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MATERIALITY ASSESSMENT IN SUSTAINABILITY REPORTING OF EU
FOREST COMPANIES

Bachelor's Thesis

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I have written this Bachelor Thesis independently. Any ideas or data taken from other authors or other sources have been fully referenced.

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Introduction

Due to the increasing amount of environmental incidents happening worldwide, people have become more aware of the environmental, social and governance impacts inflicted by companies. This has caused stakeholders to demand that companies disclose their sustainability practices and actions to prevent negative impacts.

Calabrese et al. (2017) have mentioned that companies lately have been dominating by addressing the world's sustainability-related worries. One of the reasons for this could be the Sustainable Development Goals (SDGs) launched by the United Nations in 2015 to promote sustainable development. SDGs consist of 17 development goals and 169 targets. They include everything from ending global poverty to taking urgent action to tackle climate change and its consequences by 2030 while balancing economic, social, and environmental progress (UNDP, 2015). According to Calabrese et al. (2017), for companies to excel in sustainable development, they need to change their tactics from regulatory compliance to a different dimension that relates sustainability to factors like innovation and value generation.

As the SDGs highlight important sustainable topics that companies could disclose in their reports, the European Union (EU) Non-Financial Reporting Directive (NFRD) (2014/95/EU), which is a modification of the Accounting Directive (Directive 2013/34/EU), was adopted in 2014 could also be beneficial for companies. The NFRD aims to improve the openness of social and environmental information provided by enterprises in all sectors to a relatively high level across all Member States, enhancing the disclosure of non-financial information by deciding on significant undertakings (European Parliamentary Research Service, 2021). Under NFRD, large listed entities like banks and insurance companies, also called publicly listed companies, are required to publish their reports if they have more than 500 employees. Companies must publish information on their business models, policies (including applied due diligence processes), outcomes, risks and risk management, and key performance indicators (KPIs) related to the firm, according to the NFRD (European Parliamentary Research Service, 2021).

On top of that, a new legislation, the Corporate Sustainability Reporting Directive (CSRD) 2021/0104, has been effective as of the 5th of January 2023. CSRD requires that large companies and listed SMEs, companies with more than 250 employees, disclose ESG information on a double materiality basis starting from the 2024 financial year for reports that will be published in 2025. (European Commission, n.d.)

Due to sustainability's rise in ESG matters, non-financial reporting has been a rising trend (Torelli, Balluchi, & Furlotti, 2019). KPMG (2022) has reported that 96% of the

world's 250 largest companies by revenue based on the 2021 Fortune 500 ranking (G250) report on sustainability or ESG matters. Materiality is one of the essential matters included in sustainability reports.

Materiality is the driver by which organisations can identify and prioritise concerns for inclusion and treatment in integrated and sustainability reporting and other voluntary reporting, thus favouring the expectations and demands of all stakeholders (Torelli, Balluchi, & Furlotti, 2019). Papafloratos et al. (2023) have mentioned that defining materiality in sustainability reporting tends to be tricky as it involves multiple factors, such as determining who the subject is vital to, how crucial it is, and why it is essential. Jones, Comfort and Hillier (2016) have mentioned that materiality in sustainability reporting is concerned with identifying the environmental, social, and economic issues that are most important to a corporation and its stakeholders. It was noted by KPMG (2022) that 77% of the G250 companies are performing materiality assessments.

Materiality is a crucial topic for industries deeply interconnected with sustainability, making it important to the forestry sector. About 42% of the EU is covered by forests, making it a significant natural resource (Žemaitis et al., 2021). The forestry sector consists of various branches of services that could be provided. The European Commission (n.d) has stated that the most common sectors available in the EU forestry sector are woodwork, furniture, pulp and paper manufacturing, and printing. GRI (2021) has provided the forestry sector activities they recognise: pulp and paper manufacturing, forestry, and logging. The United Nations Environment Programme Finance Initiative (UNEPFI) (n.d) defines forestry as managing the forest and its resources. Logging is defined as the removal of trees while also promoting growth for the new resources to be planted (UNEPFI, n.d.). After considering all the above points, this thesis focuses on pulp and paper manufacturing companies, as most EU companies operate in this sub-sector.

KPMG (2020) has provided that 80% of the forestry and paper sector companies in a worldwide sample of the top 100 companies based on revenue in 58 countries (N100) report sustainability matters. Even though the forestry sector has been taking such actions towards sustainability, there still have not been any sector-specific standards by organisations like the Global Reporting Initiative (GRI). GRI (2021) has ranked the forestry sector among the top ten sectors proposed to have their own sector-specific standards. Due to the forestry sector ranked ninth, there are other sectors that GRI is now focusing on, such as agriculture. At the same time, the Sustainability Accounting Standards Board (SASB) has created sector-specific standards that companies could use. However, they mainly apply to US-based companies

(KPMG, 2022; WBCSD, 2023). The European Financial Reporting Advisory Group (EFRAG), which developed the European Sustainability Reporting Standards (ESRS), explained their plan to provide sector-specific materiality assessment. However, their focus is to create those standards for the mining, oil and gas, road transportation, and agriculture sectors (EFRAG, 2022). Therefore, no clear framework can be used to assess and report materiality by the EU forest companies, which causes confusion and an inability to determine the companies' unified/sector-specific performance measures in sustainability matters.

Materiality is a rising topic in sustainability reporting matters. Due to that, a limited amount of academic literature delves into the approaches to its assessment that different companies and industries use worldwide. No studies are dedicated to materiality assessment of the EU forestry sector either. Therefore, the thesis aims to identify how EU forest companies define materiality and disclose commonly reported material topics. In order to achieve the aim, the following research tasks have been set up:

- To explain the concept of Corporate Social Responsibility (CSR) and the importance of sustainability reporting for materiality assessment.
- To define “materiality” in the framework of sustainability reporting.
- To provide examples of approaches to materiality assessment in different industries.
- To collect and qualitatively analyse available sustainability reports of the EU forest companies.
- To interpret and discuss the results.

Chapter 1 includes two subchapters and provides theoretical background of corporate social responsibility, which is an essential concept for materiality. Materiality is defined in subchapter 1.1 by comparing definitions from different organisations. Various approaches to materiality assessment available in the academic literature and practice are discussed in Subchapter 1.2. The second chapter involves empirical analysis, where multiple sustainability reports are extracted from the forest companies' websites in order to reveal the disclosure of material topics and materiality assessment methods (subchapter 2.1). The results, that aid in understanding the differences between how each company discloses materiality and the necessity for sector-specific standards to assess materiality, complete subchapter 2.2. Overall conclusion and discussion follow.

Keywords: Materiality, Materiality assessment, Sustainability Reporting, Forestry, Forestry Sector, Forest Companies

1. Theoretical framework of materiality assessment

1.1. Defining “materiality” in connection to CSR and sustainability concepts

The term “sustainability” has frequently been used in recent years. Due to factors like global warming, various support groups have raised awareness about climate change and are urging companies to take better approaches to reduce climate change. However, there has been difficulty in defining the word “sustainability”. Yuthas and Epstein (2012) mentioned that companies are pressured to “go green” and be sustainable to compete in the market.

Goyard (2003) has explained that perhaps the word “sustainability” is being stretched too far as other terms are also arising, like “sustainable development” and “triple bottom line”. The term “sustainable development” gained popularity after 1987 as the *Brundtland Report* from the United Nations’ World Commission on Environment and Development defined sustainable development as development that “meets the needs of the present generation without compromising the ability of future generations to meet their own needs” (United Nations Commission on Sustainable Development, 2007). According to Heinberg and Lerch (2010), the concept of sustainability has been tremendously influential and is still widely used; however, it has been challenged for failing to acknowledge the unsustainable use of nonrenewable resources explicitly and ignoring the population expansion problem in general.

Bansal and DesJardine (2014) mentioned that business-related sustainability could be defined as “the ability of firms to respond to their short-term financial needs without compromising their (or others’) ability to meet their future needs.”

The concept of “sustainability” underpins the ideas of another widely known concept - Corporate Social Responsibility (CSR). CSR was initially defined by the European Commission (2001) as a concept where companies combine social and environmental aspects in their operations while also voluntarily communicating with their stakeholders. Ten years later, the European Commission revisited its definition of CSR and redefined it as the responsibility of businesses towards the impacts they inflict on society (European Commission, 2011). It can be seen that the 2001 definition is broader, while the 2011 definition is narrower and more focused on impacts. The 2011 definition also emphasises the importance of stakeholder engagement.

Matten and Moon (2008) proceeded to provide two types of CSR: Explicit CSR and Implicit CSR. Explicit CSR involves the creation of official CSR policies, programs, and initiatives with the specific goal of addressing social and environmental challenges. CSR is frequently communicated to stakeholders through CSR reports, sustainability initiatives, and

social marketing activities (Matten & Moon, 2008). Implicit CSR refers to a company's social obligation that has been integrated into the foundation of its business and culture. It is frequently assumed and not explicitly articulated or branded as CSR. Implicit CSR reflects a company's beliefs, business model, and stakeholder relationships. It is commonly seen in the company's day-to-day operations, such as its dedication to employee well-being, environmental sustainability, and ethical sourcing (Matten & Moon, 2008).

Goyder (2003) has also defined CSR into two types, similar to Explicit CSR and Implicit CSR, known as compliance CSR and conviction CSR. Compliance CSR is when firms say what stakeholders want to hear from them to fit into society's norms. However, conviction CSR is when the firm is convinced of its actions and purpose and believes they will cause better change. (Goyder, 2003)

In addition, the International Institute for Sustainable Development (2007) has provided multiple CSR initiatives ranging from improving risk management to improving innovation and market positioning. According to Costa and Menichini (2013), a socially responsible company will benefit from higher customer loyalty and a good reputation. Sons (2022) mentioned that CSR will benefit the company by having more engaging customers.

In recent years, many countries have seen dramatic shifts in the number of companies reporting on sustainability, driven not only by new laws and regulations but also by a growing understanding in the finance sector of the power of environmental, social and governance (ESG) issues have to impact financial performance and corporate value. (KPMG, 2020)

Along with the increase in sustainability reporting, materiality became a rising topic mentioned in such reports. Torelli, Balluchi, and Furlotti (2019) mentioned that materiality is the most important and complex of all the frameworks and standards mentioned in sustainability reports. It is also mentioned that materiality is one of the most important topics for companies to discuss if they want to disclose their CSR practices (Torelli, Balluchi, & Furlotti, 2019).

When it comes to reporting materiality in financial reports, IFRS (2021) has amended the definition of materiality and highlighted that they consider the matter to be material if the information will directly affect the users of the financial statements or the financial statements reporters due to the exclusion of the matter or if the matter was presented incorrectly or inaccurately.

PGS (2013) has also defined materiality in financial reporting as the idea of a matter being considered material if the matter will cause a negative impact on the users of the information due to its omission or misstatement.

It can be clearly seen from both definitions that there is a similarity between some factors. For example, both definitions value the stakeholders and the negative impact that would be caused if the matter is not disclosed. However, IFRS directly stated the users that would be affected by materiality.

When defining materiality in non-financial reporting, it was pointed out that non-governmental organisations such as AccountAbility, GRI, and the United Nations have all provided materiality definitions in non-financial reporting. Other organisations, like the International Federation of Accountants (IFAC), have also attempted to define materiality. (Eccles et al., 2012)

Eccles et al. (2012) mentioned that the definition of non-financial materiality is modelled after the definition of materiality for financial information; however, it focuses more on defining the stakeholders and showcasing their importance in terms of materiality.

When deciding whether a concern is material to the business, business leaders should consider the size of the matter's impact on the company's potential to create value over time (Ngu & Amran, 2018). When assessing the potential magnitude of the effect on the business strategy and business model, business leaders should consider qualitative and quantitative factors, the internal and external impact on the business, the reputational, regulatory, financial, and operational perspectives of the effect, and the timeframe of the effect (Ngu & Amran, 2018).

KPMG (2014) defined materiality by stating that topics are considered material if they contribute to social and environmental matters that will affect or interest the respective business and the users of the business information.

