LAB University of Applied Sciences

Measuring the Quality of Finnish Forest Companies' CSR Reports using GRI Standards Reporting Principles

Case: UPM, Stora Enso and Metsä Group

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Bachelor of Business Administration, International Business
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Abstract

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Abstract

The purpose of the study was to measure the quality of the 2018 to 2022 CSR reports of UPM, Stora Enso, and Metsä Group. The study attempts to answer the research's main question, “How do the case companies disclose their CSR reports using the GRIS reporting principles?” The research will be a resource for multi-stakeholder groups who want more awareness of CSR reports' transparency, credibility, and comparability to make well-informed decisions. In addition, the study aims to have deeper insights into the quality of the case companies’ CSR reports.

The thesis is based on a deductive research approach, while a portion of the study used the inductive approach to attain all the goals of the study. Secondary data for both theoretical and empirical parts were utilized. The theoretical part used relevant sustainability concepts and theories to form the theoretical foundation. These concepts included but were not limited to the GRI Standards, CSRD (EU) 2022/2464, and Taxonomy Regulation (EU) 2020/852.

Furthermore, the empirical part applied both qualitative and quantitative approaches. The data was acquired from the websites of Stora Enso, UPM, and Metsä Group. In addition, methodical content analysis and systematic coding of the CSR reports and GRI content indexes were carried out. Finally, the GRIS principles for defining report quality were operationalized into a Likert scale to quantify the results.

The study results indicate a generally high level of CSR report quality from all the case companies. However, future studies are encouraged to use a more extensive sample group in the same industry and a longer time frame for a more comprehensive comparison.

Keywords

CSR reporting, GRI Standards, Corporate sustainability reporting directive

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Appendix

1 Introduction

1.1 Research background

Corporate social responsibility (CSR) report has become crucial for companies in communicating their performance, strategies, goals, and economic, social, and environmental impacts. Transparent, reliable, and comparable CSR disclosure impels a company's accountability. Therefore, it should account for positive and negative effects. In addition, it provides better insights and understanding for stakeholders to make well-informed decisions. (EU Directive 95/2014; Braam et al. 2016; World Economic Forum 2020; European Commission 2021.) In addition, stakeholders call for more accountability of companies and to go beyond the short-term financial focus (Rasche et al. 2017).

Various bodies have recommended several disclosure standards, including Global Reporting Initiative (GRI), Financial Accounting Standard Board (FASB), and EU Directive (95/2014). (SASB 2017; European Commission 2020.) However, as a result, the non-standardized reporting initiatives and insufficient knowledge of the CSR reporters lead to incomparable and inconsistent information. (Hahn & Kühnen 2013; European Commission 2021; Christensen et al. 2021.)

The lack of commonly accepted metrics in reporting framework and definition inconsistencies pause challenges in CSR reporting (Zsóka & Vajkai 2018). The International Business Council (IBC) proposed to all members the alignment of SDGs and sustainability reporting standard core metrics for consistency and a comparable basis. (Accountancy Europe 2019; World Economic Forum 2020.) Thus, adopting a standardized format in CSR reporting, such as the GRI Standards (GRIS) and the EU Directive (95/2014), provides comparable information and consistency (Pizzi et al. 2020).

Earlier studies claimed a spectrum of CSR reporting qualities (Habek & Wolniak 2015a). However, determining the quality of CSR reports has been debated in the literature (Habek & Wolniak 2015a) and sparked interest among researchers (Ali et al. 2017). Some studies measured the quality of CSR disclosures by using mixed parameters such as relevance, credibility, comparability, and the type of information. (Habek & Wolniak 2015b; Michelon et al. 2015; Alotaibi & Hussainey 2016; Comyns 2018; Badia et al. 2020). Based on their empirical studies, Beretta & Bozzolan (2008) argued that the quantity of the CSR report is not a replacement for its quality. Their study revealed that high-quality CSR report is positively associated with accuracy and negatively associated with earnings forecasts. At the same time, Habek & Wolniak (2015a) found that EU countries that produced fewer CSR reports have higher qualities than EU countries that made more CSR reports.

However, there are insufficient studies on CSR quality in the Finnish forest industry, although systematic research about CSR reports is widespread. Most of the studies on CSR of Finnish companies were from the late 1990s to the mid-2000s CSR reports and focused on environmental and financial indicators. (Tuominen et al. 2008; Vinnari & Laine 2013; Mikkilä et al. 2021.) For instance, Lappi (2020) studied UPM, Metsä Group, and Stora Enso's 2018 CSR reports but concentrated only on transparency and comparability. As a result, Lappi (2020) revealed limited transparency in environmental impacts and performance. Furthermore, the disclosed information posed a big challenge for comparability between companies due to variations in reporting methods.

Other studies on Finnish sustainability disclosures did not directly measure CSR reports' quality. Koskinen (2019) examined the CSR communication strategies and found extensive use of social media in communicating CSR. Mäkelä (2017) discovered in the study of Finnish forest companies CSR disclosures covering 15 years of environmental reporting that there has been a declining trend in ecological performance indicators reported.

1.2 Thesis objectives, research questions, and delimitations

Research objectives

The purpose of the study is to examine and measure the quality of CSR reports of UPM, Stora Enso, and Metsä Group. They are the most influential forest companies in Finland and Europe. Therefore, an excellent sample from the industry. The aim is to have deeper insights into the quality of CSR reports from UPM, Stora Enso, and Metsä Group. This research will be a resource for multi-stakeholder groups who want more awareness of the CSR reports' transparency, credibility, and comparability from the case companies. The quality of CSR disclosures from UPM, Stora Enso, and Metsä Group have not been widely examined based on multiple years, nor have they been studied exclusively as forest companies. Most studies that included UPM, Stora Enso, and Metsä Group had other non-forest companies.

Research questions

Formulating a research question that raises curiosity and motivates one to explore the issue is vital. In addition, the research questions provide focus and boundaries and point the study to the data that will answer those questions. Therefore, good research questions must be feasible, clear, relevant, ethical to participants, and have social importance. (Mligo 2016.)

The main research question of this study is:

How do the case companies disclose their CSR reports using the GRIS reporting principles?

The following sub-questions are based on GRIS quality reporting principles to achieve the research objectives and address the main question.

- To what extent is the accuracy of the information reported?
- To what extent does the reported information disclose favorable and unfavorable results of the organization?
- To what extent are the positive and negative trends in a performance presented on a year-after-year basis?
- To what extent is the reported information understandable and accessible to stakeholders?
- To what extent is the CSR information presented comparable on a year-after-year basis?
- To what extent is the CSR information presented comparable to other organizations in the same industry?
- To what extent are the reported information and processes in preparation for the CSR reports verifiable by an external assurance?
- Is the CSR reporting schedule timely and consistent for stakeholders to make informed decisions?

Research delimitations

A delimitation of a study is a systematic element that the researcher controls. For instance, attributes or factors that would limit to whom the findings are applicable. In contrast, a limitation of a study is a systematic bias outside the researcher's control that may inappropriately influence the results. (Price & Murnan 2004.)

Therefore, this study is delimited as it examines only the case companies' CSR reports from 2018 to 2022 based on the GRIS 2016 and 2021 frameworks. The research follows the GRIS principles for defining report quality. The study examines the CSR reports based on the indicators disclosed in GRI content indexes which cover general disclosures, economic, environmental, and social topics. Considering this is a bachelor's thesis, the research scope is comprehensive to achieve the research goal.

1.3 Research methodology and data collection

Research approach

This research uses a deductive approach. The approach deals with generating a hypothesis based on existing theory and then implementing a research strategy to test the hypothesis (Wilson 2010, 7). Deduction starts with an expected pattern tested against observations (Babbie 2021). For example, if a theory implies a causal relationship, it may generally be accurate. Gulati (2009, 42) added that a deductive design should test if the relationship can be obtained in more general cases. Figure 1 below depicts the deductive approach, in which the researcher gathers observations to describe the phenomenon being examined (Lodico 2010).

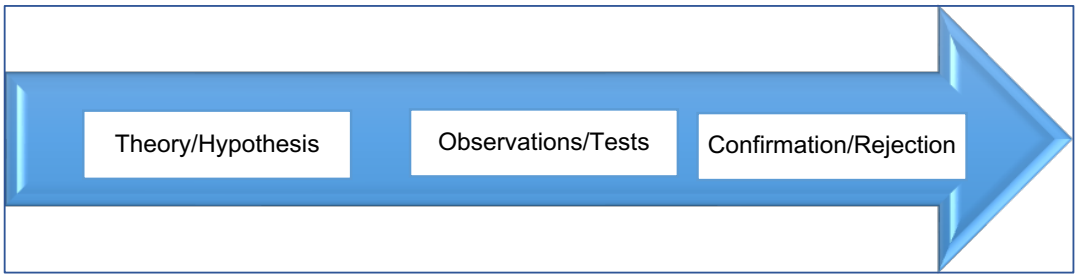

Figure 1. Deductive approach (Lodico 2010 & Babbie 2021)

In contrast, the inductive approach entails searching for patterns from observations and progressing to the theories and hypotheses (Bernard 2011). The procedure starts with utilizing empirical observations, and conclusions are proposed because of observations towards the end of the research process (Goddard & Melville 2004). In inductive research, no theories nor hypotheses are applied at the start of the study. Instead, the inductive approach allows the researcher to use existing theories to formulate the research question to be examined. Therefore, inductive reasoning observes for resemblances, patterns, and commonalities to generate a hypothesis or conclusion. Therefore, this approach is the opposite of the deductive approach. (Saunders et al. 2015.)

Research methodologies

The two most common research methodologies are quantitative and qualitative. The difference between these methodologies is the data collection and the analysis techniques. Quantitative research is a strategy that provides results by statistical methods and quantifying collected analyzed data. The quantitative process is often used with a deductive approach, focusing on testing an existing theory. (Ghauri et al. 2020.) An appropriate research methodology is essential once the study approach has been defined.

Qualitative research provides holistic insights and understanding of the research object through an unstructured and exploratory method. It studies complex phenomena that are difficult to quantify directly. However, the results can generate ideas and hypotheses that can be used in quantitative research. The researcher chooses the appropriate or mix of both methods to address the research questions and goal. (Ghauri et al. 2020; Saunders et al. 2015.) Table 1 below briefly explains the characteristics and differences between qualitative and quantitative methods.

Qualitative methods	**Quantitative methods**
Emphasis on understanding	Emphasis on testing and verification
Focus on understanding from respondent's point of view	Focus on facts and reasons
Interpretation and rational approach	Logical and critical approach
Observations and measurements in natural settings	Controlled measurement
Subjective and closeness to data	Objective and distant from data
Explorative orientation	Hypothetical-deductive and focus on hypothesis testing
Process oriented	Result oriented
Holistic perspective	Particularistic and analytical
Generalization by comparison of properties and contexts of individual organism	Generalization by population membership

Table 1. Research methods (adapted from Ghauri et al. 2020)

This study executes content analysis on CSR reports to look for instances that could substantiate GRIS quality reporting principles. Observational methods were used to comprehend the subject matter. Krippendorff (2013) indicated that content analysis has evolved into a collection of research methods that produce inferences from verbal, image, symbolic, and communication data.

Moreover, the research applies qualitative and quantitative methods. The researcher uses a comprehensive set of measures based on previous studies that used GRIS for determining reporting quality (Beattie et al. 2004; Beretta & Bozzolan 2008; Beest et al. 2009; Badia et al. 2020; Ismail et al. 2021.)

Data collection method

The two types of data used in research are primary and secondary. The primary data is new information gathered by the researcher specific to the study, either through a survey, interview, or observations using a focus group. In contrast, secondary data is information produced, collected, and published by others but not by the researcher. Secondary data can also be survey-based, documentary, publications, or from combined data sets. Non-written documentary sources include voice or video recordings, pictures, or films. Primary and secondary data can contain quantitative and qualitative data. (Saunders et al. 2009; Wolf 2016.)

This research uses secondary data. First, the theoretical information was from GRI's official website, relevant academic books, peer-reviewed journals, publications, and online sources. The empirical part of the study uses the CSR reports and GRI content indexes from 2018 through 2022 from the official websites of Stora Enso, UPM, and Metsä Group

The data is publicly available as the case companies are stock exchange-listed entities. Therefore, the researcher does not need special permits to use the CSR reports information in the research.

