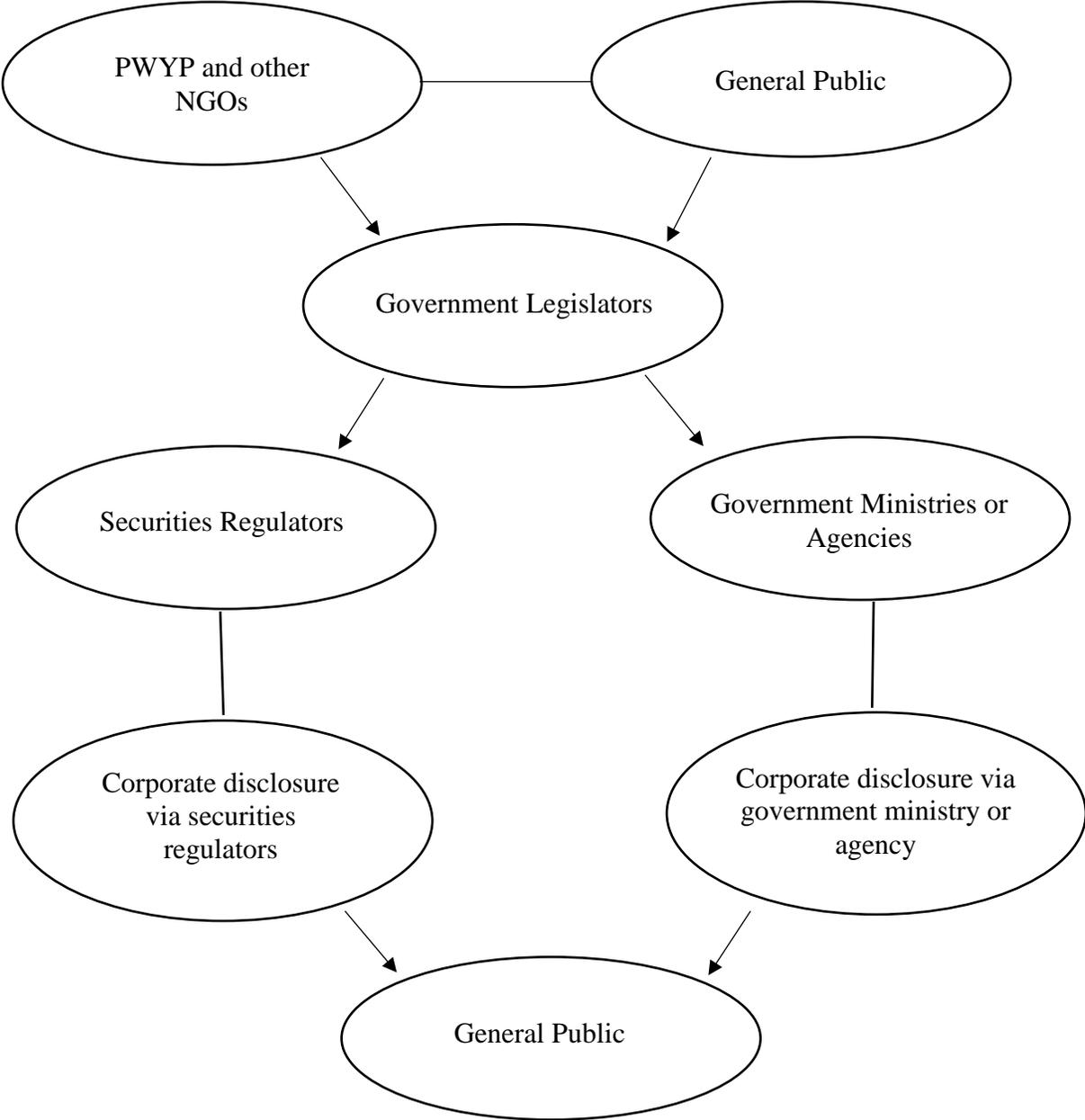
Publish What You Pay

Companies in extractive industries (i.e. mining and oil and gas) in Canada, the US and the EU have recently been mandated to publicly disclose their payments to the local governments in which extraction of the natural resources takes place. A central role in this regulatory development was played by a group called ‘Publish What You Pay’ (PWYP) and the idea is that by disclosing this information, those who live in areas where natural resources are extracted will be able to hold their governments to account for the income generated from natural resource companies.¹⁶ PWYP states: “*Our mission is for a more transparent and accountable extractive sector, that enables citizens to have a say over whether their resources are extracted, how they are extracted and how their extractive revenues are spent.*”¹⁷ PWYP lobbied the International Accounting Standards Board (IASB) to try to get this included in a potential revision of the standards for extractive industries (primarily IFRS 6: Exploration for and evaluation of mineral resources). PWYP is addressed in a 2009 Discussion Paper that came out of the IASB’s Extractive Activities Project (IFRS Foundation 2009), contemplating whether PWYP should enter into the realm of accounting standards setting. Accounting and securities regulators have been reluctant to build such things into the standards and regulations, since they have traditionally been in the business of investor protection rather than human rights (Lynn 2011). However, PWYP has been very successful with legislators, who have the power to force regulators to require disclosure on whatever they choose. Legislation now exists in the US, Canada and the EU that requires such disclosure, but the implementation across these three areas has differed. Figure 1 presents the way that organizations like PWYP can affect company disclosure. Such organizations reflect and influence public sentiment, thus there is a two-way relationship. Organizations like PWYP lobby legislators directly and via the general public. If legislators are influenced such that they choose to impose mandatory reporting, they can implement it through the securities regulators or via government ministries or agencies (i.e. Natural Resources Canada and the EPA). There are differences regarding these channels, which we touch on more below, but one key difference is that private companies can often avoid disclosures required by publicly listed companies when these items flow through the securities regulators.

¹⁶ PWYP is also associated with the Extractive Industries Transparency Initiative (EITI), which focuses on country disclosure rather than company disclosure.

¹⁷ <http://www.publishwhatyoupay.org/about/objectives/>

Figure 1 – Influence of NGOs and example of different disclosure paths