In order to unify the definition of materiality, Table 1 illustrates the common factors that were available between the provided definitions of materiality to be able to create a groundwork for the definition that will be used throughout the thesis.

Table 1

Similarities between materiality definitions

Organisation	Financial	Non-financial	Stakeholder mentioned	Sustainability mentioned	Environment and Social matters mentioned
IFRS (2021)	x		x		

PGS (2013)	x				
KPMG (2014)		x			x
GRI (2021)		x	x		x
SASB (2020)	x			x	
AccountAbility (2018)		x	x		x

Source: Compiled by the author.

As shown in Table 1, every organisation could generate its own materiality definition and create important factors. However, it has been noted that in order to consider a particular matter as material, it could be regarding environmental, social or sustainability-related matters, as well as finance-based matters that tend to affect the decision-makers or the stakeholders of an organisation in case they were falsified or omitted.

It could also be seen that the definition of CSR has overlapping elements with some of the organisations' materiality definitions, as they both highlight the influence of certain topics on society. However, materiality is more specific to environmental, social, and governmental matters, and it focuses on the direct group influenced by such topics, which is an organisation's stakeholders or users of the financial information.

Sustainability and CSR are closely related concepts. Sustainability could be considered as the initial term introduced to a society where stakeholders and companies gained the knowledge needed to understand ESG and how a firm's activity could negatively impact the environment in the long run. CSR could be considered as the initiative companies take towards ESG to make sure they are sustainable in the long run. Companies that comply with CSR tend to be more appealing to society as they are seen as taking action to ensure that their business activities are not adversely affecting anyone. At the same time, materiality is a more specific matter that allows companies to report the exact factors that are ESG-related which causes them to show their commitment to CSR. Figure 1 shows the relationship between sustainability, CSR and materiality as discussed.

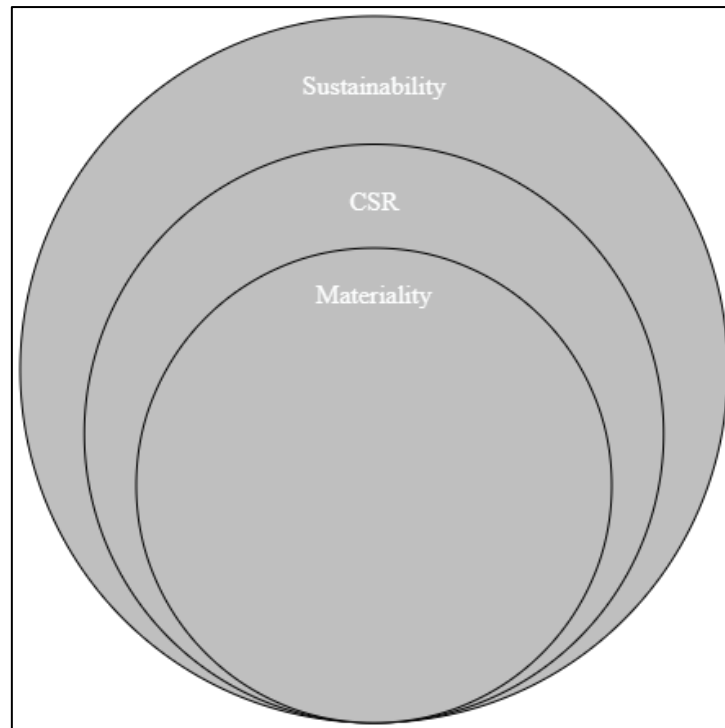


Figure 1 . Relationship between CSR, Sustainability and Materiality

Source: Compiled by the author.

Due to some amendments to the EU policies, there has been an uprising of a new term, which is double materiality. This is due to the adoption of the 17 SDGs in September 2015 and the signing of the Paris Agreement at the United Nations Framework Convention on Climate Change in December of 2015 (Baumüller & Sopp, 2021).

ESRS 2023 has defined double materiality by dividing it into two dimensions (ESRS, 2023):

- **Impact Materiality.** This is when a material topic positively or negatively impacts the people or the environment over a short, medium or long-term period. This is related to actual impacts and potential impact topics.
- **Financial Materiality** refers to the financial risks and opportunities arising from identifying financial materiality assessment. Financial materiality assessment is the identification of the material topics for the primary users of the financial reports.

EFRAG (2023) has mentioned that financial and impact materiality are connected. Risks and opportunities may arise from the undertaking's effects on people or the environment and from changes to strategy, including investments and management choices made to address such consequences. Impacts and dependencies are typically where material risks and opportunities come from. (EFRAG, 2023)

Figure 2 illustrates the dynamic of the double materiality concept. Even though it is divided into two aspects, double materiality and impact materiality, they are still interconnected.

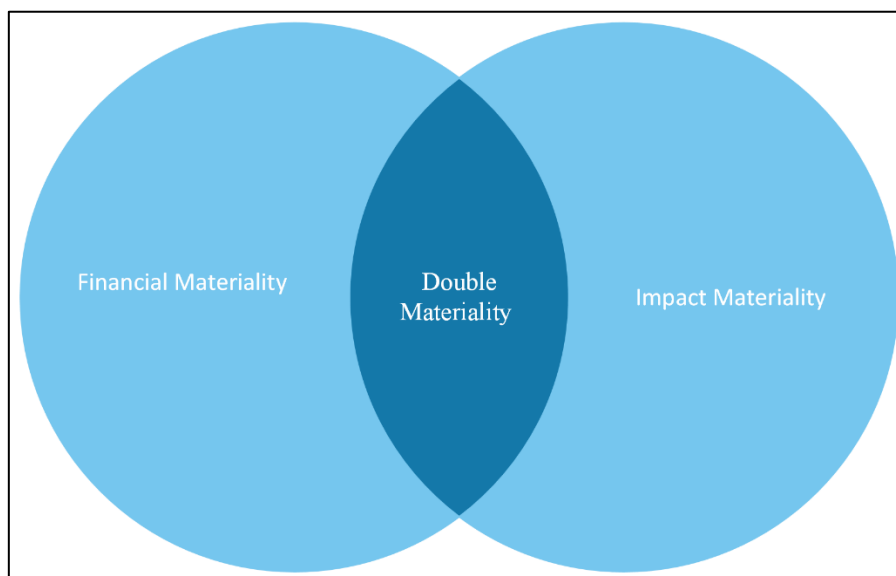


Figure 2. Double Materiality Concept

Source: Compiled by the author.

While defining materiality, it is also important to identify the necessary stakeholder group that should be involved in such a process. In order to implement a materiality analysis where the results received align with all the interests of the stakeholders, the stakeholders should be directly involved in the assessment (Torelli, Balluchi, & Furlotti, 2019). ESRS (2023) defined that stakeholders are the people affected by the organisation's decisions, and they are categorised into two groups (ESRS, 2023):

- Affected Stakeholders are the individuals or groups the organisation's activities could positively or negatively impact. As well as its direct or indirect relationship across the value chain.
- Users of sustainability statements who are the primary users of financial reporting. Those could range from investors, creditors, NGOs and trade unions.

After understanding the concept of materiality and analysing the available definitions, the author has decided to define materiality as a matter that is related to ESG, as well as finance-based matters that tend to affect the decision-makers or the stakeholders of an organisation in case they were falsified or omitted, which causes an impact on business operations. Those factors will be considered and used as the framework for defining

materiality by the author throughout the thesis as it gathers the essential points that contribute to materiality being defined by an organisation.

1.2. Approaches to materiality assessment

Multiple organisations have created their own framework for how they define their material topics and how these topics should be presented in their annual or sustainability reports. Some tools that could be used to determine materiality were also provided.

According to PGS (2013), a materiality analysis is particularly crucial for businesses developing a sustainability strategy, compiling a sustainability report, or wanting to expand into new markets. Calabrese et al. (2019) mentioned that through materiality analysis, companies have the ability to improve their accountability for their stakeholders and show more effective methods towards sustainability.

PGS (2013) has compiled a list of common elements that could be found when compiling data for materiality analysis (PGS, 2013):

- Identifying a vast amount of economic, social, environmental, and governance matters that the company should consider;
- Those matters should then be ranked based on the stakeholder's worry;
- Each matter should then be ranked based on its possibility of causing a more significant negative impact to the company;
- Those matters should be presented typically in a matrix in order to be used for future decision-making and reporting matters.

One of the main initiatives currently available for sustainability reporting is the Global Reporting Initiative (GRI), launched in 1997. According to Hohnen (2012), when first launched, GRI resulted from numerous stakeholder initiatives to create a framework that will be generally accepted in the financial reporting world as it will be reporting the organisation's environmental, economic and social performance. KPMG (2022) noted that GRI, until now, is the most used standard worldwide. They have also noted that 68% of N100 companies use GRI, a 1% increase from 2020. Also, they have mentioned that 75% of G250 companies use GRI standards, a 5% increase from 2020 (KPMG, 2022). The World Business Council for Sustainable Development (WBCSD) (2023) has also noted that 83% of the reports reviewed used GRI standards.

GRI (2021) explained their 4 step method in order to determine material topics. The first step is to understand the organisation's context by providing a high-level overview of its activities and business partnerships, including its sustainability context and stakeholders. This

information helps the organisation determine current and potential implications (GRI, 2021). The second step is to identify actual and potential topics on the economy, environment and people. Positive and negative, short- and long-term, planned and unexpected, and reversible and irreversible effects are among the impacts that could affect an organisation. GRI (2021) also provided that the organisation could gather information regarding the impacts from multiple resources which include gathering the information from its own or a third party assessments. The third step is to assess the importance of the identified impacts by ranking them based on how important they are. Setting priorities helps the company identify its material themes for reporting and take appropriate action to address the implications (GRI, 2021). The last step is to prioritise the most significant topics for reporting by ranking the topics from most to least significant (GRI, 2021).

There is another organisation that some companies use its initiatives, the Sustainability Accounting Standards Board (SASB), which is also a part of the International Financial Reporting Standards (IFRS). SASB created market-driven and sector-specific standards. SASB initiated a process based on extensive feedback from companies, investors, and other market participants to promote the adoption of measurement standards for reporting ESG issues of the same relevance and reliability as accounting standards for financial information, which resulted in the publication of a set of codified standards at the end of 2018. (Busco et al., 2020)

KPMG (2022) has noted that 33% of the N100 companies and 49% of the G200 companies report using the SASB standards. It was also brought up that most of the companies in the USA report using the SASB standards. WBCSD (2023) has also mentioned that 56% of the reports they reviewed in 2023 referenced SASB standards, which is double the percentage of 2022.

SASB's approach to materiality includes creating a set of 77 sector-specific reporting standards, which consist of (SASB, 2023):

- A. Industry descriptions. It is intended to help an organisation determine the correct sector-standard to use by describing the business models, associated activities and other common factors in the sector.
- B. Disclosure topics. They are the opportunity- or risk-related sustainability topics available within the organisation in a specific sector.
- C. Metrics. The main use of metrics is to provide the necessary information regarding the organisation's performance on a certain disclosure topic.

- D. Technical protocols. The protocols provide the needed support for the metrics' definitions, scope, and implementation.
- E. Activity Metrics. These measures are meant to be used in conjunction with the metrics mentioned in point C to normalise data and enable comparison and quantify the scope of particular activities or operations carried out by an organisation.

Companies subject to CSRD directive must report according to ESRS standards (UNEPFI, n.d.). ESRS (2023) provided a list of material topics related to sustainability that could be included in the materiality assessment. The topics are divided into three segments: environmental, social and governance. ESRS has provided 11 material topics, but they have also provided sub-topics for each topic. Some topics even had sub-sub-topics. Understandably, each sector tends to have different material topics that need to be assessed. However, ESRS provided some guidelines for possible topics and how they should be grouped. According to PGS (2023), materiality topics could be similar between a specific sector; however, there could be some differences as each company has its own identity and characteristics, which differentiates them. Those characteristics might include the company's size, financial position, location and stakeholder engagement (PGS, 2023).

Major consulting firms released their own guide to show companies how they can approach materiality and report it. Out of the Big 4 consulting firms (Deloitte, KPMG, PWC, EY), Deloitte and KPMG are the only two to have publicly released guides.