1.4 Thesis structure

This research report has six chapters. The first chapter, i.e., the introduction, introduces the concept of corporate social responsibility (CSR) reporting and the business practices of sustainability reporting. It conveys the importance of the study on the quality of sustainability disclosures and why it is relevant and a current topic for research. Furthermore, the introduction presents the research questions, scope, and limitations and sets the tone for this study's direction and primary purpose.

The second chapter presents the theoretical framework of the research topic. It covers the relevant sustainability concepts and theories commonly adopted in business practices and literature reviews. Furthermore, the third chapter introduces three chosen Finnish forest industry forerunners as case companies. This chapter provides a brief but comprehensive idea of the case companies from their history to current business innovation. It also states which business sector they operate in and their relative size in the industry.

The fourth chapter focuses on the empirical part of this study and extracting the possible qualitative and quantitative data in alignment with the thesis's objectives. Figure 2 below visualizes the flow of the thesis research to keep the study focused on its direction.

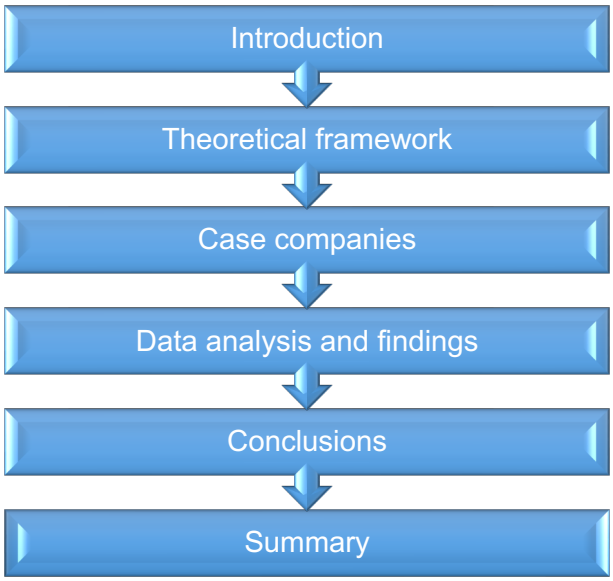

Figure 2. Research flow process

Furthermore, chapter five concludes the thesis and summarises the study's key findings, including the answers to the main and sub-questions. Lastly, chapter six summarizes the thesis report and recommends further future studies.

2 Theoretical framework

2.1 CSR reporting and materiality

In general, CSR reporting is still voluntary action. In Europe, sustainability reporting has gained momentum across industries with the prompt from the European Commission, business consortiums, and non-profit organizations. The Davos Manifesto 2020 expanded its ethos that a company fulfills societal aspirations, harmonizes stakeholders' different interests, and generates wealth. (World Economic Forum 2020.) The amended EU Directive (2014/95) disclosure of non-financial and diversity information included stricter conditions for large and listed companies and additional requirements in their non-financial information disclosure as in their CSR reports. (European Commission 2021.)

European Commission (2021) acknowledged a wide gap between CSR information disclosed and meeting the requirements of primary users of the information. The primary users or stakeholders are not necessarily the same in each organization. Therefore, a company can argue that its CSR report is for its 2primary information users depending on the industry and government recommendations (Hahn & Kühnen 2013).

The amended Non-Financial Reporting Directive (NFRD) of sustainability reporting has not sufficiently improved the quality of information companies' reports. The feedback from the primary users is that the information disclosed is neither reliable nor comparable between companies. (European Commission 2021.)

On the other hand, companies have challenges reporting due to a lack of clarity in the current requirements and numerous private standards and frameworks. Companies also experience difficulties getting information from suppliers, clients, and investee companies. All this generates unnecessary business costs. (European Commission 2021a.) Consequently, an amendment is underway with more stringent enforcement of standardized mechanisms to improve CSR reporting at the least possible cost. The amendment will harness the potential of the European single market toward a sustainable economy. (European Commission 2021.)

Materiality analysis and double materiality

Materiality analysis identifies and prioritizes sustainability issues relevant to the reporting company, including its broad group of stakeholders (Calabrese et al. 2019). Double materiality is a concept proposed by the European Commission in the 2019 guidelines on non-financial disclosure, wherein companies have the prerogative to judge materiality based on dual perspectives. First is the information for understanding the company's development, performance, and operations and how it influences its value. Second is the scale, scope, severity,

and remedial of the impacts (EFRAG 2021, 8) of the company's activities on society and the environment, including positives and negatives in achieving the SDGs goals. The concept suggests that financial and impact materiality are interconnected, thus creating double materiality. (European Commission 2019, 6; Adams et al. 2020, 9.) GRI (2021) defines materiality as the prioritized reporting based on the topics that have significant impacts economically, environmentally, and on people, including human rights.

The idea of double materiality is depicted in Figure 3 below, showing how a company can leverage double materiality to address specific and broad groups of stakeholders. Therefore, the double-materiality analysis provides diverse and mutual accountability between the companies and stakeholders (Brown & Dillard 2015; Puroilä & Mäkelä 2019).

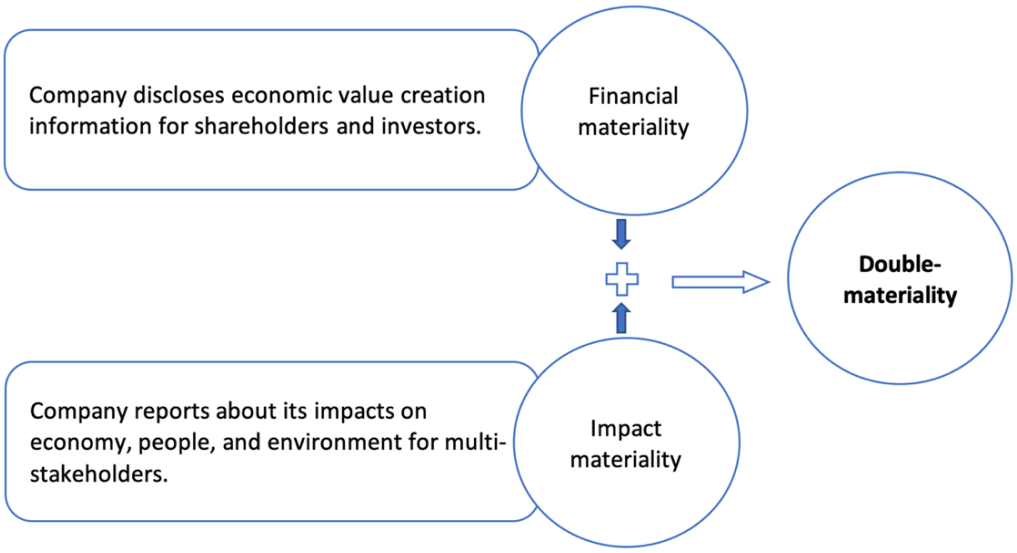

Figure 3. Double materiality (adapted from Adams et al. 2021)

Therefore, double materiality enhances stakeholder engagement in sustainability reporting (Puroila & Mäkelä 2019). It requires broad and direct stakeholder engagement to understand the material from multi-stakeholder groups, as different stakeholders may have conflicting views on sustainable material topics. (Brown & Tregidga 2017; Puroila & Mäkelä 2019.) Also, other studies disclosed the significance of accurately identifying and reporting material sustainability issues from the standpoint of broad stakeholder groups. A myopic focus on investors and shareholders may not necessarily enhance financial returns in the long term. (Martinez 2016; van Heijningen 2019; Grewal et al., 2021.)

2.2 Global Reporting Initiative

Global Reporting Initiative (GRI) is an independent non-profit institution rooted in the Coalition of Environmentally Responsible Economies (CERES). The purpose of GRI was to ensure

companies abide by responsible environmental conduct principles by creating the first accountability mechanism. Later, the scope expanded to include social, economic, and governance issues. (GRI 2022a.)

In the sustainability reporting context, GRI is the trade name of the Stichting Global Reporting Initiative. GRI's copyrights and trademarks include but are not limited to GRIS and the GRI logo. GRI does not certify or verify an organization's reports, products, or services. GRI, however, may endorse third-party consultancy or training through certified training partners and certified software tools and assurance. (GRI 2022c.)

Case companies and many industries across Europe use the GRIS. In addition, most of the large and medium companies globally use the GRIS reporting guidelines. The GRIS has improved through the years and continuously evolves to meet multi-stakeholder groups' changing requirements. As a result, the GRIS provides a similar framework applicable to a wide array of industries. GRIS offers companies the framework for economic, social, and environmental reporting wherein a third party verifies the compliance and accredits the reports. (Rahbek & Pedersen 2015; Aras et al. 2018; KPMG 2020a.) However, some researchers question whether GRI's goals in transparency and comparability in sustainability disclosure translate into reality (Einwiller et al. 2016, 240).

According to the most extensive sustainability reporting surveys by KPMG in 2020 that 73% of the world's largest 250 companies by revenue used GRI reporting standards on their sustainability disclosures. In contrast, 67% of the 5 200 large and mid-cap companies in 52 countries have started reporting their sustainability performances using the GRI principles. KPMG's survey results highlight the trend toward harmonizing and consolidating corporate reporting requirements. In addition, the survey report emphasized that the scope of CSR reporting must cover all the external impacts. (KPMG 2020b.)

GRI (2022b) emphasizes that complete transparency about the impacts of business activities is the linchpin of sustainability reporting. The latest reporting GRI Standards recommend and allow an organization to identify, prioritize and disclose information that includes its most significant impacts on the environment, economy, and people.

The sector standards describe the characteristics of a sector that determine its impacts. The topics and impacts listed in the sector standards give insights into an organization's results. Hence, the organization must scrutinize the implications and decide its relevance. Understanding the organization's context is essential in determining and assessing the impact of its effects. (GRI 2022b.) Moreover, the three GRI standards are explained below.

GRI 1 is the reference point for all companies reporting using GRI Standards. It conveys critical concepts and principles and lists the requirements for the reporting. GRI 2 specifies disclosures in detail, such as reporting practices and governance. Furthermore, GRI 3 explains step-by-step how to determine and evaluate impacts and their significance. Once the importance of impacts is assessed, the company decides which to report from prioritized impacts and groups them into topics most relevant to the company's activities. The most pertinent issues become material topics for the reporting. (GRI 2022b.)

GRI also provides specific topics such as climate change or child labor. On the other hand, if an organization cannot fulfill some of the reporting requirements based on GRIS, in that situation, the organization can use selected GRIS or parts of standard content and indicate concerning the GRIS. (GRI 2022b.)

Figure 4 below illustrates an overview of the three GRIS types as the sustainability framework for reporting companies. Under the universal standards column, an organization can apply all three GRI 1 to GRI 3 standards. Under the sector standards column, the reporting company can choose sector standards applicable to the reporting organization's industry. At the same time, the topic standards are used to report specific information on the company's material topics.