In Canada, the Extractive Sector Transparency Measures Act was passed in 2014 (last amended June 1, 2015). The law applies to the mining and the oil and gas industries. The first company disclosures came out in 2017. The law covers any entity that is involved in mining or oil and gas. The definition of an entity is defined as follows: “*entity means a corporation or a trust, partnership or other unincorporated organization*” (Government of Canada 2015, 2, emphasis in original). Unlike in the EU and the US, which we will discuss shortly, the Canadian legislation covers private companies as well. As a result, rather than reporting this information via financial markets channels, it is disclosed via the Natural Resources Canada website.¹⁸ It takes only a brief search to find out that Canadian Natural Resources Limited, Canada’s second largest oil and gas company, made a total of \$CDN 987 million in payments to governments in 2016. This includes payments of \$CDN 110 million to the Government of the Republic of Côte D’Ivoire, \$CDN 450 million to the Government of Alberta, and \$CDN 56 million to the Municipality of Wood Buffalo (the locality of many of Canada’s oil sands developments). These payments are also broken down by type and manner of payment (i.e. taxes, royalties, etc.), and by project.

In Europe, Directive 2013/34/EU Chapter 10 requires the disclosure of payments to governments (either a single payment or a series of payments), by country and by project, for large companies in the mining, oil and gas and forestry sector (European Commission 2013a).¹⁹ This pertains to all levels of government, from national to local and the threshold is set at €100,000 in a given year. Thus, the level of detail required in the Directive is similar to Canadian law. As with all EU directives, each country has to implement its content and bring the requirements of the directives into national legislation. France and the UK have been the first to implement these directives, with the first reports coming out in 2016. Information is to be disclosed via the financial reporting channels, e.g. “*through the stock market information repository or the business registry in the country of incorporation (in the same way as financial statements are made available.*” (European Commission 2013b, 2).

With the Toronto and London Stock Exchange having the majority of listings of oil and gas and mining companies in the world, PWYP may seem to have accomplished much of its goal. However, in the US, PWYP is effectively on hold. The US adopted legislation relating to disclosure of payments to governments prior to the EU and Canada. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank) was primarily meant to deal with the financial markets issues that lead to the 2008 financial crisis. Along with the main features, several other measures were included in the Act, some of them relating to mandatory disclosure on specific environmental and social issues. For example, Section 1502 of Dodd-Frank requires disclosure relating to so-called conflict minerals and Section 1503 requires disclosure relating to mine safety. We will touch on Sections 1502 and 1503 shortly, but first we will discuss Section 1504, which relates to PWYP.

Section 1504 of the Dodd-Frank added Section 13(q) to the Securities Exchange Act of 1934, which directs the SEC to issue reporting rules for publicly listed US companies similar to the PWYP disclosures currently required in Canada and the EU. However, it applies to publicly listed companies only. In 2012, the SEC came out with a rule on the disclosure of payments to governments for mining and oil and gas companies. In Canada and the EU, industry went along

¹⁸ <http://www.nrcan.gc.ca/mining-materials/estma/18198>. The information is also disclosed on the company website.