Deloitte (2022) released a working paper explaining how companies could balance their materiality assessment by introducing 4 phases. Figure 3 illustrates the 4 phases provided by Deloitte. Phase 1 explains how analysing the impacts and stakeholders is important. However, the company must include a comprehensive group of stakeholders. During this phase, the companies should pay attention to how detailed their material topics are. According to Deloitte (2022), the material topics should not be too broad or specific during this phase. Phase 2 consists of 2 categories. The first category explains how the company should set clear guidelines to maintain a consistent materiality assessment. It should also include consistent scoring criteria when assessing the material topics. As well as assessing material topics that tend to affect the company in short, medium and long-term and being transparent with the time frame that the company will decide to use. The second category of Phase 2 is to assess the most significant topics. When it comes to impact materiality, it is assessed by deciding if the topic has a positive or negative impact on the company and what is the severity of the impact. In the case of financial materiality it is

assessed by how risky the material topic is and what are the external triggers regarding the topic. Phase 3 includes using the results in creating their next steps and implementing it in their reports. Phase 4 highlights the importance of generating materiality assessments frequently. (Deloitte, 2022)

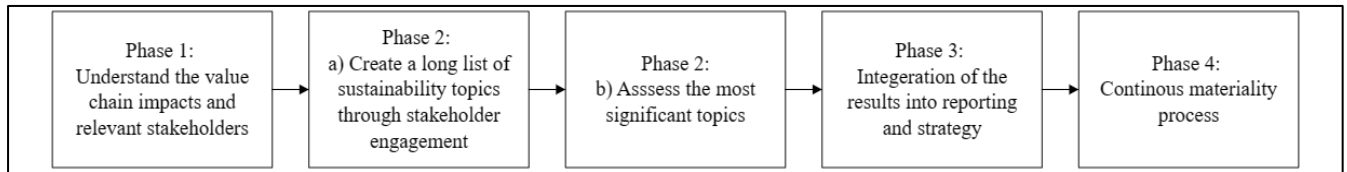


Figure 3. Phases of balancing materiality assessment by Deloitte.

Source: Compiled by the author based on Deloitte's 2022 report.

KPMG (2014) has provided a 7-phase materiality process to guide sustainability professionals, risk managers, and other employees involved in reporting practices. Figure 4 illustrates the phases created by KPMG. Phase one is to determine the definition of materiality for the company and to understand the company's objectives and audience clearly. The assessment's geographic and business unit scope is also determined (global/regional, whole/specific units, entire value chain/internal operations). Phase two is to create a list of all the possible material topics that can impact the company. KPMG recommends using diverse information sources to build a comprehensive list of potential topics (sustainability indexes, news reports, etc.) and involving various teams. Phase three is to group the determined materiality topics into categories. KPMG explains that when clustering the topics, companies should make sure that all categories are on the same advanced level, align topic names with terminologies already used within the organisation, and ensure that all the involved employees are aware of all the risks and opportunities related to each material topic. Phase four is to delve into the topics and understand their importance and impact on business operations, stakeholders, and potential ESG impacts. In this phase, the company should define the scoring system they would use as they will need it for phase five. Phase five prioritises the significant material topics based on their importance to the business, stakeholders, and the ESG-related impact that the topic causes on the value chain. Phase six includes testing the results from the materiality assessment with key internal audiences to confirm its validity. The organisation is expected to ensure senior management has signed and approved the materiality assessment. Also, it is crucial to ensure that the process and the outcome are credible. The final phase is to consult with the stakeholders and gain feedback regarding the material topics chosen to be reported. The organisation should identify the stakeholders that can review and evaluate the results. Then, the feedback

provided should be documented as it could benefit the organisation in the future. (KPMG, 2014)

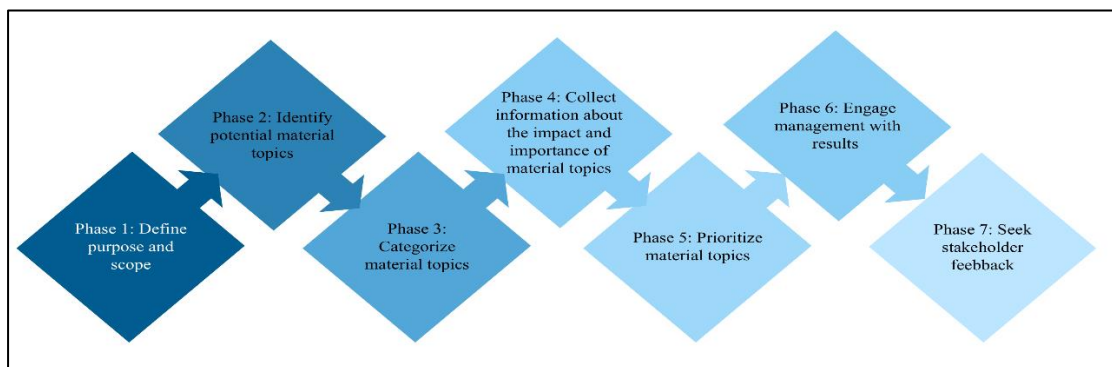


Figure 4. KPMG’s guide to materiality process

Source: Compiled by the author based on KPMG’s 2014 report.

After viewing KPMG’s and Deloitte’s guides, it is visible that KPMG’s process is more detailed. Both processes highlight that material topics should be created in a long list and then filtered based on their importance. KPMG highlighted that materiality and the scope within the organisation should be defined before delving into finding the material topics. Deloitte just highlighted that analysing the relevant stakeholders and impacts is essential, as well as making sure that the topics are not too broad or specific. KPMG also added the phase of categorising material topics, while Deloitte went straight into analysing the significant topics after creating the list. Both firms highlighted the importance of involving stakeholders and creating scoring criteria.

Table 3

Similarities and differences between KPMG and Deloitte processes

Topic	Similar	Different
Define Materiality and impact		x
Create long-list of material topics	x	
Categorise material topics		x
Create a scoring method	x	
Engage management		x
Generate materiality assessment frequently	x	
Receive stakeholder feedback	x	

Source: Compiled by the author

There has not been a unified approach to how an organisation should present the prioritised topics they include in their sustainability reporting. However, reporting initiatives provided their own “tools” that could be used to visualise and present the reported material topic. For example, SASB created a materiality finder and materiality map that provides

general information on sustainability and material issues regarding different industries (SASB, 2023).

GRI used to have a materiality matrix. However, in 2021, GRI removed the materiality matrix from their standards as they believe that the revised version of determining material topics provides the two elements of visualisation and prioritisation (GRI, 2021). Thus, a materiality matrix is not needed anymore. The last time GRI mentioned the materiality matrix was in their 2016 standards. They explained that the y-axis influences stakeholder assessments and decisions, and the x-axis is the significance of environmental, social and governance matters. For a company to create the materiality matrix, its materiality topics must abide by both axes (GRI, 2016). GreenBiz (2017) provided a more thorough analysis of the axes. The y-axis focuses on the ability to impact through the material topics and the x-axis focuses on the material topic's impact on the business (GreenBiz, 2017).

Even though GRI removed the materiality matrix, they mentioned that organisations could still visually represent the material topics they have prioritised for reporting purposes (GRI, 2021). Figure 5 illustrates an example of how a materiality matrix could look like. The points displayed in Figure 5 represent the material topics. Each company places the material topic on the matrix based on its impact on the business and the influence of stakeholders. This makes the matrix different from one company to another, even within the same industry. Due to the lack of unified agreement on illustrating a materiality matrix, each organisation tends to personify their matrix. Thus, there is no uniformity in how a materiality matrix should look. Which causes companies to create a matrix that suits their results best.

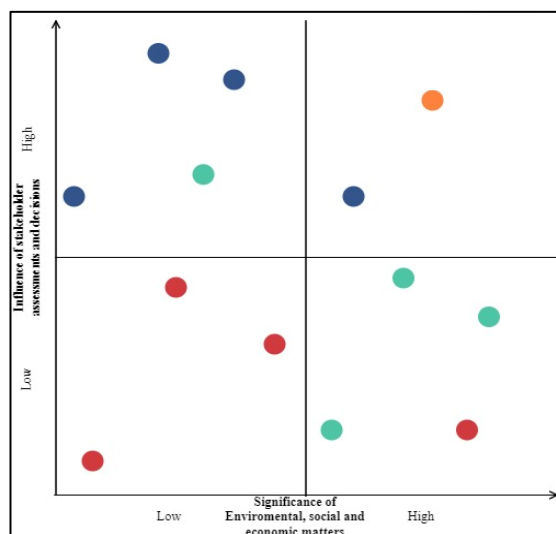


Figure 5. Example of the materiality matrix based on GRI 2016 standards

Source: Compiled by the author using online visual paradigm website.

In order to have an all-rounded understanding of how materiality is assessed, previous empirical studies have been analysed where materiality assessment was conducted in different industries. Jones, Comfort, and Hillier (2016) tested materiality in the top 10 UK retailers. The authors used the qualitative approach in their research, viewing all the sustainability reports and drawing conclusions from them. One of the main points was that not all retailers mentioned materiality in their reports. The authors have also reported that there are vastly different variations when it comes to the handling of materiality by each company. The key finding that was gathered from the article was that the authors mentioned that there is no agreement on what constitutes a material issue in the retail industry (Jones, Comfort & Hillier, 2016). Different retailers define and apply materiality differently, and there is a lack of uniformity in how it is defined and used. Another finding was that retailers are only sometimes forthcoming regarding detecting and prioritising material issues. Many sustainability reports need to explain the materiality process better, making it difficult for stakeholders to understand how sustainability challenges are addressed. Finally, it was noted that retailers identify material concerns using a variety of approaches. Some retailers conduct stakeholder surveys, while others rely on internal assessments or outside expertise (Jones, Comfort & Hillier, 2016).

Papafloratos et al. (2023) were able to test materiality in the chemical sector. They planned to summarise the most critical sustainability issues faced in the chemical sector and provide a framework for the methods and approaches used by chemical companies when conducting materiality assessments. The authors aimed to understand what type of issues the companies define as material (Papafloratos et al., 2023). The methodology consists of reviewing 25 recently published sustainability reports from 25 companies and then analysing and interpreting them. The 25 companies were solely chosen based on their revenue, and the authors did not restrict their research to a specific continent or country. After viewing the reports, it was identified that among the 25 companies, 15 sustainability reports are being material, and 30 sustainability topics could be identified (Papafloratos et al., 2023). The 30 material topics were then differentiated into the three sustainability pillars: Environmental, Social and Governance. The authors also conducted a table that provided the list of materiality purposes disclosed by the companies in their sustainability reports. Similarly to Jones, Comfort, and Hillier (2016), Papafloratos et al. (2023) have also mentioned that there are different terminologies and variations for carrying out the materiality analysis. Papafloratos et al. (2023) have also provided a table that shows the different materiality assessment approaches used among the 25 reports, similar to the conclusion Jones, Comfort,

and Hillier (2016) reached after conducting their own research. It was also pointed out that the most common approach towards materiality assessment was stakeholder interviews and surveys (Papafloratos et al., 2023). Papafloratos et al. (2023) have revealed some inconsistency and confusion around reporting it due to insufficient sector-specific standards on identifying material topics. Papafloratos et al. (2023) have identified that when reviewing the reports, there was insufficient information regarding how the companies approach materiality and what topics they determine as material.

Karagiannis et al. (2019) have conducted research that tests the airport industry's sustainability reporting, materiality, and accountability standards. Even though the study was not specifically conducted to test materiality in the airport industry, they decided to have a sample of 55 CSR reports. Then, they reduced it by 40% as some reports did not provide materiality analysis. Similar to the previous papers, Karagiannis et al. (2019) established that companies used different terminologies, generating confusion. The authors used 33 reports to analyse materiality from companies in different continents and countries. Due to the paper not focusing on materiality, the findings were not as emphasised as other papers. However, the authors divided the material aspects they found by putting them in the environmental, Social, Governance and Cultural categories. Karagiannis et al. (2019) concluded that materiality has not been implemented significantly in the airport industry.