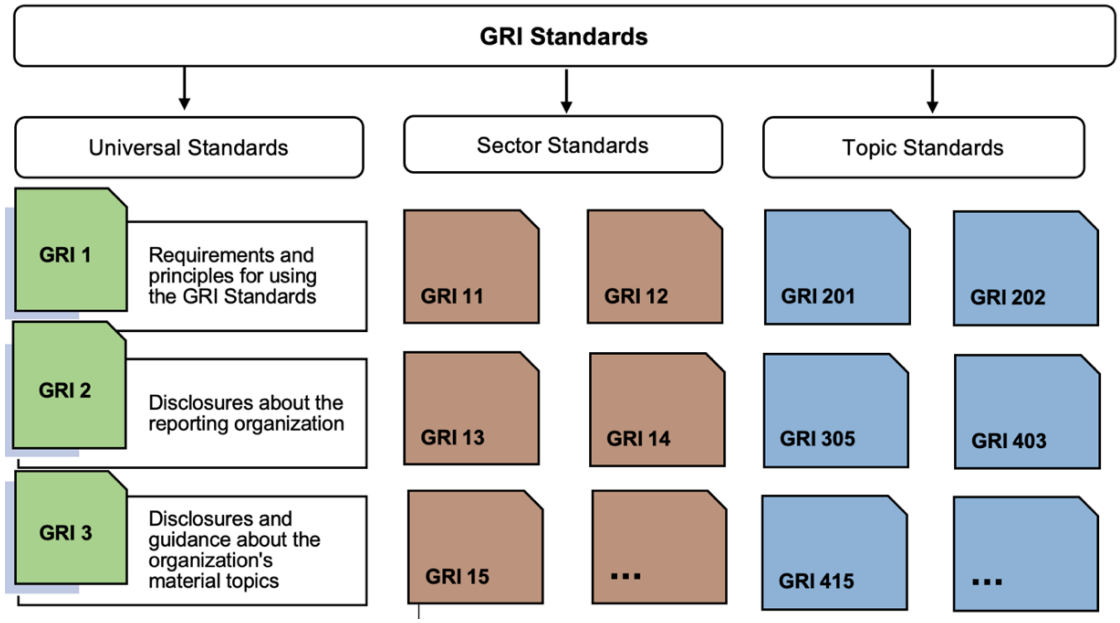

Figure 4. GRI Standards (adapted from GRIS 2022b)

The CSR reports using GRI Standards can be published in formats accessible across one or more locations, such as standalone sustainability reports or integrated into the annual report. However, GRI emphasized that reports must contain a GRI content index. The goal of the content index is the traceability of the information reported. Therefore, it enhances the report's

credibility and transparency. In addition, it provides a quick insight into the data and helps the stakeholders to go through the information briefly. (GRI 2022b.)

The content index is crucial as it specifies the GRIS utilized and lists the location for all the disclosed material topics. Furthermore, the content index can help a stakeholder comprehend what the company has not revealed and why the omission and non-compliance with the reporting requirements. (GRI 2022b.) The visual representation in Figure 5 below enables reporters to internalize and comprehend the reporting process using the GRIS.

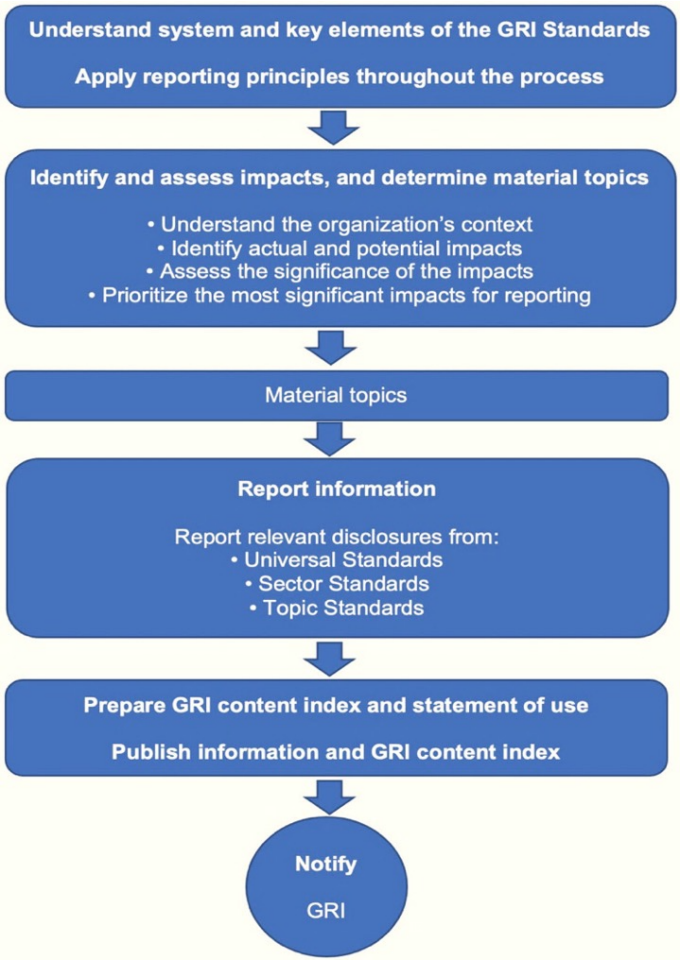

Figure 5. GRIS reporting guidelines (adapted from GRIS 2022b)

GRIS reporting principles

The GRIS reporting principles are divided into two groups: principles for defining report content and principles for defining report quality. The reporting principles for determining report content clarify which content to disclose. The company's activities, impacts, and expectations of its stakeholders are considered in the report. On the other hand, the GRIS reporting principles for defining report quality help choices on ensuring the quality of information and its accurate

presentation. The quality of the CSR report is essential for the stakeholders to make sound assessments of an organization for appropriate actions. (GRI 2022b.)

The quality assessments are based on accuracy, balance, clarity, comparability, reliability, timeliness, and accuracy. The accuracy of information is crucial for the quality of CSR disclosure, and it should be as detailed and accurate as possible when making estimations. A CSR disclosure should provide balanced information for stakeholders to assess the impacts of the company's activities and its sustainability outlook. The report should reflect the positive and negative performance of the company. (GRI 2022b.)

Under the clarity principle, CSR information must be understandable, usable, and accessible by all stakeholders to acquire specific details without unnecessary effort. However, Cho et al. (2015) stated that CSR reports often lack clarity with excessive acronyms and jargon confusing and misguides stakeholders. Furthermore, GRI recommends using maps, graphics, links, indices, tables, and other visuals for stakeholders. (GRI 2021.) Table 2 below clearly distinguishes between the two GRIS reporting principles as a guide for reporting companies.

Reporting principles for defining report content	**Reporting principles for defining report quality**
Stakeholder inclusiveness	Accuracy
Sustainability context	Balance
Materiality	Clarity
Completeness	Comparability
	Reliability
	Timeliness

Table 2. GRIS reporting principles 2016

Therefore, the comparability quality of the CSR report provides information on the company's year-on-year and overtime performance for comparability with other companies. Additionally, the reliability of the disclosed information should be solid. GRI (2021) stated that the processes applied to prepare a report should be collated, recorded, compiled, scrutinized, and disclosed in a manner that is effortless in verification. Lastly, timeliness means reporting according to the regular schedule available in time for the stakeholders. The principle stipulates that information should be communicated timely to help stakeholders make decisions.

2.3 Taxonomy Regulation (EU) 2020/852

European Commission (2020) advises that EU taxonomy regulation (EU) 2020/852 is a framework for sustainable investment amending its predecessor regulation (EU) 2019/2088. This updated regulation provides a more explicit framework for classifying organizations on the concept defining when a business operates sustainable economic practices, therefore, as a competitive edge against companies that are not environmentally friendly. Figure 6 below visualizes the six environmental objectives of EU taxonomy towards its aim to promote and reward sustainable economic activities and technologies.

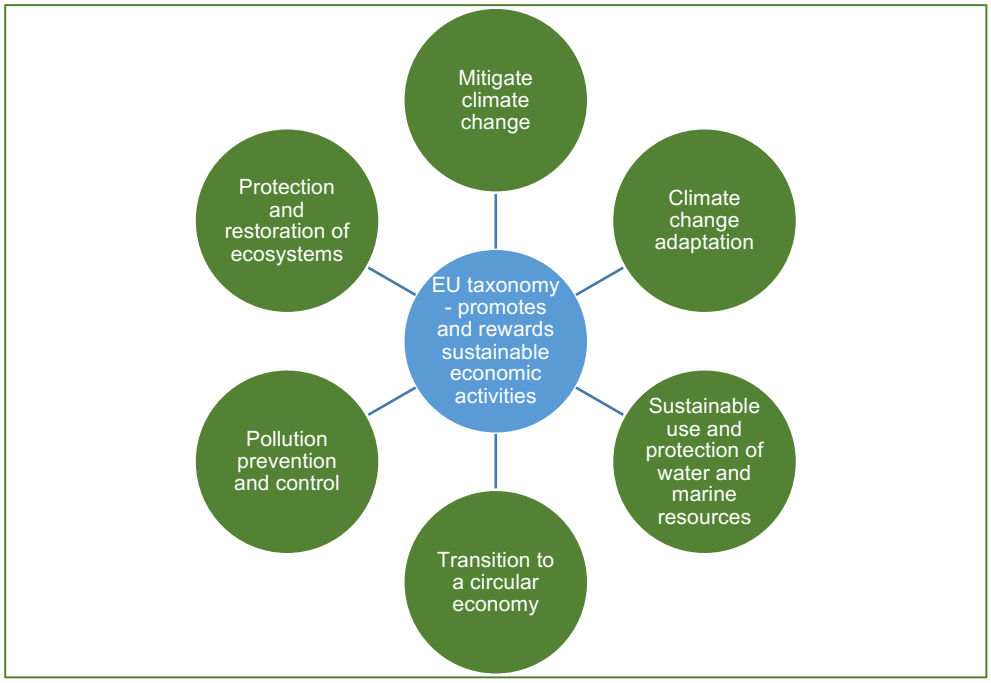

Figure 6. EU taxonomy objectives (European Commission 2020)

Therefore, the EU taxonomy's primary goals are directing investments toward sustainable activities, integrating sustainability in risk management, and encouraging long-term investment. Furthermore, the EU taxonomy provides the criteria for an organization’s economic activities, such as contribution to at least one environmental objective and meeting minimum safeguards that no significant harm will occur to other goals. (European Commission 2020 & EU taxonomy info 2023.)

2.4 Corporate Sustainability Reporting Directive (EU) 2022/2464

This corporate sustainability reporting directive (CSRD), implemented in January 2023, underpins the mandate to large organizations and public companies on what information to include on social and environmental reports. However, the mandate for adoption from new com-

panies will be in the 2024 financial year. The regulation ensures that a broader group of stakeholders can access transparent information about investment sustainability and risks from climate change and the company's impact on people and the environment. Organizations covered by the CSRD will make their reports based on the European Sustainability Reporting Standards (ESRS), customized to EU policies, while considering international standardization initiatives. Furthermore, the CSRD requires the reported information to be audited and digitalized. Moreover, the rules from Non-Financial Reporting Directive (NFRD) 2014/95/EU will remain enforced until the mandatory adoption of CSRD.

2.5 Non-Financial Reporting Directive (EU) 2014/95

The NFRD mandates public entities to disclose non-financial information in their reporting if they have an average of 500 employees and a publicly traded company that fulfills any two out of the three following criteria:

a balance sheet of over 20 million euros

a net turnover of over 40 million euros

an average number of employees of more than 250

The EU Directive (95/2014) mandated applicable companies to comply with their first sustainability reports by 2018 (Accountancy Europe 2017). The responsibility disclosure could be integrated into the annual report (AR) or as a standalone. The report should cover environmental policies, employee-related matters, human rights policies, and approaches toward corruption and bribery. The reporting should also include an unbiased and comprehensive view of the company's operations, such as its policies, outcomes, and risks regarding the reported matters. (Accountancy Europe. 2017; European Commission 2021; Global Reporting Initiative 2022a; KPMG 2022.)

Castren & Snellman (2017) claimed that the EU set the directive wherein companies have prerogatives on what to disclose rather than mandated. The European Commission acknowledged the challenges of imposing universal guidelines that fit all industries. It issued its responsibility reporting guidelines on non-financial reporting based on feedback from stakeholders and established international reporting frameworks such as GRI, SASB, and CDP (European Commission 2017).

2.6 Corporate social responsibility

The evolution of corporate social responsibility (CSR) is long and varied. However, only in the last few decades has the social performance of corporations started appearing in the literature.

(Carroll & Buchholtz 2015.) Companies' CSR activities and non-financial disclosures are voluntary. These initiatives and actions are aligned with UN sustainable development goals (SDGs). (World Economic Forum 2020.)

CSR has become a term with several derivatives, but CSR is used for brevity in this paper. The definition of CSR varies a lot and comes under multitudes of names; corporate sustainability (CS), corporate responsibility (CR), creating shared value (CSV) citizenship, and sustainable development. Different organizations use these terms synonymously and interchangeably. The most prominent is corporate social responsibility (CSR). European Commission (2014) defines CSR as the process where the concern for society, the planet, good ethics, and the value of human rights are integrated into the company's primary strategy.