¹⁹ Transparency Directive 2013/50/EU Article 6 – ‘Report on payments to governments’ was also passed by the European Parliament at the same time, which amended previous directives on transparency to be aligned with Directive 2013/34/EU.

with the new requirements. In the US, industry groups, such as the US Chamber of Commerce and the American Petroleum Institute, challenged the new rule in court. On July 2, 2013, the US District Court vacated the original SEC rule. When this occurs, it implies that the rule had not been properly drafted, or that it contravened some aspect of the US Constitution. Hence, the SEC had to rewrite the rule in the context of the court's decision.²⁰ On June 27, 2016, the SEC released its new rule implementing the requirements of Section 1504 (SEC, 2016). However, in February of 2017, with a change to a Republican controlled US Congress, the new rule was voided by a resolution using the Congressional Review Act of 1996 (CRA).²¹

The situation in the US is now somewhat unusual. Section 1504 of Dodd-Frank is still in place, yet the CRA resolution requires that the SEC must bring a substantially different rule back to Congress. It will be interesting to follow as things progress, especially considering much of the rest of the world is moving forward on PWYP. Table 4 presents a comparison of the PWYP legislation and regulation in Canada, the US and the EU.

TABLE 3
Comparison of Publish What You Pay legislation and regulation in Canada, the US and the EU

Country	Legislation or regulation	Brief Description
Canada	Extractive Sector Transparency Measures Act	All companies (public or private) in the mining or oil and gas industry must disclose their payments (generally set at CDN\$100,000) to any level of government, by country and by project. The main channel of disclosure is via the Natural Resources Canada website (not via the financial reporting channels).
United States	Dodd-Frank Wall Street Reform and Consumer Protection Act Section 1504	The SEC was required to write a regulation requiring PWYP disclosure. The most recent version of this regulation was passed in the last months of the Obama administration. However, the Republican controlled Congress was able to refuse to accept the new regulations, under the Congressional Review Act of 1996. PWYP is effectively on hold in the US. The main reporting channel would/will be via the SEC (financial markets channels).
European Union	Accounting Directive 2013/34/EU Chapter 10 – ‘Report on payments to governments’ Transparency Directive 2013/50/EU Article 6 – ‘Report on payments to governments’	Requires the disclosure of payments to governments (either a single payment or a series of payments), by country and by project, for large companies in the mining, oil and gas and forestry sector. This pertains to all levels of government, from national to local. The threshold level is €100,000. The main reporting channel is via the financial markets channels (same as financial reporting).

²⁰ For a detailed discussion of the 2013 ruling see: <http://www.csrandthelaw.com/2013/01/10/sec-files-brief-in-lawsuit-challenging-extractive-industry-transparency-rule/>.

²¹ Pursuant to the CRA, once an agency notifies Congress of a new regulation, Congress has 60 consecutive legislative days to review the regulation. If Congress disapproves, it may pass a joint resolution of disapproval under expedited procedures by simple majority See: <http://www.csrandthelaw.com/2017/02/04/the-fall-of-section-1504-congress-votes-to-repeal-the-revenue-transparency-rule/>.

Company reporting based on the various PWYP disclosure laws and subsequent reporting rules provides numerous research opportunities. These disclosures provide information on a human rights issue, and they are the outcome of activist pressure that has effectively forced many oil and gas and mining companies to give detailed disclosure of their payments to governments. The actual implementation of these disclosures may still reveal substantial heterogeneity in the quality of what companies report. Regardless, it represents an interesting setting to investigate whether different channels through which the disclosure has to occur (financial reporting vs. other channels) influences companies' disclosure responses as well as actual consequent behavior. Further, the scattered timing for the implementation of the Directive in European countries, together with variation in the level of enforcement also represent opportunities to investigate economic and other consequences of this new regulation. Researchers will be able to use new data on the actual payments, which are now available at a high level of detail and aggregation. New opportunities are on the horizon to explore how the payments are tracked and how the implementation process is handled. Perhaps even more important, is to try to determine whether forcing companies in extractive industries to publicly disclose their payments made to governments actually improves human rights.