Even though Karagiannis et al. (2019) did not specifically mention the need for sector-specific standards for materiality, Papafloratos et al. (2023) and Jones, Comfort, and Hillier (2016) voiced out their concerns about how confusing reporting materiality is when there is not sector-specific standards. Eccles et al. (2012) believe that if sector-specific standards are created regarding the sustainability issues that belong to each sector and the Key Performance Indicators (KPIs) for reporting them, it will be easier for companies to report such issues.

Even though there are some studies available for materiality assessment in various industries, no assessment is available for the forestry sector. However, the author found that organisations like WBCSD created a report and an SDG roadmap for the forestry sector and the needed focus areas. The report included 8 impact opportunities: Sustainable forest management, bioeconomy, climate change mitigation and adaptation, water, circularity, communities, people, and procurement (WBCSD, n.d).

As mentioned, GRI has ranked the forestry sector among the top ten industries needing sector-specific standards. However, the Global Sustainability Standards Board (GSSB) announced that the expected publishing of such standards will be in 2025 (GRI,

2021). Due to that, there is no availability for sector-specific material topics from GRI that could be compared or analysed in this thesis.

SASB materiality map provides sector-specific material topics for the pulp and paper products sector. The sustainability topics mentioned were greenhouse gas (GHG) emissions, air quality, energy management, water management, and supply chain management (SASB, 2023).

S&P Global (2022) has provided an ESG materiality map for paper and forest products. Some significant material topics were physical climate risk, climate transition risk, biodiversity and resource use, and workforce health and safety (S&P Global, 2022). MSCI has its own materiality map, which identifies the important ESG topics for paper products. Those included carbon emissions, toxic emissions and waste, biodiversity and land use, and labour management (MSCI, n.d.).

After reviewing the approaches to materiality assessment, it is important also to identify the benefits and drawbacks of such analysis. Jones, Comfort, and Hillier (2016) highlighted some benefits of including the materiality assessment in the sustainability reporting process. It helps to identify opportunities, combine sustainability and business strategies, gain competitive advantage and build a strong reputation (Jones, Comfort & Hillier, 2016). However, KPMG (2014) pointed out some challenges that a company might face when conducting the materiality assessment as the assessment tends to be isolated from the business activities, senior management is not involved, the business operations are too complex for a materiality assessment, stakeholder engagement tends to be expensive and time-consuming, inability to determine material topics due to the stakeholders being interested in all of them and the material topics are either too broad or they are overlapping.

To conclude this sub-chapter, the author introduced the materiality assessment process of companies' main reporting initiatives when creating their sustainability reports. After that, an introduction of KPMG and Deloitte's materiality assessment approach was also analysed. The author was able to differentiate both processes and show that KPMG has a more detailed process for companies to use. Previous empirical studies were also analysed. A brief introduction to the available sector-specific standards of the forestry sector was also introduced.

2. Empirical analysis of the EU forest companies' materiality assessment

2.1. Overview of the forestry sector and methodology

The forestry sector represents approximately 7% of the EU's manufacturing GDP and provides about 3.5 million jobs (European Commission, n.d.). Mikkilä and Toppinen (2008)

mentioned that the sector plays a significant role in global sustainable development due to its raw materials and internationalisation.

This thesis focuses on analysing the sustainability reporting of the EU forest companies, especially concerning how they define materiality and the key material topics mentioned. Due to the fact that most companies have not released their 2023 report yet, the reports that are analysed belong to 2022. Based on the author's search, some companies enhanced their materiality assessment in their 2023 reports, which would have made the comparison unjust. Also, ESRS will be used as a benchmark to understand the differences when a company uses a different reporting framework and analyse if the companies are already reporting any of the available material topics provided by ESRS. The author has chosen ESRS as the selected companies all operate in the EU. EU companies are obliged to report with ESRS to comply with CSRD. As the companies will start following this legislation in 2025 when reporting their 2024 financial year, the author investigates if the EU forest companies are already reporting material topics that match the ESRS material topics. As the official standards were not available for 2022, the ESRS drafts were the only available source for companies at that time. The content analysis method (Jones, Comfort & Hillier, 2016; Papafloratos et al., 2023; Karagiannis et al., 2019) is used in this study as it was the method applied in the previous empirical studies, which will make the comparison of results easier.

The study involves several stages that allow for a thorough analysis. The first stage is to review the available sustainability reports. The main goal for this stage is to get an overview of how companies report their sustainability matters and reveal material topics. It is also important to identify how each company defines "materiality".

The second stage would be to create a long list of all the material topics provided by the companies in their reports. This list will be used to classify the topics and match them with the ESRS material topics illustrated in Figure 6, as well as the sub-topics and sub-sub topics mentioned in the ESRS 2023 report. Figure 6 illustrates the main topics ESRS provided. The topics are divided into 5 environmental topics, 4 social topics and 2 governance topics. However, they are further divided into sub-topics and sub-sub topics. As those will be used for the analysis, Appendix A provides all of the sub-topics and sub-sub topics that will be used by the author throughout the empirical studies. There are many sub-sub topics, so the author is aware that each company will be reporting the topics that matter to them the most.

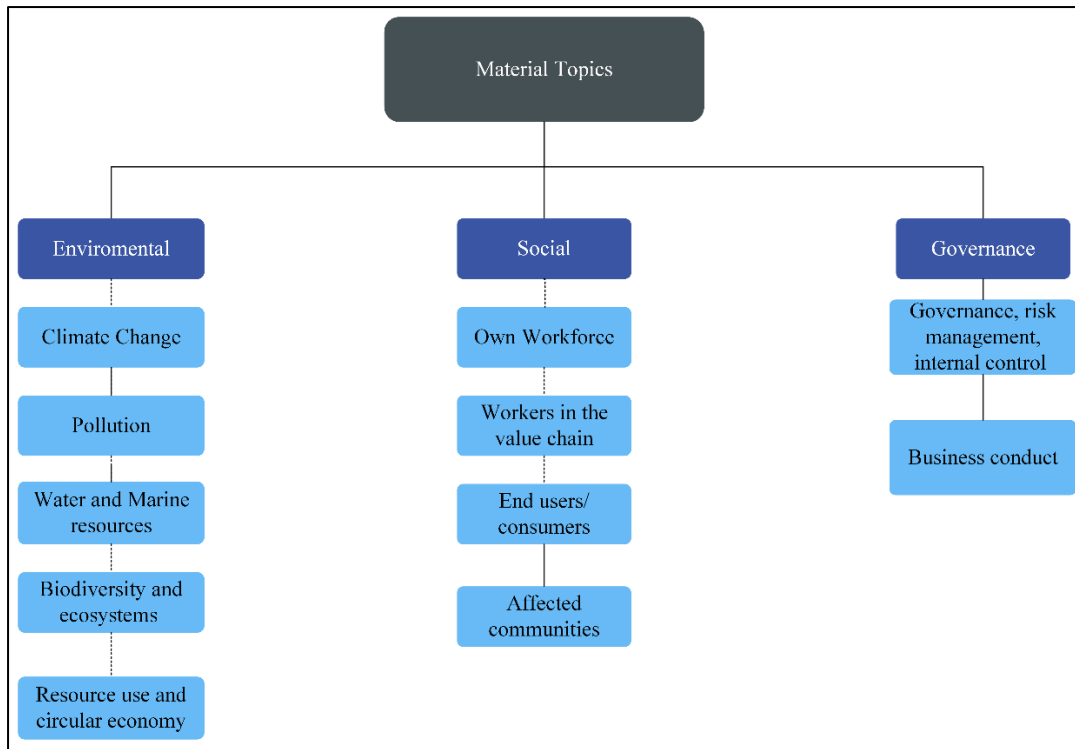


Figure 6. Material topics provided by ESRS

Source: Compiled by the author based on ESRS 2023 report

The third stage is to group the common material topics together and record the topics mentioned more than once. As each company has its differences, it is important to record how they prioritised their material topics and involved the stakeholders when identifying the topics to understand the need for sector-specific standards. The fourth stage will rank the topics based on their importance, as the companies explain it in their reports. The final stage is to create a materiality matrix based on the results to illustrate important topics for the forestry sector. While obtaining the results, the previous studies analysed will be connected with the results provided by the author. This will allow the author to understand if the results obtained are similar to the previous literature Figure 7 illustrates the process.

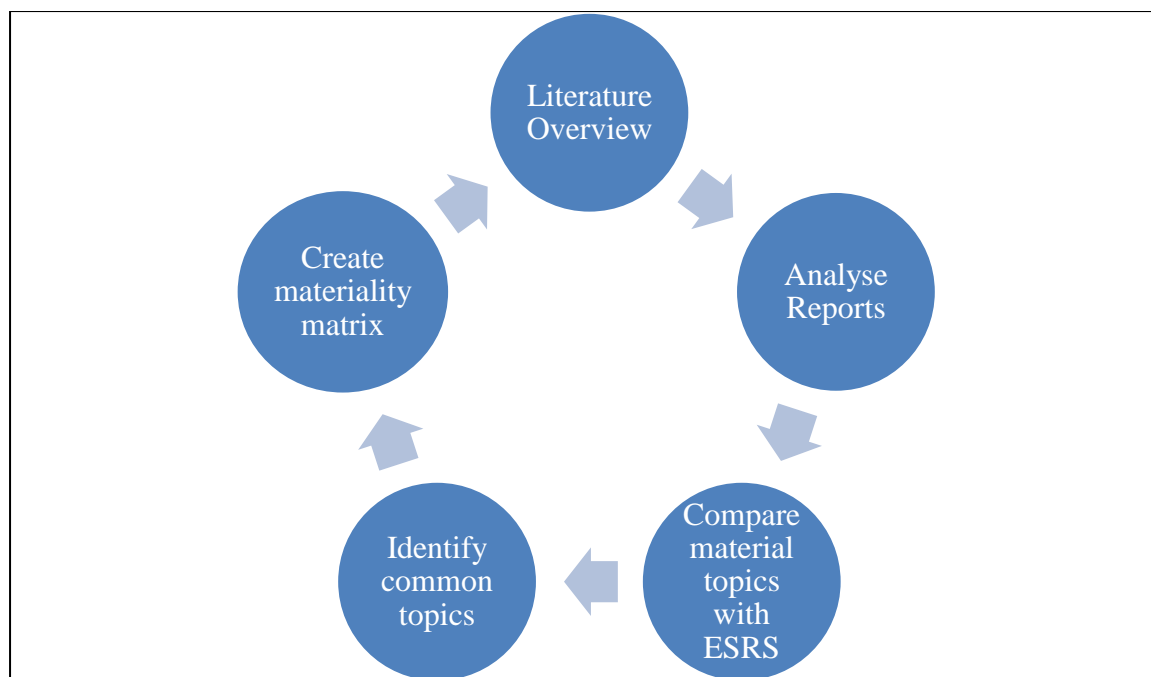


Figure 7. Methodology for identifying material topics of the EU forest companies

Source: Compiled by the author.

Table 4 provides the companies analysed throughout the thesis based on the reports' availability and reputation. Table 4 provides the company name, headquarters, report name and the reporting initiative used to create the report. Appendix B provides the company name, report name, and a link to access the company's report that was analysed. Also, it is important to note that nearly all the companies combined their sustainability reporting with their annual report. 10 of the chosen companies are a part of the Confederation of European Paper Industries (CEPI). Their mission is to secure the competition of pulp and paper industries towards EU policymakers, represent the sector to EU institutions, improve the sector's image, and show an example of how competitiveness and sustainability could go hand in hand (CEPI, n.d). 2 companies that are not a part of CEPI were chosen as well: Estonian Cell AS, Grigeo, which is Lithuanian. Estonian Cell AS 2022 sustainability report is unavailable, which led the author to use the 2023 report.