The corporate social responsibility framework is broad and extensively applied across disciplines, businesses, and institutions. Its rationales range from risks and opportunities management, government mandates, boosting employees' morale, corporate philanthropy for varying economic advantages, building a good company image, or can be a mix of all the factors (Pätäri et al. 2016; Cassar & Meier 2018, 215; Chandler 2020; Bertrand et al. 2020). Moreover, CSR interests and obligations varied over time.

Sustainability encompasses the endeavor to balance human requirements with the ability of natural resources to provide them in the long term. Carroll & Buchholtz (2015) assert that a company must be accountable for its performance to achieve sustainability, which is inherent in its strategy. (Mabee et al. 2020.) The UN succinctly defined sustainable development by the following quote, which is as relevant today as it was then.

> *Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs* (UN Brundtland Commission 1987).

The trend has been shifting from Friedman's theory that the social responsibility of the business is to increase its profits (Friedman 1970). However, there are some differing views about CSR activities regardless. Cadez & Guilding (2017) stated that companies that focus their CSR activities on bringing more economic benefits result in negligence of the environmental implications. Devinney (2009) added that CSR activities are more of a drain on resources requiring significant capital investments that take a long time to reap the returns.

Companies have a wide array of SCR activities according to their specific needs. The non-standardized and non-mandatory CSR activities lead companies to have little in common or use different metrics in their sustainability reports (World Economic Forum 2020). CSR can

include another form of assistance to suppliers that engage in ecologic and social sustainability. It can also help local communities and create initiatives to enhance employees' welfare. (Blanchard & Barrett 2010; Sprinkle & Maines 2010.) Large undertakings such as UPM, Stora Enso, and Metsä Group engage in corporate social responsibility because they envision sustainability underpins long-term and strategic value creation (UPM 2022a).

The consensus for CSR's moral argument is that all the members of society have the responsibility to uphold the rules for the interest of the common good and not just solely required from businesses. Consumers tend to support ethical values and green products but are not paying the total cost of their actions' environmental and societal impacts. (Chandler 2020.) Deloitte (2020) concurred in its 2020 study on sustainability-based consumer behaviors that affordability is the most significant barrier to adoption. Hence, the more affluent the consumer is, the likelihood of sustainable lifestyle increases. McKinsey & Company (2021) revealed that some companies reduced their packaging costs by 10% by engaging in straightforward design alterations that use more recycled plastics; therefore, such cost savings can be passed down to final consumers.

2.7 Triple bottom line

Elkington (2004a) advocated a robust partnership between innovative economies, communities, and the environment to achieve a formidable Triple Bottom Line (TBL) performance. TBL concept means forging and considering three aspects of sustainability: economic, social, and environmental factors. Friends, foes, and long-held competitors must move to construct a new symbiotic relationship. Effective long-term partnerships are vital during a transition to sustainability. Collaborative partnerships provide platforms for efficiency that a single company may struggle with alone.

Elkington (2004a) indicated that internally and externally, developing partnerships is not straightforward. Old assumptions and prejudices between businesses and campaigners linger, and strain forged partnerships. However, the clash between the companies and the campaigners defines what is right and wrong depending on one's standpoint. The objective rationale for a company may not be seen the same way by NGO campaigners. As shown in Figure 6 below, the TBL concept in achieving growth and prosperity while complementing each other.

Figure 7. Triple bottom line (Elkington 2004)

Companies have observed environmental performance as a competitive and strategic issue. Therefore, large corporations are shifting trends that recruit some environmental and social campaigners to form new value partnerships. As a result, more NGOs are experimenting with approaches in collaboration with companies on environmental and sustainability issues. (Elkington 2004.)

2.8 United Nations Global Compact

The United Nations Global Compact is a voluntary initiative supporting companies implementing universal sustainability principles in human rights, labor, the environment, and good governance. The UN-led initiative encourages businesses to contribute to sustainable development goals for a better world. (Rasche 2020; UN Global Compact 2022.)

Principles 1 and 2 deal with human rights issues. They support and promote the protection of internationally proclaimed human rights. Principles 3-6 discuss labor-related principles and rights to collective bargaining. It focuses on employment rights against forced and child labor and employment discrimination. Principles 7-9 pertain to environmental challenges and preventative measures companies should employ. Businesses are encouraged to conduct activities and innovate with environmentally friendly technologies. Lastly, principle 10 is to fight corruption in all its forms. (UN Global Compact 2022.)

Businesses that join the compact are expected to integrate the ten principles into their strategies and company culture, including day-to-day operations. Similarly, companies promote these principles publicly and communicate the progress in implementing them to their stake-

holders. However, upholding and adhering to the principles are still voluntary for the companies unless similar local laws are applicable, which would make some of the tenet's law-binding. (UN Global Compact 2022.)

2.9 Sustainable Development Goals

All UN member states adopted the United Nations Sustainable Development Goals (SDGs) in 2015. It outlines a shared blueprint of values and guidelines that countries and companies can adopt to align with their sustainability strategies (Rasche 2020). There are 17 Sustainable Development Goals (SDGs) with 169 targets that require immediate action from all the countries for the peace and prosperity of current and future generations.

The aim is a global partnership to end poverty and deprivations, promote health and education, reduce inequality, tackle climate change, and preserve oceans and forests. SDGs received criticisms for being broader in scope and challenging to quantify, implement and report (Swain 2017). Morton et al. (2017, 81-90) asserted that SDGs' broader scope and detailed content compared to its predecessor Millennium Development Goals (MDGs), SDGs could only be achieved through a global collective effort from developed to developing countries.

Companies have the prerogative of which SDGs to follow by evaluating the impacts of their business activities, as shown in Figure 7 below. Previous studies suggest that companies selectively report only SDGs that positively correlate with corporate performance (Rosati & Faria 2019; Schramade 2017).

Figure 8. U.N 17 SDGs (adapted from U.N 2022)

Furthermore, Morton et al. (2017) emphasized further that failing to understand SDGs' interrelatedness will result in non-alignment and be highly ineffective in achieving sustainable development goals. Nevertheless, Fonseca & Carvalho (2019) observed that larger organizations compliant with CSR reporting tend to report SDGs more frequently than others.

3 Finnish forest companies

UPM, Stora Enso, and Metsä Group are the major Finnish forest companies in Europe and the three biggest Finnish forest companies. The Finnish forest companies employ around 74,000 and are responsible for over a fifth of Finland's total exports. UPM and Stora Enso are the top two revenue leaders in the European forest, paper, and pulp industries. (Statista 2022.)

Decades ago, Finnish forest companies were known to be one of the highest energy users in Finland. Together, it has undergone innovative changes by using renewable energy sources. As a result, it has cut 66% of its fossil carbon dioxide emissions in 2020. (Metsäteollisuus 2021; Kunnas & Myllyntaus 2009.) In 2018, 30% of Finland's energy consumption was sourced from wood-based bioenergy. (Finnish Forest Association 2019.) They have pivotal roles in being crucial drivers for the innovation and development of the industry.

However, the case companies' latest sustainability disclosures for Scope 3 GHG emissions are still significantly higher than Scope 1 and 2 combined, emissions directly contributed by the organization. On the other hand, Scope 3 emissions are classified as GHG emissions, including CO2, indirectly contributed by the organization's activities. Scope 3 GHG emissions are created along the supply chains for which the case companies have no control other than implementing a robust supplier code of conduct and policies. Scope 3 emissions are created and released to the environment while purchasing materials and processing sold products and transportation. (UPM 2021; Stora Enso 2021a; Metsä Group 2021.)

Scope 3 emissions are particularly challenging to curb because they are technically outside the organization's control and almost impossible to monitor accurately. Arguably, the forerunners of the Finnish forest industries still have a long way to go toward total green supply chain management.

Solid cooperation to reinforce green supply networks along a complex global supply chain is a tremendous challenge. For instance, the carbon auditing and labeling per product for its carbon dioxide emission involve time, effort, and cost. Some retail companies have reported costs from £3,000.00 to £30,000.00 per product. (Fernie & Sparks 2019; McKinnon 2010, 42-60.) Furthermore, Henke & Kohl (2021) reiterated that manufacturing industries with long global supply chains are not sustainable due to the high carbon dioxide emissions they directly or indirectly produce.

3.1 UPM

UPM is a European forest industry leader with family tree roots dating back to the 1870s in Valkeakoski and Kuusankoski, Finland (UPM 2022b). UPM reported 9,814 billion euros in

revenue in 2021. It has 17,000 employees and production in 12 countries across six continents (UPM 2022a).

UPM is included in Dow Jones European and World Sustainability Indices (DJSI) for 2021-2022 and is the only company in its industry. Moreover, EcoVadis, the global sustainability rating provider, acknowledged UPM for its reliable performance in 2021 with the Platinum level of recognition. In addition, the UN Global Compact recognized UPM as one of the world's 37 most sustainable companies. (UPM 2022c.)

UPM wants to create value for its customers and consumers by addressing the challenges of climate change and scarcity of resources. UPM has identified population growth, digitalization, e-commerce, urbanization, and the increasing middle class as the global megatrends driving the demand. The trend prompted UPM to innovate and fast-track the value-creating solutions and alternatives to scarce resources. (UPM 2020,15.) UPM believes that the most efficient way to mitigate climate change is to stop using fossil resources and instead focus on renewable solutions.

UPM is a front-runner in sustainable and safe solutions in the forest industry. It aims to create a future beyond fossils. Its intuitive foresight for growth and response to consumer demands for recyclable and renewable raw materials puts UPM in a solid leading position. The company focuses on the future of bio-composites, biochemicals, and biomedicals produced from forest products. (UPM 2022a.)

The Biofore strategy directs the company to become a bio-economy forerunner and cultivates sustainable growth. The bedrock of its strategy is high performance, consistent innovations, and world-leading responsibility. As a result, customers and consumers are offered more sustainable alternative solutions without using fossils. UPM succeeded in its commitment and influenced its business portfolio management and capital allocation. It is vital to create value for its key stakeholders through products and solutions beyond fossils. (UPM 2022d.)

3.2 Stora Enso

Stora Enso, the renewable materials company, is headquartered in Helsinki, Finland. It is one of the top two European revenue leaders globally in the paper and pulp business, with 8.6 billion euros in revenue in 2020. (Statista 2021.) Stora Enso is proud of its transformation as the leading bio-economy and renewable materials company. The company creates and produces wood-based and innovative biomass solutions for different industries. Its commitment to innovation is based on renewable resources with a lower carbon footprint. The company aims to lead the industry, value societies, and bring value to its stakeholders. Forests and

plantations are sustainably managed and integrate efficient use of resources in all their processes. Utmost responsibility for the environment and society fortifies its corporate strategy. (Stora Enso 2021b.)

Stora Enso envisions that fossil-based resources today can someday be replaced by materials from trees. Its foundation for value creation is traditional wood products and pulp. It is leveraging its leading positions to accelerate innovation of packaging, building, and biomaterials solutions. (Stora Enso 2021b.)

Stora Enso (2021b) recognizes global megatrends and climate change is the most challenging factor impacting societies and businesses. It addresses the limited natural resources against an increasing global population. Its aim is a collaboration with stakeholders and a future circular economy that can be developed from fossil-free resources.

The TBL framework is the linchpin to Stora Enso's sustainability agenda. The corporate plan addresses core sustainability aspects identified as material to the business and its key stakeholders. The company recognizes its key stakeholders: workforce, society, natural resources, customers, suppliers, and investors. Respecting human rights is an overarching and integrated part of its Sustainability Agenda. It abides by the UN Guiding Principles on Business and Human Rights (UNGPs) in conducting due diligence and respect for human rights even when regulatory frameworks are inadequate. (Stora Enso 2020.)

Stora Enso also conducts environmental and social impact assessments (ESIAs) for new projects that may adversely impact local communities. ESIA assessments involve dialogues with the residents, experts, and relevant stakeholders. The ESIA results provide essential information about any impacts on cultural heritage and draw out implications for the community. (Stora Enso 2020a.)

3.3 Metsä Group

Metsä Group is an innovative and competitive company with an 80-year forest industry history. It is headquartered in Helsinki, Finland, and is a crucial European player in the forest industry. Its revenue in 2021 was six billion euros, with 9,500 employees across 30 countries of operation. The Group's parent company is Metsäliitto Cooperative, comprising around 100,000 Finnish forest-owner members. Its vision is straightforward: the preferred partner in developing a sustainable business. (Metsä Group 2022.)