Conflict Minerals

We begin our discussion of conflict minerals with the US, which as mentioned above, is covered by Dodd-Frank Section 1502. Whereas PWYP targets the mining and oil and gas industries, Section 1502 mainly targets the electronics industry (and to a lesser degree, automotive). In Dodd-Frank, conflict minerals are defined as tin, tungsten, tantalum and gold (often referred to as 3T+G) coming from the Democratic Republic of Congo and surrounding areas (known as the Great Lakes Region). These minerals are widely used in the manufacture of smart phones. In the Great Lakes Region, these minerals are often mined by forced and/or child labour and the proceeds go to fund the various warring factions. In 2012, the SEC released the rule on conflict minerals reporting. It required companies using the 3T+G minerals to determine whether they might be sourced from the Great Lakes Region, called a reasonable country of origin investigation (RCOI). If so, they must demonstrate due diligence in auditing their supply chain, including using 3rd party audits, to try and determine whether their products contain conflict minerals, being 3T+G from the Great Lakes Region. Over a phase-in period (2 years for large and 4 years for small companies), companies could declare that they could not determine whether their supply chain was conflict mineral free (conflict-free indeterminable). However, after the phase-in period, all companies were to declare whether or not their supply chain was conflict mineral free. As with PWYP, industry groups challenged the conflict mineral rules in court and the US courts decided that requiring a final declaration of whether the company is conflict-mineral free was unconstitutional. Hence, the rule in place requires a form SD to be filed, but that the declaration itself remains a voluntary disclosure. We have investigated the form SD disclosures of 2014 and 2015 and found only 4 companies declared themselves conflict minerals free in 2014 and 6 companies did so in 2015. Most companies declare themselves conflict mineral 'indeterminable', a practice they may now keep doing indefinitely.

In Canada, Bill C-486, Conflict Minerals Act, was introduced in 2014 by a member of the New Democratic Party. The majority Conservatives subsequently defeated the bill. Thus,

describing the situation in Canada is straight-forward; no action is currently being taken in this area in Canada, implying that conflict mineral reporting is still a voluntary initiative.

In the EU, on the other hand, full implementation of conflict minerals reporting is now in process. Regulation (EU) 2017/821 of the European Parliament and of the Council of 17 May 2017 requires conflict mineral reporting by 2021 for all member countries (European Commission, 2017). The regulation lays down supply chain due diligence obligations for Union importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas (Megregian et al. 2017; European Commission 2017). The rules apply to specified annual import volumes and is estimated to affect about 95% of the total import volume. The new rule requires four types of supply chain due diligence obligations:

- Management system obligations, i.e. to adopt supply chain standards in line with Annex II of the Organization for Economic Cooperation and Development’s (OECD) Due Diligence Guidance;
- Risk management obligations, i.e. to identify, assess, and report risks of adverse impact in own supply chain;
- Third party obligations, i.e. to commission third party audits of activities, processes, and systems;
- Disclosure obligations, i.e. to make the results of third party audits publicly available, disclose information gathered as a result of due diligence activities to downstream purchasers, and on a yearly basis report on supply chain due diligence policies and practices.

The regulation went into effect in 2017, however, most of the measures will not apply until 2021. Despite the later adoption of this disclosure mandate, the EU seems to be ahead of Canada and the US on conflict minerals reporting. Table 5 presents the comparative situation for Canada, the US and the EU regarding Conflict Minerals.

TABLE 4
Comparison of Conflict Minerals legislation and regulation in Canada, the US and the EU

Country	Legislation or regulation	Brief Description
Canada	Bill C-486, Conflict Minerals Act (not passed by the Canadian parliament)	Introduced as a private members bill in 2014 (by member of the New Democratic Party), defeated by majority Conservatives. The proposed legislation was similar to that of the US and EU, focusing on an audit trail and disclosure confirming no conflict minerals in the final products of the company.
United States	Dodd-Frank Wall Street Reform and Consumer Protection Act Section 1502	Companies are required to file a Form SD on Conflict Minerals, however they are not required to declare themselves conflict mineral free. As with PWYP, basically on hold in the US.
European Union	Regulation (EU) 2017/821 of the European Parliament and of the Council of 17 May 2017	Lays down supply chain due diligence obligations for EU importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas. This regulation comes into effect in 2021.

Conflict minerals as a topic opens up several avenues for future research. For example, we believe further research into supply chain disclosure practices across industries and geographical areas is very important. One recent study provides a case study based on 27 interviews, but more large-scale evidence is needed to understand the quality of disclosure practices across countries

and industries (Hoffmann et al. 2018). We also feel that it is important to gauge the overall impact of conflict mineral disclosure for external stakeholders (including investors) across industries and geographical areas. Recent research based on a set of US companies over a period of two years suggests that investors price conflict mineral disclosure as an off-balance sheet liability, however more research is needed to establish the full economic effects of this type of mandatory disclosure regulation (Griffin et al. 2014). Furthermore, whether this disclosure regulation is having any effect on how companies actually operate in the conflict areas may be the subject of field research aimed at understanding the effects on the local communities (if any) of such new rules. Recent research (Islam and Van Staden 2017) documents that collaboration with NGOs is associated with more comprehensive disclosure. This finding calls for more in depth understanding (i.e. case studies) about the process through which NGOs and companies can develop fruitful collaborations, and what are the most relevant accounting implications of such partnerships. Another interesting accounting issue relates to the process of assurance for a conflict mineral free supply chain, which is a complex issue since once a mineral has entered the supply chain, it is difficult to determine its origin.²² As with PWYP, we feel the conflict minerals setting is one that is rich for both quantitative and qualitative research.