Table 4

Forest companies used for the empirical study

Company	Headquarters	Name of report	Reporting Framework
Brigl & Bergmeister GmbH	Austria	Sustainability Report 2021 2022	GRI
Prinzhorn group	Austria	Sustainability Report 2022	GRI
VPK Group	Belgium	Sustainability Report 2022	GRI
Estonian Cell AS	Estonia	Environmental and Sustainability Report 2023	Not mentioned

Metsä Board	Finland	Sustainability Report 2022	GRI, SASB, TCFD
Stora Enso	Finland	Annual Report 2022	GRI, SASB, TCFD
UPM- Kymmene	Finland	Annual Report 2022	GRI, SASB
Pfleiderer	Germany	Sustainability Report 2022	GRI, SASB
Burgo Group	Italy	Sustainability Report 2022	GRI
RDM Group	Italy	Sustainability Report 2022	GRI
Grigeo	Lithuania	Sustainability Report 2022	GRI
Solidus	Netherlands	Sustainability Report 2022	GRI
The Navigator Company	Portugal	Valuing is who we are. Sustainability Report 2022	GRI
BillerudKorsnäs	Sweden	Annual and Sustainability Report 2022	GRI
Smurfit Kappa	Sweden	Delivering the future together 2022	GRI, SASB

Source: Compiled by the author.

Stora Enso and Smurfit Kappa were a part of the WBCSD Forest Solutions Group project. Stora Enso ranked seventh in the WBCSD Reporting Matters Report 2023 for its sustainability reporting standards and data quality (WBCSD, 2023). UPM-Kymmene ranked among the top 1% for outstanding sustainability performance (UPM, 2024).

CDP, which is a non-profit organisation that runs a global system to manage environmental impacts, has scored Stora Enso, UPM- Kymmene, and Metsä Board with an A grade for their continuous leadership in “environmental and performance on climate change, deforestation and water security” (CDP, 2023). Ecovadis is a leading sustainability rating provider that acknowledges companies with high sustainability performance (Ecovadis, 2024). Metsä Board Corporation, Estonian Cell AS, RDM Group, VPK Group, Prinzhorn Group, and Pfleiderer were awarded the Ecovadis ranking. Grigeo and Estonian Cell AS are the leading forest companies in the Baltic states.

2.2. Analysis and discussion of the results

After reviewing the reports of the 15 companies, it is important to mention that only 3 companies (Prinzhorn Group, RDM Group, and The Navigator Company) explicitly defined materiality in their reports. Both companies used the definition provided by ESRS. On the other hand, 11 companies provided their materiality assessment without defining materiality. Estonian Cell AS is the only company that did not explicitly mention materiality in their report. However, they have provided some environmental and social topics that affect their operations and stakeholders. Even though 14 of the 15 companies use GRI as their reporting standards, there is still no unified agreement on how materiality should be defined. The author's results are similar to what Papafloratos et al. (2023) and Jones, Comfort, and Hillier (2016) faced in their research, which shows that the problem is prevalent in multiple sectors,

including the forestry sector. As 12 companies did not explicitly define materiality, the author analysed the companies' reports thoroughly to conclude whether the definition provided by the author in subchapter 1.1 was fulfilled. The process of such analysis was to search for the keywords in the reports when discussing materiality: ESG, impacts, stakeholders, material topics and financial materiality.

Table 5 provides the author's results for the 12 companies. Based on the results, all companies, excluding Estonian Cell AS, had those keywords in their reports. This shows that even though the companies did not explicitly define materiality, they could still implicitly define it. However, defining materiality explicitly will enable the stakeholders and users of such information to understand what materiality is, as not everyone is aware of its definition yet.

Table 5

Materiality definition implicitly expressed by EU Forest Companies

Company	Fulfillment of materiality definition
Brigl & Bergmeister GmbH	✓
VPK Group	✓
Estonian Cell AS	x
Metsä Board	✓
Stora Enso	✓
UPM- Kymmene	✓
Pfleiderer	✓
Burgo Group	✓
Grigeo	✓
Solidus	✓
BillerudKorsnäs	✓
Smurfit Kappa	✓

Source: Compiled by the author based on annual and sustainability reports.

Double materiality was also researched when searching for the definition of materiality in the reports. Even though the CSRD directive was officially announced in 2023, the author wanted to understand if companies mentioned double materiality before the directive. Grigeo, Burgo Group, Billerud, Pfleiderer, VPK Group, Estonian Cell AS, Solidus, and UPM-Kymmene did not mention double materiality in their reports. On the other hand, Metsa Board Corporation, RDM Group, Prinzhorn Group, Smurfit Kappa, Stora Enso, The Navigator company and Brigl & Bergmeister GmbH provided some information about double materiality and explained that due to ESRS and CSRD, they have implemented the double materiality concept in their assessment.

When analysing the reports, it was visible that each company abided by a different materiality assessment process. Grigeo, The Navigator Company, Brigl & Bergmeister GmbH, and RDM Group provided their materiality assessment process, similar to the GRI approach. Burgo Group, Stora Enso, Billerud Korsnäs, Solidus, and VPK Group did not explain their materiality approach. Estonian Cell AS did not disclose or mention materiality in their reports. Metsa Board implemented a three-stage materiality process, including identifying, prioritising, and confirming material topics (Metsa Board Corporation, 2022).

Prinzhorn's materiality assessment approach was as follows: analyse the value chain, list potential topics, which were 15, and finally identify the seven material topics (Prinzhorn, 2022). Smurfit Kappa had a three-step materiality assessment, which included identifying sustainability issues, validating them through stakeholders, and prioritising important topics (Smurfit Kappa, 2022). UPM's materiality assessment process identified the topics with significant impact, prioritised the impact based on its scale and scope, and grouping the selected topics (UPM, 2022). Pfleiderer showed that their materiality process included identifying 114 possible topics based on interviews, documents, and available guidelines and aligning with GRI, SASB, and ESRS standards, summarising them into 16 potential topics discussed and comparing with their current ESG goals, and then identifying the six material topics. The analysis shows that the companies do not have a unified approach to materiality assessment. Interestingly, this is a conclusion that was also reached by Jones, Comfort, and Hillier (2016) and Papafloratos et al. (2023). There are some similarities between the companies' approaches, including listing the topics and prioritising them. However, the differences arise from their stakeholder engagement approach. Some companies list their impact topics and validate them, while others communicate with their stakeholders at the beginning of the process and then list the potential topics. The results show that although 14 companies reported using GRI, some companies still had a different materiality process. Due to that, the author believes that if there are sector-specific standards that also provide the ideal approach that companies should use when reporting materiality, then there will be a unification that will allow companies and external users to understand the process better and compare the results more easily.

In order to gain a deeper understanding of how the companies identified those material topics, the common stakeholder engagement methods used by each company are compiled in Table 6. Companies like VPK Group explained their plan of including stakeholders more in their 2023 reports for the materiality analysis. Estonian Cell AS expressed that stakeholder dialogue is essential to achieving success; however, they did not

explain how they communicate with the stakeholders. The most common method used is a survey. Some of the companies also mentioned meetings and interviews.

Table 6

Stakeholder engagement methods used by EU Forest Companies

Company	Stakeholder engagement method
Brigl & Bergmeister GmbH	Survey
Prinzhorn group	Survey
VPK Group	Survey, meetings
Estonian Cell AS	Not mentioned
Metsä Board	Interview
Stora Enso	Survey, Social Media
UPM- Kymmene	Survey, queries
Pfleiderer	Social Media
Burgo Group	Survey
RDM Group	Surveys, meetings, Social Media
Grigeo	Survey, meetings
Solidus	Survey, meetings
The Navigator Company	Social Media
BillerudKorsnäs	Survey, Meetings
Smurfit Kappa	Survey, interview

Source: Compiled by the author based on annual and sustainability reports.

After understanding how each company reports materiality, 37 material topics were identified from 15 reports. The topics were then classified and grouped based on the material topics provided by ESRS in Figure 6 to understand what topics were reported by the companies based on ESRS.

Figure 8 shows the results obtained by the author. All 15 companies reported topics related to climate change, pollution, water and marine resources, biodiversity and ecosystems, their own workforce, and workers in the value chain. 12 companies reported topics related to circular economy. 10 companies reported business conduct topics, and 11 reported biodiversity and ecosystems-related topics. However, only 5 companies (RDM Group, Prinzhorn Group Smurfit Kappa, Pfleiderer, and Solidus) disclosed consumer and end users topics. Even though most companies recognised customer satisfaction as a topic, ESRS (2023) identified topics like consumer safety, non-discrimination, and access to health and safety as topics to be reported in this category, which companies did not report. Also, only 4 companies identified local communities in their material topics (Grigeo, Smurfit Kappa, Billerud, and Pfleiderer); some companies mentioned the local communities briefly but were not identified as material topics.

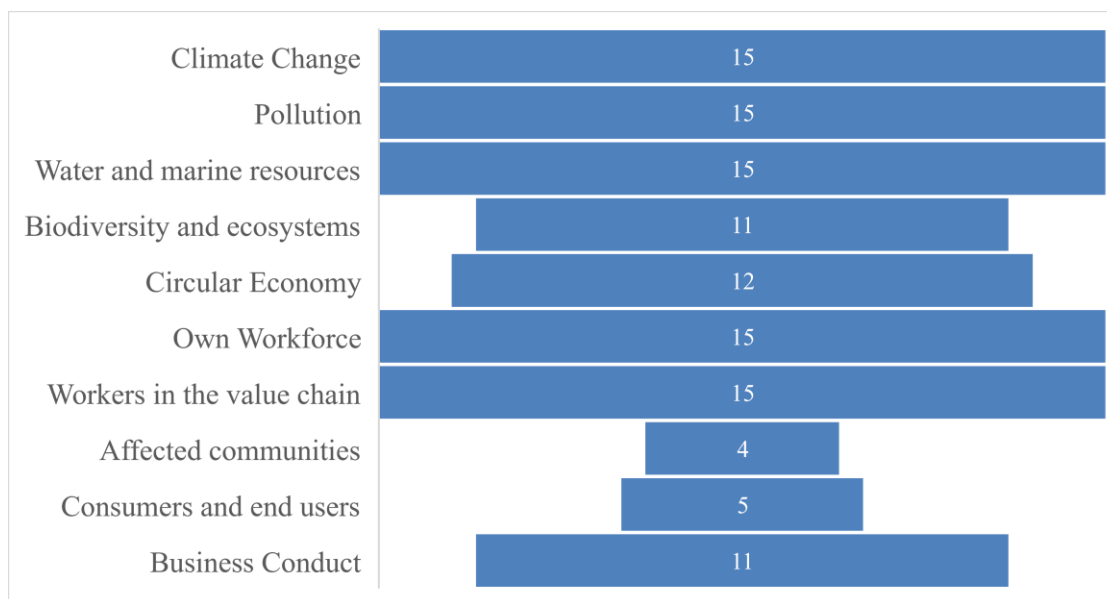


Figure 8. The number of EU forest companies reported ESRS topics based on Figure 6
 Source: Compiled by the author.

When analysing the companies’ material topics and ESRS material topics, the author was able to identify 6 material topics that were commonly identified between all of the 15 companies. It has been noticed that when analysing, the companies tended to name the same material topics differently, and the material topic names were not unified. Most companies did not explicitly mention in their materiality analysis the indicators that were used for each topic. Both problems were also faced by Jones, Comfort, and Hillier (2016) and Papafloratos et al. (2023) in their research. The most common topic with this prevalent problem is climate-related topics. Some companies reported emissions, specifically Greenhouse gas (GHG), as a material topic. While other companies would report climate impact as a topic. Table 6 shows the material topic and the variations of words used to describe the same topic in the sustainability reports. Table 6 also describes that topics related to water and climate are the most common topics with different variations.

Table 6

Material Topic and its variations

Material Topic	Topic variations in reports
Waste	Waste reduction, Waste management, Responsible waste management, Waste to landfill
Health and Safety Training	Promoting safety and well-being at work, Employee development and training, Training and Education
Water	Water Stewardship, Water resources management, Mitigating climate change and

<p>Energy Climate</p>	<p>reducing emissions, Water withdrawal and discharge, Water quality and scarcity, Water and Effluents, Water Intake Energy usage, Energy use and emissions GHG emissions, Climate change, CO2 emissions, Climate change awareness, Emissions, Climate adaptation, Climate and carbon emissions management, Climate protection and prevention of emissions</p>
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Source: Compiled by the author based on annual and sustainability reports.