While the president and CEO are responsible for sustainable operation strategies in Metsä Group operations, the Board of Directors governs sustainability. It approves all group policies, strategic objectives, targets, and guidelines. The Group's executive management team assists

the president and CEO in overseeing the implementation of the group's sustainability strategy. In addition, the sustainability process management team monitors the progress and ensures that the Group is in the right direction. (Metsä Group 2021.)

Metsä Group operates its sustainability management based on strategic, operational, and cultural integration cornerstones. Also, the ESG dimensions are inherent in all planning and decision-making. The Group prides itself on its values of caring for the environment, engaging, and listening to its stakeholders. Furthermore, it values responsible profitability, reliable partnerships, and the renewal of nature. Metsä group uses fully traceable wood raw materials to produce its products, such as packaging, wood, and fibreboards. (Metsä Group 2021.)

According to Metsä Group (2021), sustainability is core to Metsä Group's strategy and operations. Its mission is to gain firm ground in the bio-economy. It promotes a circular economy by efficiently processing northern wood into carbon-storing and recyclable products. The Group is committed to executing the U.N Global Compact Sustainability Initiative and creating a low-carbon society. Metsä Group's 2030 sustainability objectives are bold and encouraging. It aims to bring the forest to its stakeholders by increasing the number of trees and expanding the regeneration area of products storing the carbon while safeguarding biodiversity. It advocates working for a better environment through investments in fossil-free and resource-efficient production processes. Furthermore, Metsä Group offers sustainable choices of fossil-free raw materials and a sustainable value chain.

4 Empirical research and data analysis

4.1 Data acquisition

During the research stages, the approaches to acquiring the initial data were redefined several times due to a vast number of texts and graphical information. The documents collected had 1800 pages for the reporting years 2018-2022. The presentation formats in the AR and CSR reports are also noticeably different every year. Therefore, it posed a significant challenge in collating, coding, and comparing the data.

The first step applied was establishing GRI quality indicators as the main categories. They were then followed by familiarizing the GRI content indexes and CSR reports. Next, the GRI content indexes were compared to find patterns and similarities. Finally, the researcher transferred the information to an Excel sheet for efficiency. Data transfer from the GRIS content indexes to the Excel sheet was reviewed three times, line by line. Doing so gave the researcher a deeper understanding of the study's next step, which was the manual categorization and descriptive coding of the data in the CSR reports.

Saunders et al. (2015) explain that coding is utilized to categorize data with similar meanings and be accessible for retrieval or rearranging under relevant codes later in the data analysis. Furthermore, a descriptive code assigns a symbolic meaning to a data unit or segment. A segment can be a word or group of words in a phrase, a sentence, or a paragraph that may answer the research questions. Some data segments may overlap and be coded with more than one code. (Miles et al. 2014; Saldana (2016.)

MAXQDA, the automatic coding analysis software, could not be used during the initial phase of descriptive coding. It rendered several hundred frequently used words and thousands of segments irrelevant to the research goals. Therefore, the researcher executed the first coding phase through line-by-line content analysis. A segment of interest was manually assigned to a corresponding primary GRI quality indicator. A sub-indicator was used when a segment was challenging to assign directly to the primary indicator. Manual coding was a very time-consuming process but the best option. The researcher focused on the CSR reports and ignored data from the AR unless the information was deemed material. The second coding phase was data cleaning and removing duplicate information in preparation for the data analysis.

4.2 Data analysis

This section answered the thesis questions and summarized the study's key findings. The analyses were based on general disclosures, and economic, environmental, and social topics. Each CSR report was rated objectively as much as possible. The test and operationalization score index parameters used a 1 to 5 scale to produce a quantitative score.

Two analysis phases were executed before the findings were finalized. The first phase was the manual analysis of the appropriateness of the coded segments against the GRI quality indicators. Every segment was reviewed and re-assigned to a more appropriate one. For instance, disclosure information containing reduced energy usage in megawatts resulted in lower costs. Based on this research's test and operationalization index, this case could be coded to balance one and accuracy quality indicators. However, the information was coded to balance one quality indicator with favorable disclosure rather than an accuracy quality indicator. The rationale was that the energy savings was more appropriate to favorable disclosure than to accuracy indicator.

In the second phase, MAXQDA analysis software automatically aggregated the coded segments in each GRI quality indicator. Then, each CSR report's final aggregated segments were analyzed against how the disclosed information answered each research question.

As shown in Figure 9 below, MAXQDA analysis software summarized all the coded segments assigned in each GRI quality indicator. In addition, the analysis report produced quantitative information in tables and graphs, which were then utilized for reporting.

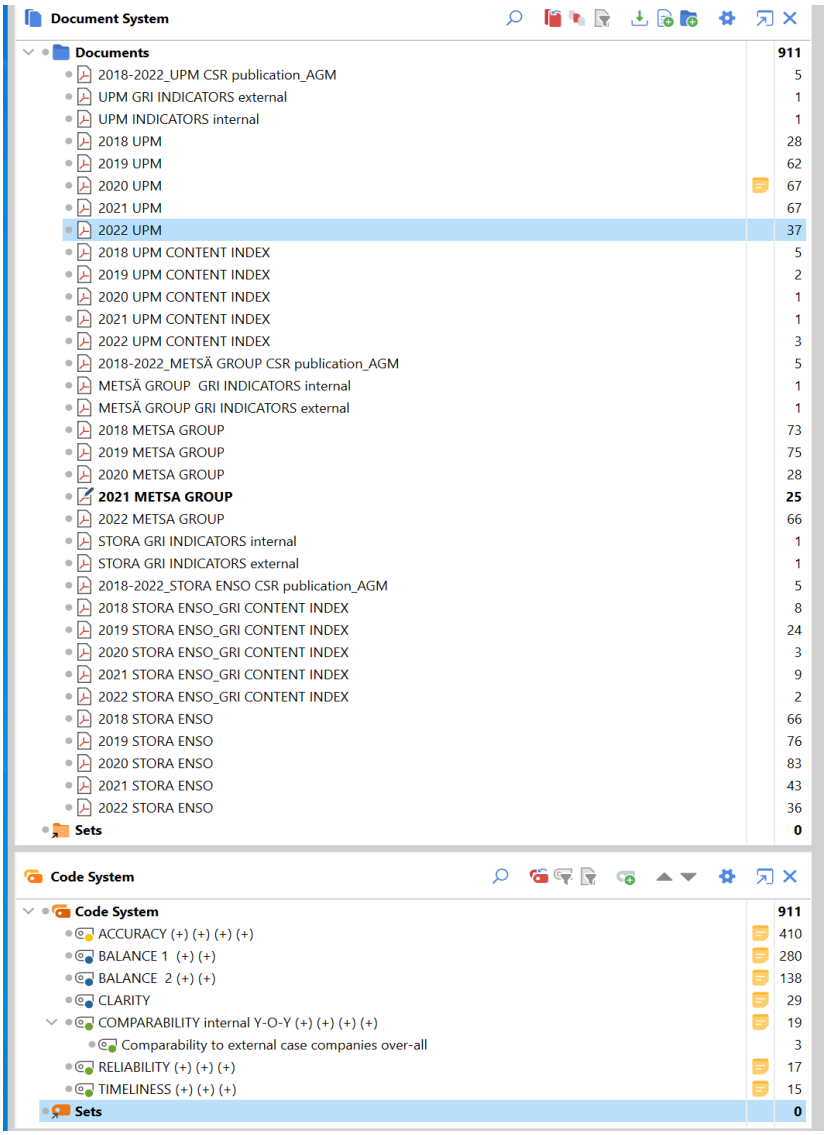

Figure 9. MAXQDA analysis software summary

The results of the 5-year analyses on the general disclosures and economic, environmental, and social GRI indicators were aggregated to condense the crucial findings. The AR, GRI content index, and CSR reports totaled 34 documents and 1800 pages. Due to the delimitation of this study, the examination focused only on the sections relevant to sustainability reporting. Table 5 below shows the frequency of coded segments from 34 documents to give a summary overview. The plus symbols signified that the primary indicator had sub-indicators wherein the data was later aggregated. The number of coded data has already surpassed the requirements and tests required by GRIS principles for defining report quality.

GRIS CSR Quality Indicators	Frequency Coded Documents	Frequency Coded Segments	Coded Segments Percentage
Clarity	14	29	3,2 %
Accuracy (+) (+) (+) (+)	19	410	45,0 %
Balance 1 favorable & unfavorable (+) (+)	23	280	30,7 %
Balance 2 positive & negative performance y-o-y (+) (+)	17	138	15,1 %
Comparability 1 internal y-o- (+) (+) (+) (+)	18	19	2,1 %
Comparability 2 external organizations	3	15	1,6 %
Reliability-Assurance (+) (+) (+)	15	17	1,9 %
Timeliness (+) (+) (+)	3	3	0,3 %
Documents with code(s)	**34**	**911**	100,0 %
Documents without code(s)	0		
Analyzed documents	34		

Table 3. Summary of coded data

An overview of eight quality indicators applied to operationalize based on GRIS reporting principles for assessing quality is found in more detail (see Appendix 1). A five-point Likert scale determines each indicator based on GRI Standards for reporting quality assessments. Table 2 below shows the dimension and indicators for evaluating the quality of the CSR reports.

GRIS CSR Quality Indicators	Scale	Maximum Score
Accuracy	1-5	5
Balance 1: favorable & unfavorable	1-5	5
Balance 2: positive & negative performance y-o-y	1-5	5
Clarity	1-5	5
Comparability 1: internal y-o-y	1-5	5
Comparability 2: external organizations	1-5	5
Reliability: external assurance	1-5	5
Timeliness	1-2	2

Table 4. GRIS quality indicators

Question 1

To what extent is the accuracy of the information reported?

For accuracy, all the case companies fulfilled all the criteria under the tests required to operationalize the information disclosed. The GRIS principles for defining quality require that the reported data is detailed for stakeholders to determine the company's performance.

There were 410 coded segments in the accuracy quality indicator, of which 39% belonged to Stora Enso and 33% to UPM. Although Metsä Group got 29% only, it has nevertheless provided sufficient qualitative and quantitative data to achieve all the quality requirements for the

highest score. The rating was based on the operationalization parameters indicated in the CSR quality index in Annex 1.

Also, the study found that data measurements in all case companies were adequately described and explained when a previous year's data measurements were re-calculated. For instance, the amount of carbon emissions scopes 1 and 2 was often recalculated due to newer technological processes available only in the later years. Figure 8 below shows that all have achieved the highest accuracy score of five points and relative percentages to the overall number of coded segments.

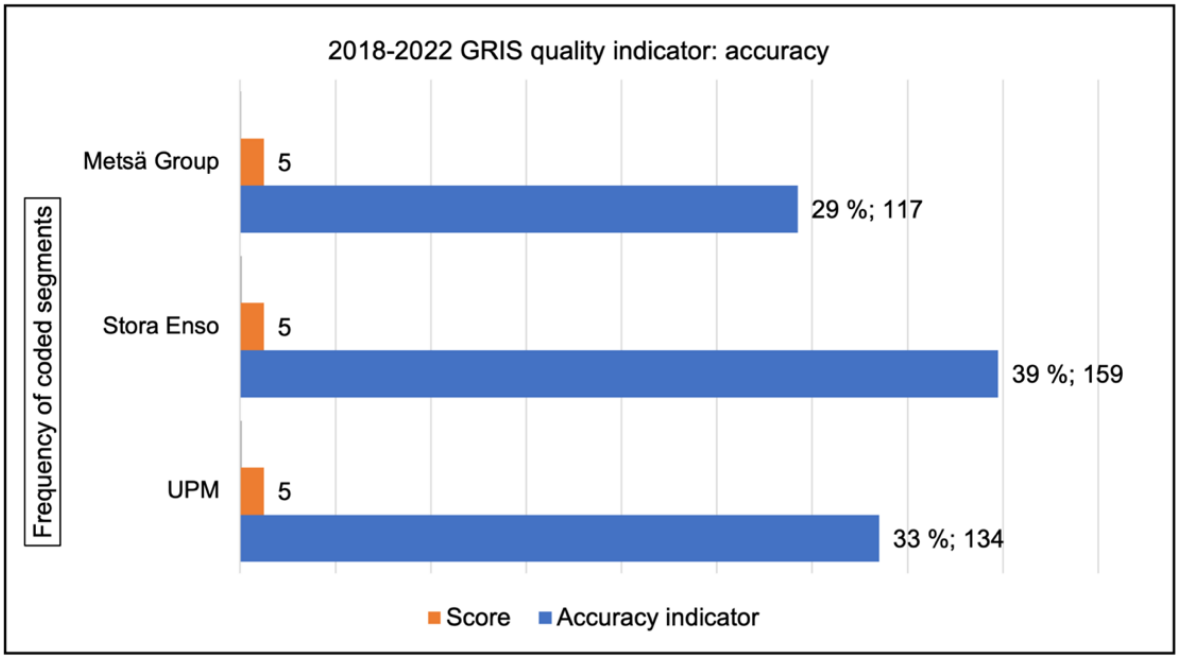

Figure 10. GRIS quality indicator accuracy

Question 2

To what extent does the reported information disclose favorable and unfavorable results of the organization?