Mine-safety

On a final note, we point to another mandatory disclosure requirement related to the human rights issue currently tackled in the US, but not to the same extent in Canada and Europe.²³ Section 1503 of Dodd-Frank requires SEC-registered companies to include information regarding mine-safety performance in the financial reports. It requires the reporting of citations for violations of mine safety regulations both in mine owners' financial reports (i.e., Forms 10K and 10Q) and immediately upon the receipt of an imminent danger order (IDO) through a Form 8K filing.²⁴ Section 1503 is meant to protect US labourers only, since it relates to mining regulations within the US. Thus, while the right to safety is a fundamental human right, this specific regulation covers only US employees. It is important to note that the information required under Section 1503 was already available to the public, via the US Mine Safety and Health Administration website. Hence, Dodd-Frank essentially only modifies the reporting channel of this information, as it now requires it to be disclosed in the financial reports.

A recent paper by Christensen et al. (2017) exploits this feature, and they find that mine safety records improve when companies are forced to disclose this information *in their financial reports*, and realize a reduction in productivity, documenting both positive and negative real

²² For example, Apple Inc. has been working on its conflict minerals supply chain audit since 2010 and in 2016, although its supply chain is now fully audited, it has yet to be able to unequivocally declare its products conflict minerals free. Source: <https://www.bloomberg.com/news/articles/2016-03-30/apple-says-supply-chain-now-100-audited-for-conflict-minerals>.

²³ Mining related sustainability issues are regulated by various more general EU Directives and Regulations such as Directive 2001/42/EC – Strategic Environmental Assessment Directive, 1999/31/EC Landfill of Waste, and Regulation (EEC) No 761/2001 Community of eco-management and audit scheme (EMAS) with various disclosure requirements. The employee safety status is covered the Article 153 of the Lisbon Treaty.

²⁴ The US Department of Labor defines an imminent danger on its website as follows (citing the US Mine Act): “the existence of any condition or practice in a coal or other mine that which could reasonably be expected to cause death or serious physical harm before such condition or practice can be abated”. If a mine inspector determines that an imminent danger exists, an imminent danger order is issued and mining must cease until the imminent danger is abated.

effects. They also find a real market effect related to mine safety incidents with the implementation of section 1503 (Christensen et al. 2017, 4). These results suggest that many investors rely only on the official financial markets channels for their information. The finding that certain stakeholders such as investors do not consider information provided outside their normal information environment raises another very important issue. It might well be that disclosures on items such as mine safety included in a sustainability report may be viewed by users as voluntary, when it is actually mandatory.

Although the evidence by Christensen et al. (2017) is quite comprehensive, it remains an open question whether the documented real effects of mandated safety disclosure hold true in another institutional setting where the costs associated to safety infractions may be lower, but where the disclosure may not be required through a financial reporting channel. Furthermore, while Christensen et al. (2017) adopt a quantitative approach to provide evidence on a causal link between the introduction of the disclosure mandate and real effects on corporate behavior. Future research could look into a qualitative assessment of whether and how the switch to the financial reporting channel has had implications for the reporting *process* and internal control systems. It may also be interesting to investigate how stakeholders, employees specifically, perceive the documented *real effects* on corporate behavior, whether there are any cases of enhanced collaborations between NGOs, local communities, and companies and how these elements mediate, if at all, the real effects documented in Christensen et al. (2017).

DISCUSSION, IMPLICATIONS AND CONCLUSIONS

The introduction of mandatory corporate disclosures on environmental and social matters has had profound effects over the past quarter century. We have moved from a setting where disclosure has been mostly voluntary, and many of the liabilities have been kept off balance sheet, to one where a wide array of mandatory disclosures are available to investors and stakeholders. Our academic note on mandatory environmental and social disclosure in Canada, the US and the EU is meant to inform the reader on this area. We acknowledge that it may not be fully comprehensive and that we are not always able to provide an overview of the specifics within each jurisdiction. However, we believe our note provides a solid base to discuss some fruitful venues for future research, as well as draw some important implications for education purposes. We start our discussion by pointing out implications for research.