Figure 9 displays the 6 topics that all companies identified. On top of that, a list of topics that were reported by most of the companies and the least reported topics are provided in Figure 10. Based on the analysis, forest companies focus on climate, waste, energy, and water regarding environmental matters, along with training and improving employees' health regarding social topics. It is also visible that the employee's work-life balance, human rights, and wages are the least reported topics. 12 companies also reported governance topics like ethics, sound corporate governance, and compliance. The analysis will be used to create the materiality matrix for the EU forest companies.

Topics reported by 15 companies	Topics reported by 10 to 14 companies	Least reported topics
<ul style="list-style-type: none"> • Waste • Health and safety • Training • Water • Energy • Climate 	<ul style="list-style-type: none"> • Circular Economy • Diversity and equal opportunities • Sustainable Sourcing • Biodiversity • Governance 	<ul style="list-style-type: none"> • Employee wages • Work-Life balance • Employee wellbeing • Anti corruption • Supply chain control • Human Rights • Innovation • Quality of products

Figure 9. Material topics reported by the EU forest companies

Source: Compiled by the author.

After analysing the common material topics reported and the available sector-specific standards and impact topics, the author's next step is to use the word frequency method (Sáenz, 2019; Roca & Searcy, 2012; Cinquini, Passetti, Tenucci, & Frey, 2012), which is a part of the content analysis method. Table 7 presents the results obtained by the author after conducting a word count analysis on the material topics to understand how much a topic was

mentioned compared to the other methods. Due to the climate material topic consisting of emissions, the author also decided to analyse emissions separately as some companies had emissions as their material topic.

Table 7

Word Count of material topics in each company

Material Topic	Waste	Health and Safety	Training	Water	Emissions	Climate	Energy
Brigl & Bergmeister GmbH	83	87	71	92	59	20	104
Prinzhorn group	64	70	50	70	57	6	78
VPK Group	70	118	59	120	68	15	84
Estonian Cell AS	105	39	12	164	35	8	50
Metsä Board	74	103	19	126	78	71	87
Stora Enso	90	185	174	205	170	187	180
UPM-Kymmene	55	97	39	109	117	186	210
Pfleiderer	48	85	41	50	72	54	55
Burgo Group	85	131	58	100	100	13	124
RDM Group	96	114	39	118	41	10	58
Grigeo	214	57	47	183	116	52	138
Solidus	44	46	7	30	8	12	14
The Navigator Company	69	138	64	112	153	163	198
BillerudKorsnäs	43	170	50	88	74	156	91
Smurfit Kappa	136	186	24	233	104	112	102

Source: Compiled by the author based on annual and sustainability reports.

Table 6 proves that even though the companies report all of those topics, some seem more prioritised or explained more thoroughly than others throughout. The word frequency method might not be accurate enough to be used as a main indicator for the materiality matrix; however, it helps to understand each topic's relevance better.

After considering all the analyses discussed, Figure 10 illustrates the materiality matrix. The topics were categorised into sections based on their placement in the companies' materiality matrix, if available, and based on the explanations provided by the companies when discussing each topic in terms of its relevance for stakeholders and impact on society and the environment.

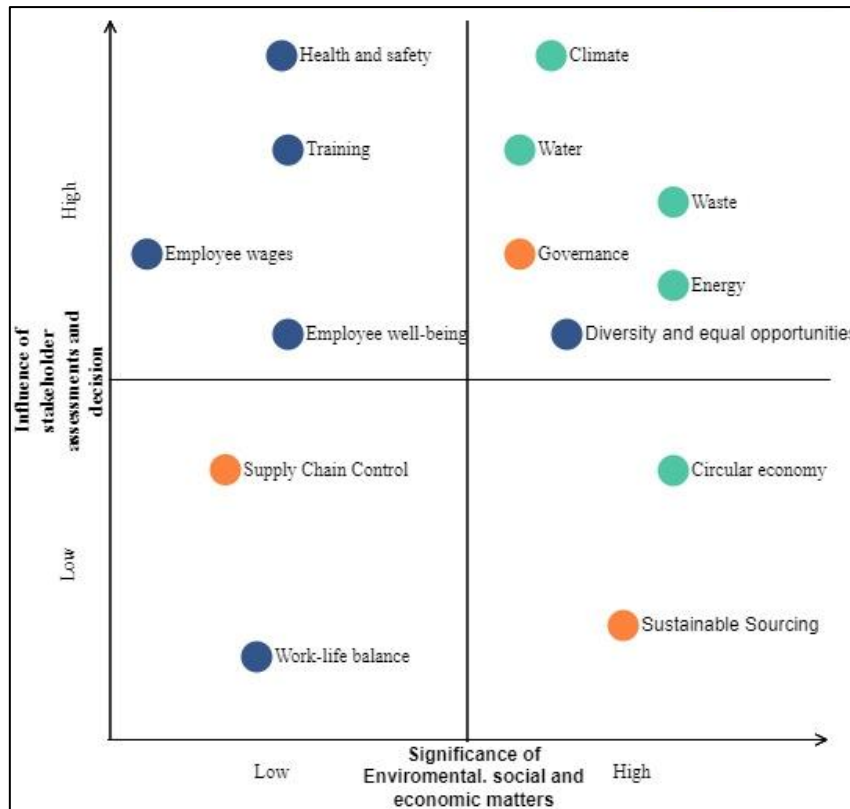


Figure 10. Materiality matrix of EU Forest companies

Notes. Green represents environmental topics, blue represents social topics, and orange represents governance topics.

Source: Compiled by the author using online visual paradigm website.

It was clear that companies and stakeholders are mainly focused on environmental topics like emissions, waste, and water. Topics related to the employee are not as important in terms of ESG, but the stakeholders value them. Most companies have stated that respecting each other is one of their main priorities. It also ensures that recruitment is done anonymously and that fair opportunities are given to everyone. This does not compensate for other employee-related matters like communication within a team, transparency, and a healthy working environment, which immensely contribute to the quality of the work while ensuring that employee turnover can be maintained and burnout can be avoided. While “sustainability sourcing” could be significant to the company’s reputation, it is ranked as high as the author believes it should. The author believes stakeholders should also be interested in sustainability sourcing as this could contribute to the company’s sales if their customers prioritise suppliers with ethical and sustainable practices. The author believes that the forestry sector should be a leading example of sustainability sourcing as their raw materials are mainly wood, which means that they need to be aware of the origin of their raw materials and advocate for

sustainability measures from their suppliers. It is also visible that companies focus on environmental and social topics.

After analysing the reports, the EU forest companies mostly report their material topics and discuss the concerns and action plans toward them. However, there is a lack of defining materiality in those reports. The main issue is the lack of uniformity in reporting between the companies; it is visible that each company has its own assessment process and stakeholder engagement methods. The results obtained by the author align with Eccles et al. (2012) conclusion that creating sector-specific standards might make the reporting procedure easier for companies. It will also unify the assessment process and perhaps the material topic names and definitions, making it easier for stakeholders to understand the results. The results provided align with PGS's (2013) studies that explain that each company tends to report different material topics even if they are within the same sector. In comparison with Jones, Comfort, and Hillier (2016), nearly all the EU forest companies provide material topics and an explanation of their materiality assessment, unlike the UK retailers. However, stakeholder engagement and the materiality assessment process were used in different ways. Even though Papafloratos et al. (2023) identified that chemical companies reported materiality topics, the same problem of using different terminologies and processes was identified in the current thesis.

Another aspect is that the companies are vocal about the SDGs; all of them provided the SDGs that they impact through their group activities, which was not something researched by Jones, Comfort, and Hillier (2016) or Papafloratos et al. (2023). 12 out of the 15 companies identified the SDGs they are focusing on. The common SDG among the 12 companies is SDG 12, which ensures sustainable consumption and production patterns (United Nations, n.d). SDG 13 was commonly reported by the 12 companies, which is related to taking urgent action to reduce climate change (United Nations, n.d). Those results also reflect the companies' prioritisation of environmental-related topics in their materiality assessment. After taking all of the analysis into consideration, the author believes that sector-specific standards will significantly improve the quality and transparency of the materiality of the EU forest companies.

Conclusion

This thesis explores the growing interest in sustainability matters, especially in the context of corporate activities, with a focus on the forestry sector in the European Union (EU). The Sustainable Development Goals (SDGs) set by the United Nations in 2015 have

driven companies to address sustainability concerns, leading to an increased emphasis on non-financial reporting, including materiality assessments.

This research reduces the gap in existing sustainability reporting standards by identifying the common material topics reported by EU forest companies.

The theoretical chapter establishes the basics of CSR, sustainability, and materiality. Various definitions of CSR were provided and analysed. The importance of sustainability and its interlocking relationship with CSR was emphasised. The thesis defines and assesses materiality in both financial and non-financial settings. Also, it discusses various organisations' standards like GRI and SASB. The term "double materiality" is also introduced.

After analysing all of those topics, the author generates the definition of materiality based on the descriptions and literature discussed, which will be used as a framework throughout the thesis.

In order to create some grounds for analysing materiality in the EU forest companies, a brief overview of materiality assessment approaches provided by reporting initiatives, as well as KPMG and Deloitte, are analysed and discussed. Each organisation created its own approach to materiality; however, some core aspects were similar throughout each process. For example, listing all possible impact topics and then prioritising and including stakeholders in their process.

The thesis applies qualitative content analysis to investigate the sustainable reports of EU forest companies by analysing 15 companies' sustainability reports and overlooking how they defined materiality, the material topics listed and how sector-specific standards could improve their reporting practices.

The analysis reveals that only 2 companies explicitly define materiality in their reports. This prompts the author to examine whether the companies implicitly define materiality by searching for certain keywords that were provided based on the definition created by the author in Chapter 1.1. The author then finds out that 10 out of the 11 companies that did not explicitly define materiality did indeed define it implicitly in their reports. However, the author believes that explicitly defining materiality is an element company should consider in their report as it will allow the information's users to better understand how the company defines materiality while conducting a materiality assessment.

The author also points out that most companies' materiality assessment processes are vastly different. They all use different terms and performance indicators when discussing the same material topic. However, the main difference between the companies that provided their

assessment process in their reports is when they include the stakeholders. For example, some companies list the possible material topics and then validate them through the stakeholders, while other companies include their stakeholders from the beginning of the process to choose the possible material topics and then prioritise them. Due to that, the author analyses the stakeholder engagement methods used by the 15 companies. Surveys turn out to be the main source of communication used by companies.

The analysis showed that waste, health and safety, training, water, climate, and energy were the commonly reported material topics among the 15 companies. On the other hand, employee-related matters like wages, well-being, work-life balance, and other matters like sustainable resourcing were the least reported topics among the companies. Similar to previous empirical studies, the author identifies that material topics are reported with different terminologies. Due to that, a table was generated to distinguish the different terminologies. After identifying the material topics, a word frequency table was created in order to see the differences of the commonly reported material topics between the companies. The table showed that each company focused on different topics and explained their impacts more than others they identified. The analysis helped the author create the materiality matrix presented to showcase the material topics based on their importance identified when analysing the reports. The materiality matrix showed that companies focus mainly on environmental and social topics. Governance topics reported by each common tend to be quite different from one another.

The author understands that there was a limitation in this research, which is the sample size. However, some companies released their 2023 reports and removed 2022 reports from their websites. Other companies have not yet released their 2023 reports. Due to that, the author had to leave out some companies in order to be able to have a fair comparison while conducting the research. Some companies indicated their integrity and plan to conduct a thorough materiality analysis in their 2023 report and involve stakeholders more in their assessment.

In terms of future research, various studies could be done. An analysis could be done regarding the sustainability reports of EU forest companies for a selected number of years to understand the evolution of materiality assessment and the patterns that could be identified. Another research is to identify if the EU forest companies worldwide report the same topics or if there are differences due to their geographical locations. Further studies could be done regarding another sector to identify if the same underlying problems of not having unified standards are affecting the reporting procedure of the companies in different industries.