The GRIS guidance to the balance quality was that the reported information reflects positive and negative impacts. So, stakeholders will have a good insight into its overall performance. This indicator is composed of favorable and unfavorable disclosures on an annual basis. There were 280 coded segments related to favorable and unfavorable results. UPM had 25 coded segments, and Metsä Group had 27. At the same time, Stora Enso reported the highest unfavorable results of 41 coded segments. These figures included negative disclosures from the ESG topics ranging from decreased financial performance and minor offenses to fatalities. The CSR reports have more with positive performances and are highlighted with bold letters and graphics. In contrast, the negative results were never highlighted nor located in the first

few pages of the reports. However, as an exception, were the years 2018-2019 from Metsä Group president's messages which contained the unfortunate news of fatalities in their factories. The adverse reports were only a fraction of the thousands of positive disclosures in five years. It took an effort to look for the negative disclosures in 100 and 200-page annual reports. The worst unfavorable disclosures were accidents and fatalities. Accidents and deaths happen almost every year despite their robust safety compliance processes. Stora Enso reported the highest rate of ne negative results, including fatalities, amongst the case companies, as shown in Figure 9 below.

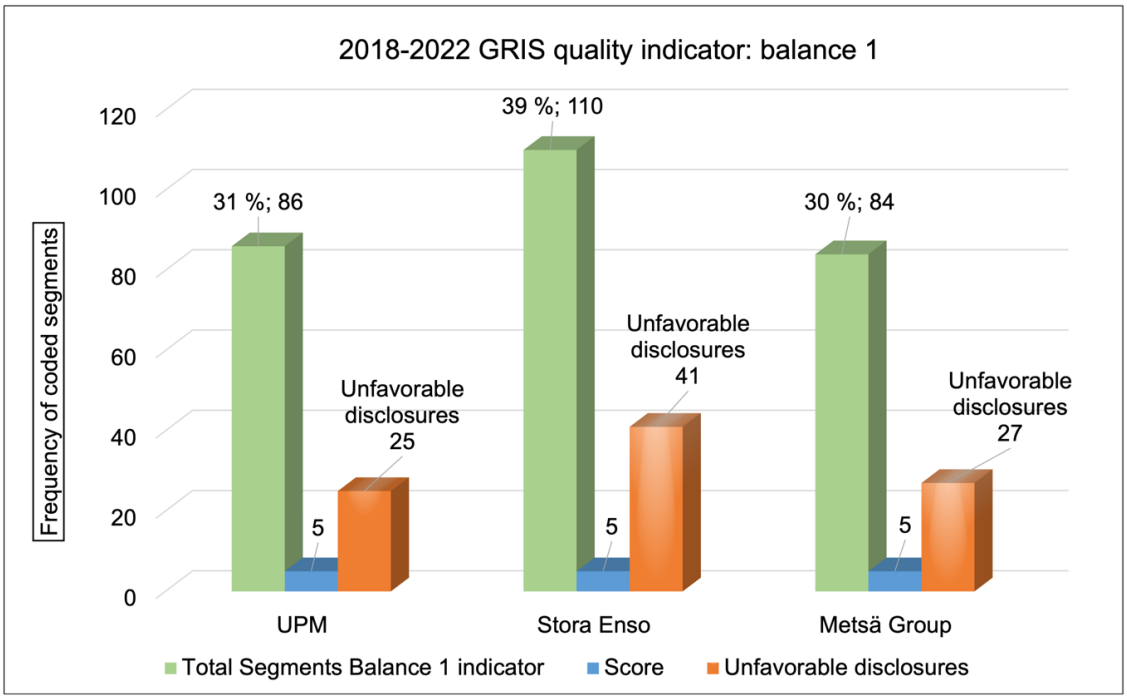

Figure 11. GRIS quality indicator balance 1

All the case companies achieved the highest score, 5 on a 5-point scale, regardless of the number of negative disclosures. The assessment was based on the GRIS principles of balanced negative and positive performance disclosure. The evaluation was about the company providing an unbiased picture of its performance to all its stakeholders. Figure 9 below shows the combined frequency of favorable and unfavorable disclosures. Indicated separately is the frequency of adverse disclosures for a more explicit reference.

Question 3

To what extent are the positive and negative trends in a performance presented on a year-after-year basis?

The second balance indicator has the same GRIS guidance but was coded separately to find positive and negative trends in the company's performance on a year-on-year basis. The study

found that the trends were more about economic and environmental performance, such as lowering carbon gas emissions and decreasing energy and water usage. Trends on incidents and fatalities were also indicated and usually in a table form. Each case company got 5 on a 5-point scale because they have fulfilled all the requirements and tests based on the parameters of the study and GRIS principles of assessing reporting quality. Figure 10 below illustrates the frequency of coded segments for performance trends disclosed by UPM, Stora Enso, and Metsä Group.

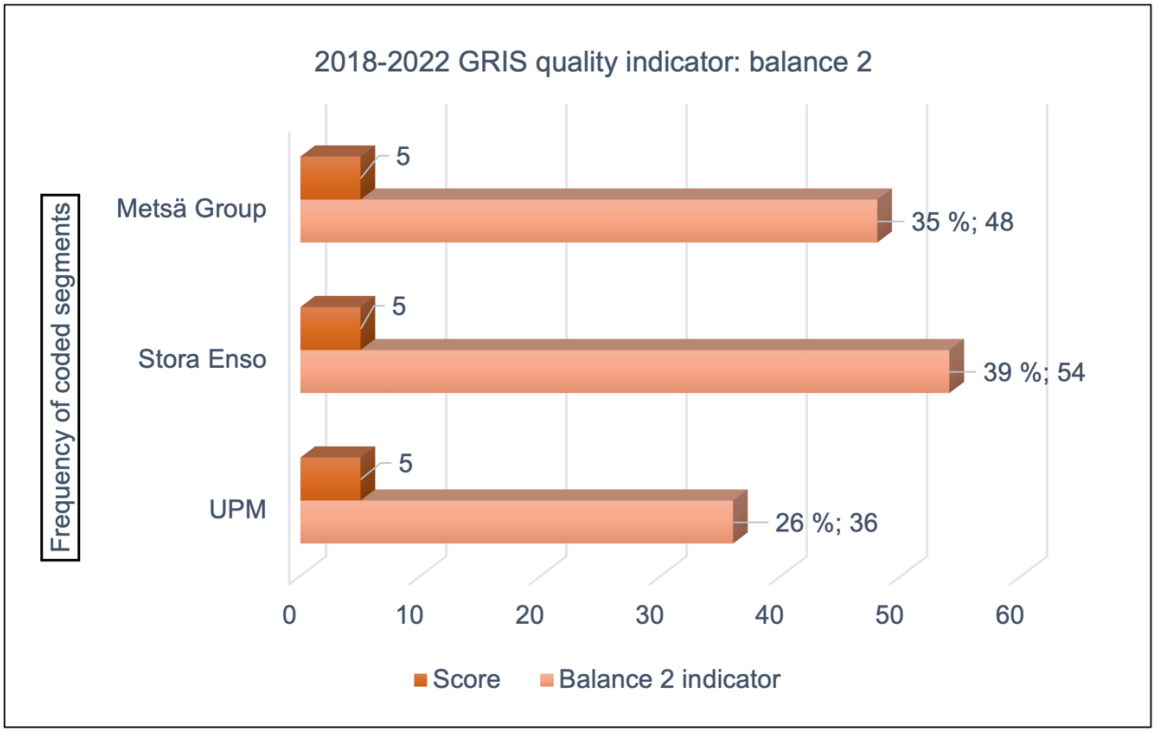

Figure 12. GRIS quality indicator balance 2

Question 4

To what extent is the reported information understandable and accessible to stakeholders?

GRIS defined the clarity indicator as the availability of information that is accessible and understandable to the stakeholders. The assessment was based on the test parameters (see Appendix 1) and the general usability and accessibility of the information indicated in GRI content indexes. The GRI content index contained the GRIS indicators, brief remarks, and the location of such data in the CSR report. Sometimes some information may be found in the financial report even if it is mentioned in the GRI content index. The CSR concept has been built upon non-financial disclosure. Still, it has evolved to include some financial aspects material to the economic topic of CSR reporting. Stora Enso achieved all the tests and rated 5 on a 5-point scale. Stora Enso's GRI content indexes were almost the same year-on-year. It contained working URL links that were efficient for the user to find the information from the GRI

content index to the CSR and AR. All the links were next to their respective disclosures, and clicking the URL links took the user to the page where the information was found.

UPM and Metsä Group were rated 4 on a 5-point scale only, even though they had disclosed all the relevant information. Their GRI content indexes had very similar characteristics, and referencing from the GRI content indexes was not user efficient. UPM's GRI content index had an average of 250 GRI indicators and sub-indicators, and Metsä Group had a slightly lesser number of indicators. For instance, when the user wants to see the complete information about the environmental disclosures, the user needs to manually refer to the CSR and AR by scrolling back and forth to different pages.

The URL links that UPM provided in the GRI content index were not updated and were sometimes unavailable. The URL links that worked had data primarily available from 2020-2022. They use the same links for environmental disclosures covering 2018-2022 but only provide some data from 2020-2022. Most of the data for 2018-2019 were missing in the archives. UPM's archive system did not store all the older data referenced in their GRI content index in 2018-2019. UPM and Metsä Group's GRI content indexes mainly indicated just the page numbers as the location of the complete information in the CSR and AR. The lack of working URL links in the GRI content indexes required too much effort from the user to manually search every time. Figure 11 below illustrates the frequency of segments coded for clarity as a quality indicator against the scores attained.

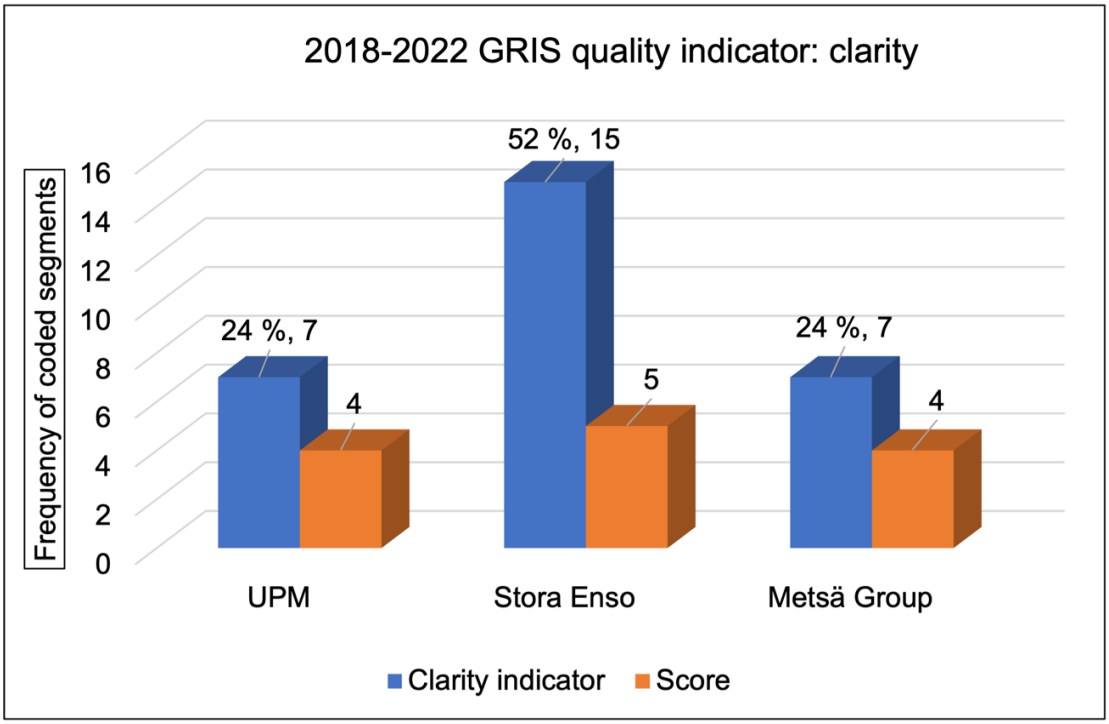

Figure 13. GRIS quality indicator clarity

Question 5

To what extent is the CSR information presented comparable on a year-after-year basis?