First, our overarching view of different countries is helpful because a detailed knowledge of the regulatory setting can help inform research questions. For example, the differential levels of enforcement and the staggered adoption of social and environmental disclosure regulations within European countries provide an opportunity to investigate with a rigorous design how the overall reporting regulation context affects levels of compliance and disclosure practice. We noted in the introduction that although disclosure is mandatory, regulation often leaves a good amount of discretion to companies, implying that we may be able to observe significant variation in the quality and substance of information provided. By exploiting differences in the institutional settings, and controlling for other company-level incentives, future research could look into the effects of various regulatory approaches on the quality of disclosure.

We also note that environmental and social reporting for listed companies in the EU must get to the general public via each country's financial authorities, which is a change from the channels previously used for social and environmental reporting. It is an interesting research area and will certainly attract attention from accounting scholars in the years to come. Looking at

Canada, the US and the EU together, we contend that there is a lot of environmental and social information available in company mandatory reports, outside and inside the financial statements. As shown above, there are many inter-company and inter-country differences to explore, along with company-specific implementation processes that warrant case- and field-specific exploration.

Furthermore, the advent of machine learning classifier algorithms for textual analysis provides a fruitful avenue for future research into different textual characteristics of these disclosures, and academics are well suited to build up databases of such disclosures that can assist regulators in their enforcement activities. The ability to mine thousands of disclosures and identify – at a relatively low cost – what represents best reporting practice can surely have important implications for developing further reporting guidance and supplement the minimum requirements dictated by the regulation. Furthermore, settings where mandatory requirements involve multiple channels of communication (via financial reporting or other sources) can also be explored further to assess the effectiveness of the reporting mandate and its influence on the quality of reporting.

Moreover, on the heterogeneity of the regulatory backgrounds, we note that the social and environmental literature provides plenty of investigations about the role, determinants and effects of voluntary disclosure. Given that regulation on social and environmental matters is quite extensive, especially in Europe, our paper calls for researchers to familiarize themselves with the institutional settings they focus on and avoid the dangers of concluding on voluntary disclosure when mandatory requirements may be driving the observed disclosures.

We further point to disclosure practices on the implementation of accounting standards for environmental and social liabilities as a venue that has been under-investigated. Key information such as the discount rate used, or the amount of the undiscounted liability, details over the timeline, and any further discussion of costs are not mandated per se. However, these additional discretionary disclosures reported within the mandatory financial statements are fundamental to understand correctly the accounting behind the reported liability, as well as understand potential societal costs associated with corporate activities. Future research could look into these discretionary disclosures to identify best practices and engage with preparers to understand the challenges they face and the logics they use.

Finally, in section 4, we explored three emerging issues, which have started to attract academic attention, and we have identified thereby some specific calls for further research. We note that there are other emerging regulatory disclosure trends, which we have not been able to cover in detail. One of these is the relatively recent wave of regulatory action on improving disclosure on diversity. This is an emerging issue in social matters and that the regulators themselves are taking very seriously, although academic research in this area is in its infancy. For example, the Canadian Securities Administrators has issued an annual report on its review of these disclosure requirements in Canada (OSC 2017). The European Union has recently launched a strategy on diversity and inclusion in July of 2017, which will possibly also entail new types of mandatory disclosure. An article in *The Economist* in April of 2018 discussed the newly required disclosure regulations in the UK on pay equity (Anonymous 2018). In the US, along with the previously discussed aspects of the Dodd-Frank Act, it also includes requirements for “self-assessment” on diversity (SEC, 2015a) as well as disclosure on “say on pay” (SEC 2015b). The first “say on pay” disclosure is coming out in 2018 (based on fiscal years starting on or after January 1, 2017), that requires the disclosure of the pay ratio of the chief of operating officer compensation to the median pay of all other employees. However, in the words of the SEC, the disclosure rules include “*substantial flexibility in determining the pay ratio*” (SEC 2015b, 1).

We also briefly discuss some educational implications. Information on environmental capital expenditures and the expected near-term cash costs for clean-up are generally required disclosures (when considered material). Practitioners involved in the reporting process and preparation of disclosure continue to have to concern themselves with tracking and preparing required disclosures on social and environmental matters (Kaspersen and Riise-Johansen 2016). Thus, it is critical to include study of these requirements in accounting education. Preparers and auditors should be aware of how these matters enter into the required reporting documents and we expect this will become more, not less, a part of their role in practice. In closing, although the entry of social and environmental disclosure into the mandatory disclosure realm is not necessarily new, how effective it is as a tool is an open question. Encouraging more discourse on mandatory disclosure of social and environmental matters is a main objective of this academic note. It is our hope that it is helpful in doing so.