List of references

1. Accountability. (2018). AA1000 AccountAbility Principles. Retrieved from <https://www.accountability.org/standards/aa1000-accountability-principles/>
2. Bansal, P., & DesJardine, M. R. (2014). Business sustainability: It is about time. *Strategic Organization*, 12(1), 70–78. <https://doi.org/10.1177/1476127013520265>
3. Baumüller, J., & Sopp, K. (2021). Double materiality and the shift from non-financial to European sustainability reporting: review, outlook and implications. *Journal of Applied Accounting Research*, 23(1), 8–28. <https://doi.org/10.1108/jaar-04-2021-0114>
4. Billerud Korsnäs. (2023). *Annual and Sustainability Report 2022*. Retrieved from <https://www.billerud.com/globalassets/cision/documents/2023/20230405-billeruds-annual-and-sustainability-report-2022-en-0-4510292.pdf>
5. BRIGL & BERGMEISTER. (2023). *SUSTAINABILITY REPORT 2021 / 2022*. Retrieved from <https://www.brigl-bergmeister.com/wp-content/uploads/2023/11/GRI-Index-Sustainability-Report-2021.pdf>
6. Burgo Group. (2023). *Sustainability Report 2022*. Retrieved from https://www.burgo.com/sites/default/files/bilanci/bilancio_sostenibilita_2022_gb_web_23mb.pdf
7. Busco, C., Consolandi, C., Eccles, R. G., & Sofra, E. (2020). A preliminary analysis of SASB reporting: disclosure topics, financial relevance, and the financial intensity of ESG materiality. *Journal of Applied Corporate Finance*, 32(2), 117–125. <https://doi.org/10.1111/jacf.12411>
8. Calabrese, A., Costa, R., Ghiron, N. L., & Menichini, T. (2017). MATERIALITY ANALYSIS IN SUSTAINABILITY REPORTING: a METHOD FOR MAKING IT WORK IN PRACTICE. *European Journal of Sustainable Development*, 6(3). <https://doi.org/10.14207/ejsd.2017.v6n3p439>
9. Calabrese, A., Costa, R., Ghiron, N. L., & Menichini, T. (2019). MATERIALITY ANALYSIS IN SUSTAINABILITY REPORTING: A TOOL FOR DIRECTING CORPORATE SUSTAINABILITY TOWARDS EMERGING ECONOMIC, ENVIRONMENTAL AND SOCIAL OPPORTUNITIES. *Technological and Economic Development of Economy*, 25(5), 1016–1038. <https://doi.org/10.3846/tede.2019.10550>
10. CDP. (2023). CDP A List companies 2023. Retrieved from <https://www.cdp.net/en/companies/companies-scores>
11. CEPI. (n.d.). Organisation. Retrieved from <https://www.cepi.org/about-cepi/organisation/>

12. Cinquini, L., Passetti, E., Tenucci, A., & Frey, M. (2012). Analyzing intellectual capital information in sustainability reports: some empirical evidence. *Journal of Intellectual Capital*, 13(4), 531–561. <https://doi.org/10.1108/14691931211276124>
13. Costa, R., & Menichini, T. (2013). A multidimensional approach for CSR assessment: The importance of the stakeholder perception. *Expert Systems With Applications*, 40(1), 150–161. <https://doi.org/10.1016/j.eswa.2012.07.028>
14. Deloitte. (2022, December). *Working Paper: Balancing Your Materiality Assessment How to move Beyond the Matrix*. Author. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/nl/Documents/risk/deloitte-nl-risk-double-materiality.pdf>
15. Eccles, R. G., Krzus, M. P., Rogers, J., & Serafeim, G. (2012). The need for Sector-Specific Materiality and Sustainability reporting standards. *Journal of Applied Corporate Finance*, 24(2), 65–71. <https://doi.org/10.1111/j.1745-6622.2012.00380.x>
16. EcoVadis. (2024, April 17). Supply Chain Sustainability Assessments | EcoVADIS. Retrieved from <https://ecovadis.com/suppliers/>
17. EFRAG. (2023). *[Draft] EFRAG IG 1: Materiality Assessment Implementation Guidance*. Retrieved from <https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FsiteAssets%2FDraft%2520EFRAG%2520IG%25201%2520MAIG%2520231222.pdf>
18. ESRS. (2023, December). *Commission Delegated Regulation (EU) 2023/2772 of 31 July 2023 Supplementing Directive 2013/34/EU of the European Parliament and of the Council as regards Sustainability Reporting Standards*. Retrieved from <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32023R2772>
19. Estonian Cell AS. (2023). *Environmental and Sustainability Report*. Retrieved from <https://www.estoniacell.ee/en/sustainability-1/sustainability-report-2023/>
20. European Commission. (n.d.). Sustainable forest management. Retrieved from https://single-market-economy.ec.europa.eu/sectors/raw-materials/related-industries/forest-based-industries/sustainable-forest-management_en
21. European Commission. (2011). *COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS*. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011DC0681>

22. European Commission. (n.d.). Forest-based industries. Retrieved from https://single-market-economy.ec.europa.eu/sectors/raw-materials/related-industries/forest-based-industries_en
23. European Parliamentary Research Service. (2021). *Non-financial Reporting Directive*. Retrieved from [https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/654213/EPRS_BRI\(2021\)654213_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/654213/EPRS_BRI(2021)654213_EN.pdf)
24. Goyder, M. (2003). Redefining CSR. Retrieved from <https://www.tomorrowcompany.com/>
25. GreenBiz. (2017). How to make your materiality assessment worth the effort | GreenBiz. Retrieved from <https://www.greenbiz.com/article/how-make-your-materiality-assessment-worth-effort>
26. GRI. (2016). *GRI 101: FOUNDATION 2016*. Retrieved from <https://reportadviser.com/wp-content/uploads/2021/05/GRI-101-foundation-2016.pdf>
27. GRI. (2021). GRI - Sector Program. Retrieved from <https://www.globalreporting.org/standards/sector-program/>
28. GRI. (2022). *GRI Universal Standards 2021 Frequently Asked Questions (FAQs)*. Retrieved from <https://www.globalreporting.org/how-to-use-the-gri-standards/questions-and-answers/>
29. Grigeo. (2023). *Consolidated annual report and sustainability report*. Retrieved from https://www.grigeo.lt/storage/app/media/Verslo%20tvarumas/Tvarumo%20ataskaitos/2022_Sustainability%20report_en.pdf
30. Heinberg, R., & Lerch, D. (2010). What is sustainability. In *The post carbon reader* (Vol. 11, p. 19).
31. Hohnen, P. (2012). *The future of sustainability reporting*. Chatham House, London. Retrieved from https://www.chathamhouse.org/sites/default/files/public/Research/Energy,%20Environment%20and%20Development/0112pp_hohnen.pdf
32. IFRS. (2018). *Definition of Material*. Retrieved from <https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FMeeting%20Documents%2F1709060818526684%2F04-05%20Definition%20of%20Material%20-%20Published%20Amendments%20-%20EFRAG%20TEG%2018-11-29.pdf>

33. International Institute for Sustainable Development. (2007). *Corporate Social Responsibility: An Implementation Guide for Business*. Retrieved from <https://www.iisd.org/publications/corporate-social-responsibility-implementation-guide-business>
34. Jones, P., Comfort, D., & Hillier, D. (2015). Materiality in corporate sustainability reporting within UK retailing. *Journal of Public Affairs*, 16(1), 81–90. <https://doi.org/10.1002/pa.1570>
35. Karagiannis, I., Vouros, P., Skouloudis, A., & Evangelinos, K. (2019). Sustainability reporting, materiality, and accountability assessment in the airport industry. *Business Strategy and the Environment*, 28(7), 1370–1405. <https://doi.org/10.1002/bse.2321>
36. KPMG. (2014). *Sustainable Insight: The essentials of materiality assessment*. Retrieved from <https://assets.kpmg.com/content/dam/kpmg/cn/pdf/en/2017/the-essentials-of-materiality-assessment.pdf>
37. KPMG. (2020). *The time has come The KPMG Survey of Sustainability Reporting 2020*. Retrieved from <https://kpmg.com/xx/en/home/insights/2020/11/the-time-has-come-survey-of-sustainability-reporting.html>
38. KPMG. (2022). *Big shifts, small steps Survey of Sustainability Reporting 2022*. Retrieved from <https://kpmg.com/xx/en/home/insights/2022/09/survey-of-sustainability-reporting-2022.html>
39. Matten, D., & Moon, J. (2008). “Implicit” and “Explicit” CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Academy of Management Review*, 33(2), 404–424. <https://doi.org/10.5465/amr.2008.31193458>
40. Metsa Board Corporation. (2023). *Sustainability Report 2022*. Retrieved from <https://metsaboardannualreport.metsagroup.com/view/290886120/>
41. Mikkilä, M., & Toppinen, A. (2008). Corporate responsibility reporting by large pulp and paper companies. *Forest Policy and Economics*, 10(7–8), 500–506. <https://doi.org/10.1016/j.forpol.2008.05.002>
42. MSCI. (n.d.). ESG Industry Materiality Map. Retrieved from <https://www.msci.com/our-solutions/esg-investing/esg-industry-materiality-map#>
43. Ngu, S. B., & Amran, A. (2018). Materiality disclosure in sustainability reporting: fostering stakeholder engagement. *Strategic Direction*, 34(5), 1–4. <https://doi.org/10.1108/sd-01-2018-0002>

44. Papafloratos, T., Markidis, I., Kotzaivazoglou, I., & Frigidis, G. (2023). Sustainability Material Topics and Materiality Analysis in the Chemical Industry. *Sustainability*, 15(18), 14014. <https://doi.org/10.3390/su151814014>
45. Pflaiderer. (2021). *Sustainability Report 2022*. Retrieved from https://www.pflaiderer.com/fileadmin/content/Images/Sustainability_Report_2023/Pflaiderer_Sustainability_Report_2022.pdf
46. PGS Advisors International. (2013, July 30). Determining materiality: a key for corporate sustainability – PGS Advisors International. Retrieved from <http://www.pgsadvisors.com/2013/07/determining-materiality-a-key-tool-for-corporate-sustainability/>
47. Prinzhorn Group. (2023). *WE LIVE CIRCULARITY*. Retrieved from https://www.prinzhorngroup.com/fileadmin/Prinzhorn_Group/Sustainability/RZ_2023_0905_NHB_WEB_mit_Navi_Einzel.pdf
48. RDM Group. (2023). *Sustainability Report 2022*. Retrieved from <https://rdmgroup.com/wp-content/uploads/2023/10/RDM-Group-Sustainability-Report-2022.pdf>
49. Roca, L. C., & Searcy, C. (2012). An analysis of indicators disclosed in corporate sustainability reports. *Journal of Cleaner Production*, 20(1), 103–118. <https://doi.org/10.1016/j.jclepro.2011.08.002>
50. Sáenz, C. (2019). Creating shared value using materiality analysis: Strategies from the mining industry. *Corporate Social-responsibility and Environmental Management*, 26(6), 1351–1360. <https://doi.org/10.1002/csr.1751>
51. SASB. (2020). *PROPOSED CHANGES TO THE SASB CONCEPTUAL FRAMEWORK & RULES OF PROCEDURE*. Retrieved from https://www.sasb.org/wp-content/uploads/2020/08/Invitation-to-Comment-SASB-CF-RoP.pdf?utm_medium=email&_hsmi=94146062&_hsenc=p2ANqtz-_ibDC97wvYK-TNE6lOSPq9tQNYQsJWHU60vNiaCw8Fa-zP5VU41XCPGmRRm5vMYC93wfpR4XK0qOY8SPHANKqxsNHWweW01go4humzK-WRviMQ6Xo&utm_content=94146062&utm_source=hs_email
52. SASB. (2023, June 13). Find Industry Topics. Retrieved from <https://sasb.ifrs.org/standards/materiality-finder/find/?industry%5B0%5D=RR-FM>
53. Smurfit Kappa. (2023). *Delivering the future together*. Retrieved from <https://www.smurfitkappa.com/sustainability/-/m/files/publications---global/sustainability->