GRIS defined the comparability indicator as the consistency of the reported information presented in a way that enables stakeholders to analyze a company's performance over time and to be able to compare it to other organizations. The comparability indicator was divided into two indicators.

The first comparability indicator was assessed based on the consistency of reports yearly within the same organization. Stora Enso and UPM were rated 5 on a 5-point scale. They achieved extensive comparability based on the yearly GRI indicators relative to the information disclosed in the CSR reports. UPM and Stora Enso had shown consistencies in their CSR reporting from 2018-2022. For example, once the information user has examined the CSR reports of 2018 and 2019, they can start seeing the patterns of the reports in 2020. Any factors affecting the reporting scope, such as changes in material topics or topic boundaries, were mentioned and had sufficient explanations.

Metsä Group, on the other hand, got 4 on a 5-point scale because it had significant changes and inconsistencies in GRIS indicators used in 2018-2022. The changes affected the information disclosed in the CSR reports. Figure 13 below shows the year-on-year consistency rating of each company within the same organization.

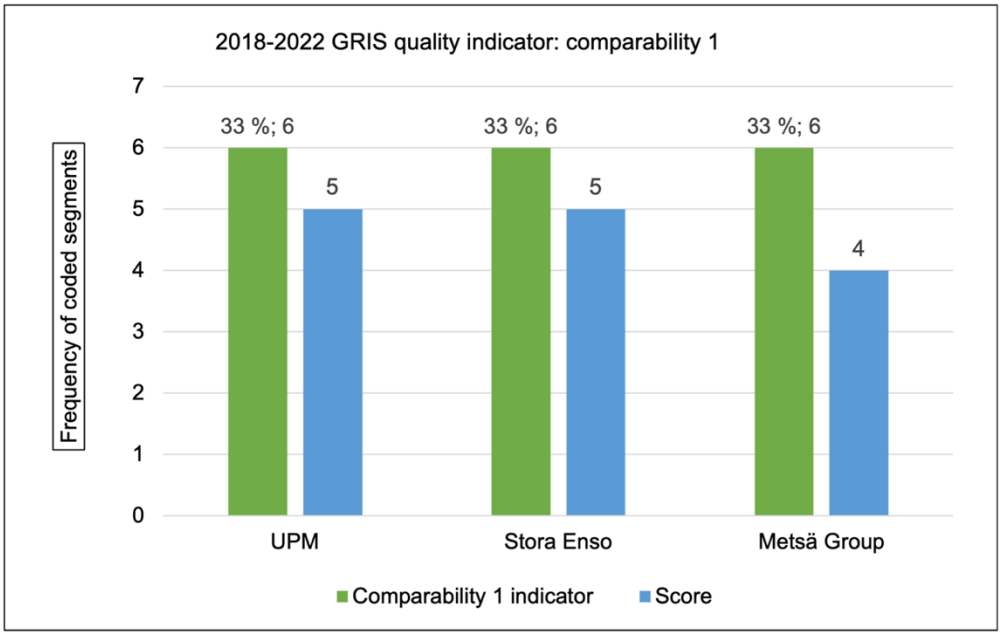

Figure 14. GRI quality indicator comparability 1

Question 6

To what extent is the CSR information presented comparable to other organizations in the same industry?

The second comparability indicator was intended to compare the organization to other organizations. In this study, the comparison within the same industry would yield more significant results than comparing to a different sector.

The case companies were rated 5 on a 5-point scale. They had extensive comparability based on more than 70 similar GRIS indicators used. Stora Enso showed more indicators because it used a slightly different format than Metsä Group. The case companies used between 110-250 GRIS indicators and sub-indicators. For example, Metsä Group did not show the management approach in every line, and therefore it can look that Metsä Group had fewer GRIS indicators used. The reference points were the GRI content indexes and the CSR reports' information. Figure 12 below shows the comparability scores of the case companies.

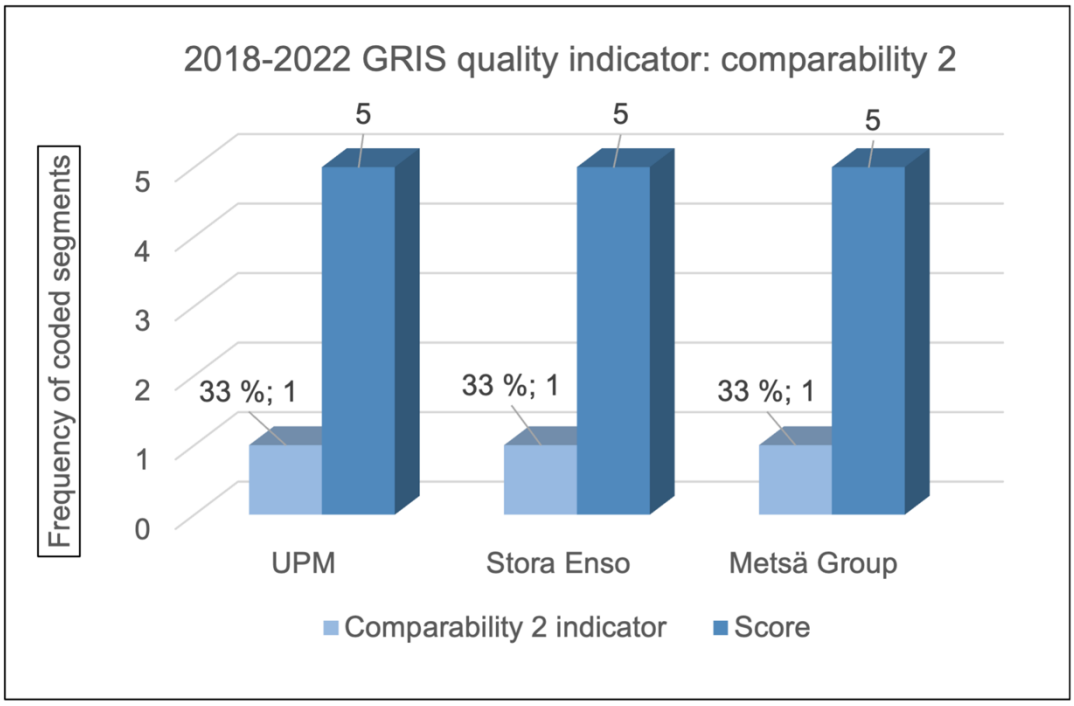

Figure 15. GRIS quality indicator comparability 2

Question 7

To what extent are the reported information and processes in preparation for the CSR reports verifiable by an external assurance?

The GRIS guidance on reliability was that the reporting organization should be able to provide the means of establishing the quality and materiality of the disclosure when subject to examination.

Out of all the coded reports, Stora Enso had 41% while UPM and Metsä Group had 29%, as shown below in Figure 14. They all got a score of 4 on a 5-point scale. The highest score could not be given despite the claim that the GRIS indicators disclosed in their CSR reports have been independently assured. The external assurance firms were not assuring all the disclosures entirely and comprehensively.

For instance, Stora Enso's CSR reports were assured with limited assurance and reasonable assurance on the scope 1 and 2 of the carbon gas emissions. While UPM's CSR reports were assured under limited assurance on selected GRI indicators, and Metsä Group's CSR reports were assured under limited assurance. All those assurances were limited to documentary verifications, employee interviews, random data sampling and testing, and some visits to factories in different countries.

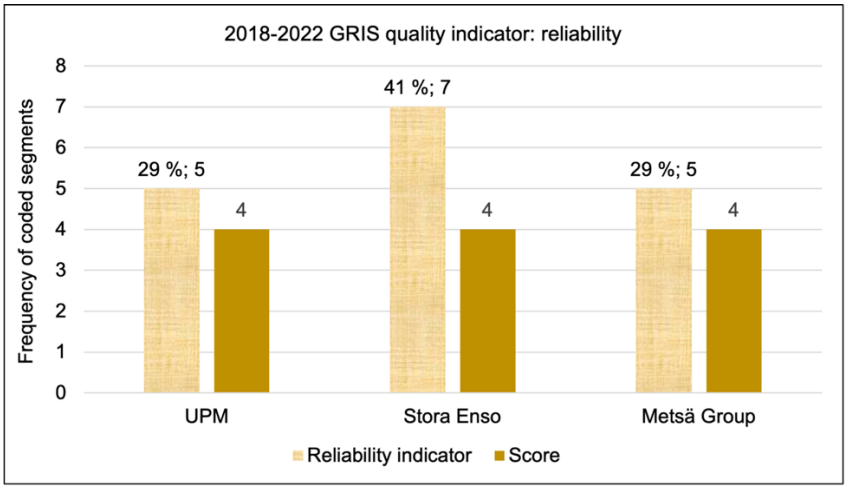

Figure 16. GRIS quality indicator reliability

Question 8

Is the CSR reporting schedule timely and consistent for stakeholders to make informed decisions?

GRIS guidance on timeliness quality assessment was about the regular schedule of the information available to the stakeholders in time to make informed decisions.

UPM, Stora Enso, and Metsä Group published all the documents related to CSR reports on a regular schedule and ahead of the annual general meeting (AGM). Consequently, they were given a score of 2 on a 2-point scale, as shown in Figure 15 below.

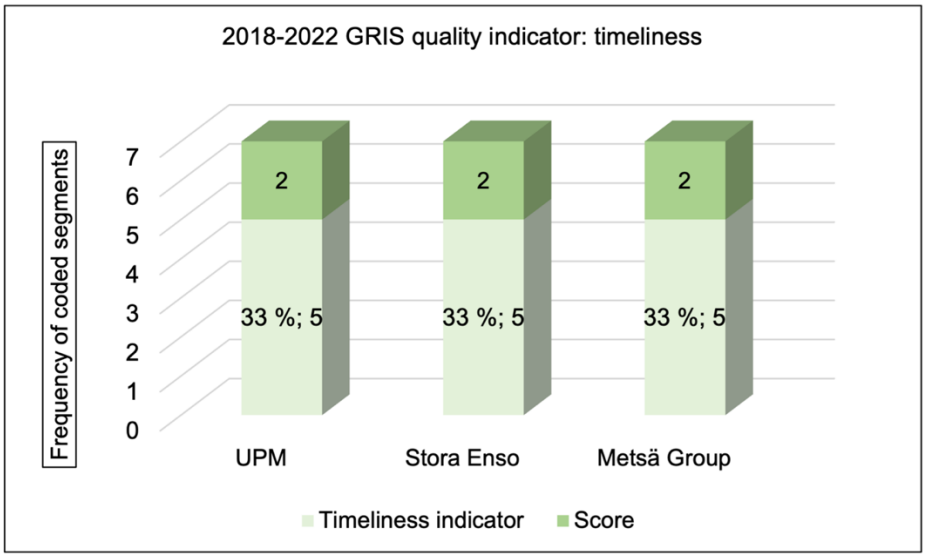

Figure 17. GRIS quality indicator timeliness

The time between the AGM was, on average, three to four weeks and, therefore, plenty of time for the stakeholders to make informed decisions.