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Appendix 1 – Examples of specific disclosures

	Disclosure type	Source	Disclosure text
1	Excerpt of non-boilerplate disclosure on litigation	CSA Staff Notice 51-333, p. 28. This is an excerpt of suggested disclosure from Appendix 1, presenting several full examples of non-boilerplate disclosure	<i>[Insert name of early stage civil litigation matter]</i> <i>The company has been named as a defendant in an action filed in Province X, where the plaintiffs have alleged that the company's operations have contaminated the local water supply, resulting in health and economic damages to local fisheries. The statement of claim seeks damages in the amount of \$x and punitive damages in the amount of \$x. The company filed a statement of defence on x, 20xx. It believes this action lacks legal or factual merit and intends to vigorously defend this action. No amounts have been accrued in the financial statements for any potential loss under this action. No trial date has been set at this time. While the company believes the action is without merit, an adverse outcome could result in payment of significant damages or penalties and significant capital expenditures which cannot be determined at this time. Defence costs associated with the action could also be significant, and may not be completely covered by the company's insurance. These payments or expenditures could significantly affect the company's financial condition, cash flows and results of operations.</i>
2	Sample disclosure relating to the US Superfund	Weyerhaeuser Company (Forestry Products), 2016 Form 10-K. Notes to the financial statements, Note 14 and by reference in the MD&A	<i>Site Remediation</i> <i>Under the Comprehensive Environmental Response, Compensation and Liability Act — commonly known as the Superfund — and similar state laws, we:</i> <ul style="list-style-type: none"> • <i>are a party to various proceedings related to the cleanup of hazardous waste sites and</i> • <i>have been notified that we may be a potentially responsible party related to the cleanup of other hazardous waste sites for which proceedings have not yet been initiated. (emphasis added)</i>
3	Indeterminate useful life as reason not to disclose	Chevron Corp (Petroleum Refining), 2016 Form 10-K, MD&A (also discussed on Note 26 to the F/S)	<i>For the company's other ongoing operating assets, such as refineries and chemicals facilities, no provisions are made for exit or cleanup costs that may be required when such assets reach the end of their useful lives unless a decision to sell or otherwise abandon the facility has been made, as the indeterminate settlement dates for the asset retirements prevent estimation of the fair value of the asset retirement obligation. (emphasis added)</i>
4	Revision of discount rate for IFRS reporter using own credit risk	ENI Spa (main Italian oil and gas company), Form 20-F 2016, p. F-64	<i>Negative estimates' revisions of €647 million were primarily due to a rise in the discount rate curve in particular for the U.S. dollar and to the revision of previous estimates of decommissioning costs, partially offset by new provisions of the year. The accretion discount recognized in the profit and loss account for €297 million was determined by adopting discount rates ranging from -0.01% to 5.8% (from 0.2% to 4.6% at December 31, 2015). Main expenditures associated with decommissioning operations are expected to be incurred over a 40-year period. (emphasis added)</i>

Appendix 2 – Mandatory environmental and social reporting in France, Germany and the UK

France

France is one of the more proactive countries when it comes to environmental and social reporting requirements. The French government launched a policy in support of environmental and social issues in the early 2000s. This new policy was referred to as The New Economic Regulation Law and regulated disclosures on environmental and social outcomes of listed companies' operations in their annual reports.²⁵ This initiative was followed by the environmental Charter in 2005 that established a 'polluter pays' principle and a right to live in a healthy environment.²⁶ The next major development was the Grenelle 1 Law that went into effect in 2009 in which Article 57 focuses on environmental issues such as buildings and urban planning, transport, energy and climate, biodiversity, risks, health and waste, and governance; and thereby drew a road map for ecology, sustainable development, and planning. The latter part of the law on governance is directly related to mandatory disclosures by companies. The law requires companies to include an environmental and social section in their annual reports describing consequences of their activities and their commitment to sustainable development.²⁷ Grenelle 1 is followed by Grenelle 2 in 2010, which extends environmental and social reporting requirements. Specifically, Grenelle 2 introduced measures needed to achieve the defined targets for 2020, set out in the Grenelle 1 law. Grenelle 2 constitutes an extension of Grenelle 1 and requires companies with more than 500 employees to report on 42 topics related to environmental and social commitments to sustainable development, as of 31 December 2013. Companies are allowed to elect indicators for each topic. The law is not entirely mandatory as the law uses a "comply or explain" approach. However, independent auditors are required to provide their opinion on omissions and explanations.²⁸ Further, companies must also explain any framework used and provide comparatives. Finally, the companies' disclosures are subject to verification of an independent party.²⁹ The Directive 2014/95/EU went into effect in July 2015. By issuing Decree no. 2015-1850, the French government imposes disclosure requirements over and above the requirements under the Directive 2014/95/EU.³⁰ The decree affects all listed French companies, all companies that registered financial assets in France, and foreign subsidiaries registered to do business in France. These entities must provide information on environmental factors. Specifically, they must disclose climate risks in terms of physical risks related to climate change and assets potentially to become devalued as a consequence of actions to derive energy from non-fossil resources.