- reports/smurfit_kappa_sustainable_development_report_2022.pdf?rev=e2161db1df74451ca8dfc031214638d4&hash=8BE3990A8AB193ABAB2DFC2B44A055AA
54. Solidus. (2023). Our Sustainability Commitment | Packaging services - Solidus. Retrieved from <https://solidus.com/sustainability-commitment/> 58.
55. Sons, T. (2022, November 4). How corporate social responsibility appeals to your customers. *Forbes*. Retrieved from <https://www.forbes.com> 60.
56. S&P Global. (2022). ESG Materiality Map: Paper and Forest Products | S&P Global ratings. Retrieved from <https://www.spglobal.com/ratings/en/research/pdf-articles/221019-esg-materiality-map-paper-and-forest-products-101567867>
57. Stora Enso. (2023). *Annual Report 2022*. Retrieved from https://www.storaenso.com/-/media/documents/download-center/documents/annual-reports/2022/storaenso_annual_report_2022.pdf?lastUpdated=20230306061830
58. The Navigator Company. (2023). *Valuing is who we are. Sustainability Report 2022*. Retrieved from https://thenavigatorcompany.com/external/relatorio-de-contas-2022/docs/en/2023_04_03_Sustainability_Report_CMVM.pdf
59. Torelli, R., Balluchi, F., & Furlotti, K. (2019). The materiality assessment and stakeholder engagement: A content analysis of sustainability reports. *Corporate Social Responsibility and Environmental Management*, 27(2), 470–484. <https://doi.org/10.1002/csr.1813>
60. UNDP. (2015). Sustainable development goals. Retrieved from <https://www.undp.org/sustainable-development-goals>
61. UNEPFI. (n.d.). European Sustainability Reporting Standards (ESRS). Retrieved from <https://www.unepfi.org/impact/interoperability/european-sustainability-reporting-standards-esrs/#:~:text=Companies%20subject%20to%20the%20CSRD,bringing%20together%20various%20different%20stakeholders.>
62. United Nations. (n.d.). THE 17 GOALS | Sustainable Development. Retrieved from <https://sdgs.un.org/goals>
63. United Nations Commission on Sustainable Development. (2007). *Framing Sustainable Development The Brundtland Report – 20 Years On*. Retrieved from https://www.un.org/esa/sustdev/csd/csd15/media/backgrounder_brundtland.pdf
64. UPM. (2024). Recognitions. Retrieved from <https://www.upm.com/responsibility/fundamentals/recognitions/>

65. UPM-Kymmene. (2023). *UPM Annual Report 2022*. Retrieved from <https://www.upm.com/siteassets/asset/investors/2022/upm-annual-report-2022.pdf>
66. Visual Paradigm - Online Productivity Suite. (n.d.). Retrieved from <https://online.visual-paradigm.com/>
67. VPK Group. (2023). *The future of packaging is shaped by our people*. Retrieved from <https://www.vpkgroup.com/-/media/Files/reports/VPK-Group-Sustainability-Report-2022.pdf?la=en&hash=11DEAD10F0566A6EF2EE72380B805F589565496F>
68. World Business Council for Sustainable Development (WBCSD). (2023). Reporting matters 2023. Retrieved from <https://www.wbcsd.org/Programs/Redefining-Value/Reporting-matters/Resources/RM2023>
69. World Business Council for Sustainable Development (WBCSD). (n.d.). Forest Solutions Group. Retrieved from <https://www.wbcsd.org/Sector-Projects/Forest-Solutions-Group>
70. Yuthas, K., & Epstein, M. J. (2012). Analyzing sustainability impacts. *Strategic Finance*. Retrieved from https://pdxscholar.library.pdx.edu/busadmin_fac/12/
71. Žemaitis, P., Linkevičius, E., Aleinikovas, M., & Tuomasjukka, D. (2021). Sustainability impact assessment of glue laminated timber and concrete-based building materials production chains – A Lithuanian case study. *Journal of Cleaner Production*, 321, 129005. <https://doi.org/10.1016/j.jclepro.2021.129005>

Appendix A
ESRS Material Topics

Topic	Sub-topic	Sub-sub topic
Climate Change	<ul style="list-style-type: none"> • Climate change adaptation • Climate change mitigation 	
Pollution	<ul style="list-style-type: none"> • Energy • Pollution of air • Pollution of water • Pollution of soil • Pollution of living organisms and food resources • Substances of concern • Substances of very high concern • Microplastics 	
Water and marine resources	<ul style="list-style-type: none"> • Water • Marine Resources 	<ul style="list-style-type: none"> • Water consumption • Water withdrawals • Water discharges • Water discharges in the ocean • Extraction and use of marine resources
Biodiversity and Ecosystems	<ul style="list-style-type: none"> • Direct impact drivers of biodiversity loss • Impacts on the state of species • Impacts on the extent and conditions of ecosystems • Impacts and dependencies on ecosystem services 	<ul style="list-style-type: none"> • Climate Change • Land use change, fresh water-use change, and sea use change • Direct exploitation • Invasive alien species • Pollution
Circular Economy	<ul style="list-style-type: none"> • Resources inflows, including resource use • Resource outflows related to products and services • Waste 	
Own Workforce	<ul style="list-style-type: none"> • Working Conditions • Equal treatment and opportunities for all • Other work-related 	<ul style="list-style-type: none"> • Secure employment • Working time • Adequate Wages • Social Dialogue

	rights	<ul style="list-style-type: none"> • Work-life balance • Health and safety • Gender equality • Training and skills development • Employment and inclusion of persons with disabilities • Measures against violence and harassment in the workplace • Diversity • Child labour • Forced labour • Adequate housing • Privacy
Workers in the value chain	<ul style="list-style-type: none"> • Working Conditions • Equal treatment and opportunities for all • Other work-related rights 	<ul style="list-style-type: none"> • Secure employment • Working time • Adequate Wages • Social Dialogue • Collective bargaining • Work-life balance • Health and safety • Gender equality • Training and skills development • Employment and inclusion of persons with disabilities • Measures against violence and harassment in the workplace • Diversity • Child labour • Forced labour • Adequate housing
Affected communities	<ul style="list-style-type: none"> • Communities' economic, social and cultural rights • Communities' civil and political rights • Rights of indigenous peoples 	<p>Privacy</p> <ul style="list-style-type: none"> • Adequate housing • Adequate food • Water and sanitation • Land-related impacts • Security-related impacts • Freedom of expression • Freedom of assembly • Impacts on human

		rights defenders
		<ul style="list-style-type: none"> • Free, prior and informed consent • Self-determination • Cultural rights • Privacy • Freedom of expression • Access to (quality) information • Health and safety • Security of a person • Protection of children • Non-discrimination • Access to products and services • Responsible marketing practices
Consumers and end users	<ul style="list-style-type: none"> • Information-related impacts for consumers and/or end-users • Personal safety of consumers and/or end-users • Social inclusion of consumers and/or end-users 	<ul style="list-style-type: none"> • Prevention and detection including training • Incidents
Business Conduct	<ul style="list-style-type: none"> • Corporate culture • Protection of whistle-blowers • Animal welfare • Political engagement and lobbying • Management of relationships with suppliers, including payment practices • Corruption and bribery 	

Source: Compiled by the author based on ESRS 2023 report

Appendix B**The list of analysed reports and their links**

Company	Report Name	Report Link
Brigl & Bergmeister GmbH	Sustainability Report 2021 2022	https://www.brigl-bergmeister.com/en/sustainability/
Prinzhorn group	Sustainability Report 2022	https://www.prinzhorngroup.com/sustainability/
VPK Group	Sustainability Report 2022	https://www.vpkgroup.com/en/sustainability/sustainability-report
Estonian Cell AS	Environmental and Sustainability Report 2023	https://www.estoniacell.ee/en/downloads/
Metsä Board	Sustainability Report 2022	https://metsaboardannualreport.metsagroup.com/view/290886120/
Stora Enso	Annual Report 2022	https://www.storaenso.com/en/sustainability/sustainability-reporting
UPM-Kymmene Pfleiderer	Annual Report 2022 Sustainability Report 2022	https://www.upm.com/investors/reports-and-presentations/2022/ https://www.pfleiderer.com/global-en/sustainability
Burgo Group	Sustainability Report 2022	https://www.burgo.com/en/investors/reports
RDM Group	Sustainability Report 2022	https://rdmgroup.com/news/rdm-group-sustainability-report-2022/
Grigeo	Sustainability Report 2022	https://www.grigeo.lt/en/sustainability/ab-grigeo-group-of-companies-sustainability-reports
Solidus	Sustainability Report 2022	https://solidus.com/sustainability-commitment/
The Navigator Company	Valuing is who we are. Sustainability Report 2022	https://en.thenavigatorcompany.com/accounting-2022
BillerudKorsnäs	Annual and Sustainability Report 2022	https://www.billerud.com/press--news/press-releases/2023/billeruds-annual-and-sustainability-report-2022
Smurfit Kappa	Delivering the Future Together 2022	https://www.smurfitkappa.com/sustainability/download-centre

Source: Compiled by the author.

Resümee

OLULISUSE HINDAMINE ELI METSANDUSETTEVÕTETE JÄTKUSUUTLIKKUSE ARUANDLUSES

Hagar Saadeldin Lotfy Mahmoud

Kuna huvi jätkusuutlikkuse ning keskkonna-, sotsiaal- ja juhtimisküsimuste vastu kasvab, peavad ettevõtted esitama jätkusuutlikkuse aruandeid. Sidusrühmad on viimasel ajal tundnud tohutut huvi ettevõtete läbipaistvustavade ja nende poolt jätkusuutlike küsimuste avalikustamise vastu. Sellised õigusaktid nagu finantsaruandluse direktiiv (2014/95/EL) ja ettevõtete jätkusuutlikkuse aruandluse direktiiv (CSRD) 2021/0104 aitavad kaasa jätkusuutlikkuse aruannete esitamisele nõuete kohaselt. Aitavad kaasa nõuete kehtestamisele, mida ettevõtted peavad esitama oma jätkusuutlikkusega seotud küsimuste kohta aruandeid.

Selle tulemusel tõttu on jätkusuutlikkuse aruandluse tavadesse üha enam juurdunud olulisuse teemaintegreeritud teema, mille nimi on olulisus. Kuna metsandussektor on seotud jätkusuutlikkusega, on olulisus metsandusettevõtete jaoks tähtisoluuline teema. Olulisust peetakse jätkusuutlikkuse maailmas veel uueks teemaks. Seega on selle hindamise kohta piiratud hulk kirjandust. Käesoleva lõputöö eesmärk on välja selgitada, kuidas ELi metsandusettevõtted määratlevad olulisust ja avalikustavad sageli teatatud olulisi teemasid.

1. peatükk sisaldab kahte alapeatükki ja annab teoreetilise tausta ettevõtete sotsiaalse vastutuse kohta, mis on olulisuse jaoks tähtisoluuline mõiste. Alapeatükis 1.1 defineeritakse määratletakse olulisust, võrreldes erinevate organisatsioonide definitsioonidega määratlusi. Seejärel genereeris autor analüüsitud definitsioonide põhjal olulisuse mõiste, mida kasutatakse kogu lõputöös. Allpeatükis 1.2 käsitletakse akadeemilises kirjanduses ja praktikas kättesaadavaid erinevaid lähenemisviise olulisuse hindamisele. Autor leiab, et peamine erinevus seisneb ettevõtete poolt olulisuse hindamisel kasutatavas sidusrühmade kaasamise meetodis.

Teine peatükk hõlmab empiirilist analüüsi, kus analüüsitakse mitmete metsandusettevõtete veebilehtedeltsaitidelt saadud võetakse välja mitu jätkusuutlikkuse aruandearuannet, et selgitada välja oluliste teemade avalikustamine ja olulisuse hindamise meetodikameetodid. Autor suutis tuvastada 15 metsandusettevõtte puhul tuvastatud ühised olulised teemad. Autor koostas maatriksi tulemuste illustreerimiseks koostas tulemusi illustreeriva maatriksi. Autor tuvastas, et metsandusettevõtted keskenduvad kõige enam keskkonnaküsimustele. Sotsiaalsete küsimuste osas olid nende kaks peamist teatatud teemat koolitus ning tervisekaitse ja ohutus. Kuigi autori arvates on need teemad väga olulised, on

olemas ka teisi olulisi sotsiaalseid teemasid, nagu palk ja töö- ja eraelu tasakaal.

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