5 Conclusions

5.1 Answers to research questions

This study aims to have insights into the quality of the 2018-2022 CSR reports of UPM, Stora Enso, and Metsä Group. This research is a resource for multi-stakeholder groups who seek transparency, credibility, and comparability of CSR reports to make informed decisions. The quality of CSR disclosures from UPM, Stora Enso, and Metsä Group has not been widely examined based on multiple years. The more recent studies are limited to a 1-year CSR report. The reports were systematically analyzed and codified to answer the research questions. The answers are synthesized in the following paragraphs.

Figure 18 below illustrates that the study has identified high accuracy and timeliness of CSR reporting from all the case companies. The CSR information was published ahead of every annual general meeting. Any changes to the data previously disclosed or recalculated are adequately explained and supported by evidence. The reports are consistent with the information presented year-to-year. Also, the reports contained sufficient qualitative and quantitative data to operationalize using the test parameters based on GRIS reporting principles for defining report quality.

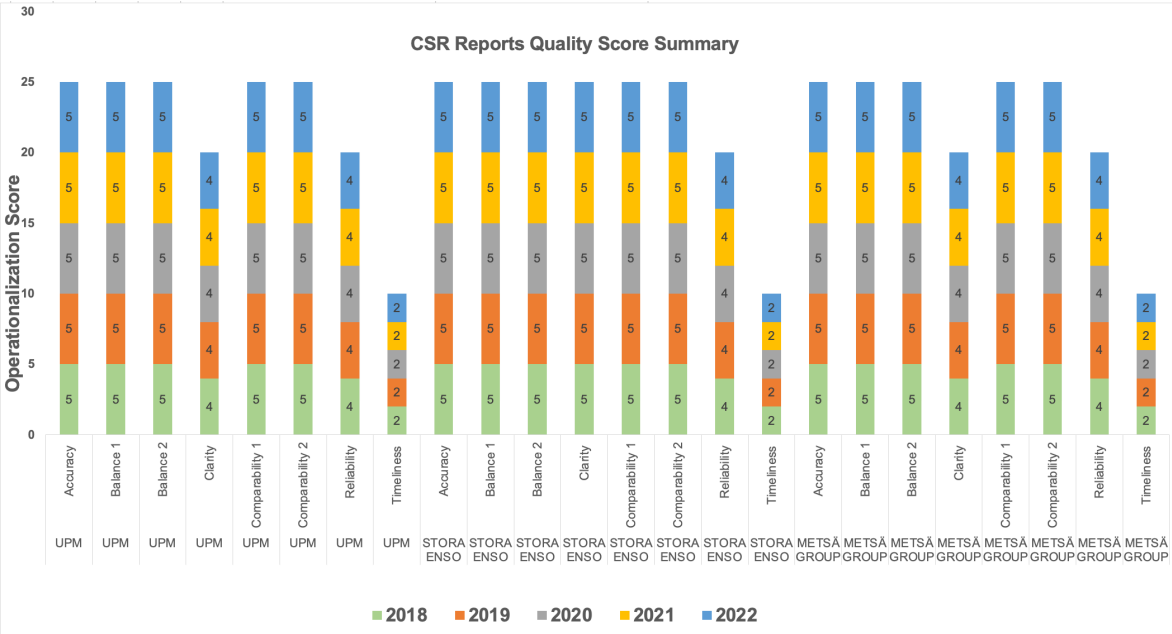

Figure 18. Summary CSR report quality

Furthermore, the second significant finding from the balance quality indicator 1 and 2 is that they all have a balanced disclosure of favorable and unfavorable results. However, negative performance was never highlighted. In addition, Stora Enso discloses the highest adverse results ranging from economic, social, and environmental incidents to fatalities. UPM has the

least disclosed unfavorable results. The rating is based on the GRIS test parameters and is not about the best performer but the company's transparency to provide stakeholders an unbiased insight into the company's performance. Similarly, the case companies report their year-to-year positive and negative trends with adequate supporting information. The data is mainly related to economic and environmental impacts and presented with the previous year's performance.

Moreover, regarding the clarity indicator, the case companies did not get the same rating, although they all presented adequate data in the CSR reports. Stora Enso's CSR reports and GRI content indexes achieved the highest clarity rating. In addition, they contain URL links that take the user directly to the information page. UPM and Metsä Group's got a 4 on a 5-point scale due to their GRI content indexes requiring much effort to navigate. The user must manually scroll back and forth to find the information from different reports. Also, the URL links that UPM provided do not have all the archived data related to 2018-2019. The unreasonable effort in getting the CSR information affects the information's accessibility.

Regarding CSR's comparability within the organization year-to-year, UPM and Stora Enso got the highest rating because they are consistent with the GRIS indicators used. The small changes through the years did not affect the rating as they met the test conditions' requirements. However, Metsä Group had more inconsistencies on the GRIS indicators and was rated 4 on a 5-point scale. Moreover, all case companies got the highest rating on the second comparability indicator. This is because they used similar GRI indicators and more than the test required. Extensive comparability is expected because they belong to the same industry.

The examination of the reliability indicator shows that the case companies did not achieve the requirements for the highest rating. Although the CSR reports are externally and independently assured, the assurances were under a limited assurance or limited assurance on selected GRI indicators. In addition, the assurances were not comprehensive and instead limited to a random sampling of data and testing. Therefore, a rating of 4 on a 5-point scale is appropriate.

Overall, the findings suggest that Stora Enso, UPM, and Metsä Group have applied systematic, high-quality CSR reporting using GRIS to provide a balanced representation of both favorable and unfavorable impacts towards sustainability.

5.2 Validity and reliability

Saunders et al. (2015) suggest that the interpretivism philosophy is inherent to the nature of qualitative data. In other words, the researcher must understand the study's biases and socially constructed meanings brought into the research. In addition, Rose & Johnson (2020)

describe that increased reliability and validity in qualitative research can be demonstrated in the consistencies of the rigor and systematized procedures of the study. Creswell (2014); Rose & Johnson (2020) further define validity as the fidelity and accuracy of the findings through a systematic process. While reliability is, the soundness and consistency of the approach applied to the entire research study.

The result of the study is both valid and reliable. The study was conducted as objectively as possible within the constraints of the test parameters. But it must be considered, the inherent subjectivity of the interpretation aspects of qualitative research and analysis. The author conducted theoretical and empirical studies using reliable and relevant academic sources such as books, journals, and well-grounded Internet sources. The author applied systematic procedures in data collection and thorough, methodical content analysis. This study was done methodically and systematically with MAXQDA software analysis. Therefore, the results can be replicated using the same test parameters and methods on the same sample data.

The goal of the thesis was to find answers to the main research question and the eight subquestions. At the end of the study, all the research questions were answered in chapter 5.1. However, this study only applies to the Finnish context due to the limited sample size. The high-quality result of the CSR reports cannot be used to generalize to all large forestry companies.

6 Summary

The purpose of this study was to measure the quality of CSR reports of UPM, Stora Enso, and Metsä Group. They are the largest forestry companies in Europe and, therefore, an excellent industry sample. The result of the research will become a reference for multi-stakeholder groups who want more insights into the transparency, credibility, and comparability of CSR reports of the case companies. The quality of CSR disclosures from UPM, Stora Enso, and Metsä Group have not been widely examined based on multiple years nor studied exclusively in recent years as forestry companies.

This study used secondary data for theoretical and empirical parts. The second chapter discussed the study's theoretical framework, covering sustainability concepts and theories commonly adopted in business practices. The third chapter introduced Stora Enso, UPM, and Metsä Group and their comprehensive backgrounds.

Moreover, the fourth chapter focused on the study's empirical part, consisting of data acquisition and analysis. The secondary data used were primarily qualitative. The initial content analysis was applied through systematic manual coding, followed by a second phase of manual coding, cleaning up, and aggregating similar data.

Moreover, the final analysis phase allocated the coded segments to appropriate quality indicators. The MAXQDA analysis software automatically aggregates the coded segments in each GRI quality indicator. The final aggregated segments of each CSR report were methodically analyzed on an overall basis against how the disclosed information answered each related research question. The test parameters of a 1 to 5 scale were used to operationalize and produce quantitative scores.

The study has identified high accuracy and timeliness of all CSR reports. The CSR information was published ahead of every annual general meeting. In addition, the case companies disclose and adequately explain any changes in the previous year’s calculations, especially regarding environmental topics.

All the CSR reports of Stora Enso, UPM, and Metsä Group have adequate qualitative and quantitative data to support their annual performance. Stora Enso’s CSR reports have the highest clarity regarding user-friendliness in accessing the supporting data and the understandability of the reported information. UPM and Metsä Group’s CSR disclosures were presented in a manner that would require unreasonable efforts to find the information disclosed in the CSR report.

However, all the CSR reports of the case companies fell short regarding the coverage and depth of the third-party assurance. The assurances were under limited or limited assurance on selected GRI indicators. The assurances were limited to a random sampling of data and testing.

Furthermore, the validity and reliability of the study were evaluated. This chapter also recommended further future research. From the methodology perspective, the study possibly be repeated with more extensive sample data and a more extended period of analysis on the quality of the CSR disclosures. In addition, the CSR quality assessment between companies within the same industry will be preferable for direct comparison as they would have similar GRIS materiality topics and topic boundaries. In Chapter 5, the thesis was concluded, and the key findings were summarized as answers to the research questions. Lastly, chapter six summarizes the thesis study.

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Appendix 1. Quality indicators, tests, and score index

Indicator	Question	Test & operationalization	Score
Accuracy	To what extent is the accuracy of the information reported?	1= Only qualitative information is disclosed 2= Minimal qualitative and quantitative information is disclosed 3= Sufficient qualitative and quantitative information is disclosed 4= Sufficient qualitative and quantitative information is disclosed with data measurements adequately described 5= Fulfilled all five or most of the tests listed in GRI reporting quality measurements	1-5
Balance1	To what extent does the reported information disclose favorable and unfavorable results of the organization?	1= No favorable and unfavorable results were mentioned 2= Unfavorable results indicated only in footnotes 3= Favorable results highlighted 4= Balance favorable and unfavorable results 5= Balance positive and negative results, including an emphasis on various topics relative to materiality	1-5
Balance 2	To what extent are the positive and negative trends in a performance presented on a year-to-year basis?	1= No positive and negative performance trends presented on a year-to-year basis 2= Negative performance trend showed not on a year-to-year basis 3= Positive performance trends showed not on a year-to-year basis 4= Balance positive and negative performance trends presented on a year-to-year basis 5=Impacts of the positive and negative performance of the organization are presented on a year-to-year basis	1-5
Clarity	To what extent is the reported information understandable and accessible to stakeholders?	1= No visual aids, excessive jargon, and language 2= Minimal visual aids, excessive jargon, and language 3= Sufficient visuals but excessive jargon and specific information require effort to find 4= Sufficient visuals but detailed information requires effort to find 5= Fulfills the four tests listed in GRI reporting quality measurements	1-5

Comparability 1	To what extent the CSR information presented is comparable on a year-to-year basis?	1= No comparability 2= Limited comparability (one year) 3= Moderate comparability (two years) 4= Adequate comparability (three years) 5= Extensive comparability (four years and more)	1-5
Comparability 2	To what extent is the CSR information presented comparable to other organizations in the same industry?	1= Very limited comparability (less than 40 GRIS indicators) 2= Limited comparability (40-50 GRIS indicators) 3= Moderate comparability (50-60 GRIS indicators) 4= Adequate comparability (60-70 GRIS indicators) 5= Extensive comparability (more than 70 GRIS indicators)	1-5
Reliability	To what extent are the reported information and processes in preparation for the CSR reports verifiable by an external assurance?	1= The scope and extent of external assurance are vague 2= The content and breadth of external assurance are identified 3= The organization has external assurance and can identify sources of the information 4= The organization has external assurance, can provide original sources of the information, and support complex calculations 5=Fulfills all the four tests listed in GRI reporting quality measurements	1-5
Timeliness	Is the CSR reporting schedule timely and consistent for stakeholders to make informed decisions?	1= No specific schedule and information inconsistent relative to the reporting period 2= Yes, detailed schedule and information consistent relative to the reporting period	1-2