Germany

Initially there were no specific regulations for environmental disclosures in Germany, only guidelines on setting out the minimum amount of disclosure, issued by the National Institute for

²⁵ Loi Nouvelle Régulation Economique, NRE, 15 May 2001

²⁶ Charte de l'Environnement. <http://www.ladocumentationfrancaise.fr/dossiers/developpement-durable/charte-environnement.shtml#>

²⁷ The Library of Congress <http://www.loc.gov/law/foreign-news/article/france-law-on-national-commitment-for-the-environment/>

²⁸ Presentation by Michel Doucin, Ambassador at large for Corporate Social Responsibility on 9 April, 2013 <https://www.globalreporting.org/SiteCollectionDocuments/GoFPara47PoliciesInitiatives-France.pdf>

²⁹ Presentation by Michel Doucin, Ambassador at large for Corporate Social Responsibility on 9 April, 2013 <https://www.globalreporting.org/SiteCollectionDocuments/GoFPara47PoliciesInitiatives-France.pdf>

³⁰ <https://www.legifrance.gouv.fr/eli/decret/2015/12/29/2015-1850/jo/texte>

Standard-Setting (DeutscheInstitut Fur Normierung) in 1997 (Barbu, Dumontier, Feleagă, and Feleagă, 2014). However, these guidelines were later repealed. Non-financial, environmental disclosure requirements among listed German companies were later regulated by the German Corporate Governance Code (first issued in 2002) via the Stock Corporation Act (the Aktiengesetz 1937, last amended in 2017).³¹ Under these rules corporate reporting had to provide non-financial indicators in addition to financial information. The non-financial disclosure requirements were not very detailed and basically required disclosure of environmental and social information of significance to users.³² Germany adopted a CSR law based on Directive 2014/95/EU in March 2017. The new law set out disclosure requirements in four areas with twenty criteria, where those related to the environment refer to the usage of natural resources, resource management, and climate-relevant emissions.³³ All companies must prepare and file a declaration of conformity, which will be reviewed by the German Council for Sustainable Development. Companies may apply the guidelines of the Global Reporting Initiative (GRI) Sustainability Reporting Standards, or European Federation of Financial Analysts Societies (EFFAS).³⁴

The United Kingdom

Mandatory environmental and social disclosures in the UK are mainly regulated by the Companies Act (First 1985 and later on 2006 (Barbu et al., 2014)). The Act of 1985 required that listed companies include information on significant corporate environmental consequences of their operations in the annual operating and financial review (OFR). These rules were later on repealed by the Companies Act 2006, which also abandoned the OFR for a Business Review (BR) in which disclosures on environmental matters also are required but only to *the extent necessary* for understanding the development and performance of the company. A change that essentially made most CSR-type disclosures voluntary in the UK, until just recently. However, in December 2016, the UK government implemented the Directive 2014/95/EU by amendments to the Companies Act 2006 requiring a Strategic Report (SR) that prescribes disclosures on companies' impact on the community and the environment. The UK applies the “comply or explain” approach and regardless of materiality, companies that do not have policies on environmental matters must provide an explanation as to why that is the case.³⁵

³¹ Aktiengesetz. <https://www.gesetze-im-internet.de/aktg/AktG.pdf>

³² Council of Bars and Law of Societies of Europe.

http://www.ccbe.eu/fileadmin/speciality_distribution/public/documents/CSR/CSR_Position_papers/EN_CSR_20130131_Overview-of-CSR-developments-at-a-national-level.pdf

³³ Bundgesetzblatt. <http://www.deutscher-nachhaltigkeitskodex.de/en/home.html>

³⁴ <http://www.deutscher-nachhaltigkeitskodex.de/en/application/information-for-users.html>

³⁵ <https://www.frc.org.uk/getattachment/3dfe0ac6-ac6d-41a0-91bf-df98cbba0ad6/Non-Financial-Reporting-Factsheet-Final.pdf>