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# ESG S2 Social Responsibility and risk management within upstream value chain – Definition and implementation at Metsä Group

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**ABSTRACT:**
While the expansion of international supply chains, subcontracting and globalization has delivered considerable benefits, it has also resulted in significant negative consequences, including human rights violations and environmental damage. Managing environmental and social issues in supply chains has a significant weakness: the complexity of control and oversight. CSRD, ESRS, and CSDDD are part of the EU's regulatory initiatives aimed at enhancing transparency regarding organizations' operations affecting social and environmental risks. ESRS S2 requires companies to identify, assess, and address risks related to value chain workers' rights. However, to comply with the evolving regulations, a risk management framework such as COSO ERM must be in place within a company to ensure a structured approach for identifying and managing various risks.

There is a need for further research on risk management regarding value chain workers and on practical implementation of CSR and due diligence in supplier and operations networks. The aim of this study is to investigate how can best practices for social responsibility and enterprise risk management be adopted and implemented across a supplier network and operations to comply with ESRS S2 while enhancing risk mitigation related to value chain workers. Metsä Group must comply with CSRD and its associated reporting requirements. They may be considered legally responsible for any harm or damage supplier workforce may cause to themselves, other people, the company, and stakeholders, including the environment. Hence, the definition of the best practices is highly relevant, and they can serve as a guideline for other businesses navigating similar challenges. This study aims to contribute valuable insights into the yet theoretically under-explored industry-tailored best practices. Qualitative data were collected from the case company's project workshops and meetings, four semi-structured interviews, and publicly available official sources.

One of the key findings is the recognition of the distinction between passive and proactive risk management practices. The findings indicate that one of the key proactive risk management best practices identified include workforce identification and qualification management. A filter to identify the most risky or vulnerable suppliers enable more efficient risk management, as risks related to value chain workers differ based on the nature of the job and whether the work is conducted on-site or off-site. Anonymous surveys sent directly to the supplier workforce have potential to become a standard expected risk management practice in the future, and to serve as a new opportunity for risk mitigation and communication with external workforce, and for complying with CSDDD and ESRS S2. However, the adoption and implementation of the best practices are not driven solely by the need to comply with the regulations. Rather, they are integral to a broader commitment to responsible and ethical business practices, sustainable growth, and proactive risk management.

**KEYWORDS:** CSDDD, CSR, CSRD, ERM, ESG, ESRS, supply chain network, value chain worker

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**TIIVISTELMÄ:**
Vaikka kansainvälisten toimitusketjujen, alihankinnan ja globalisaation kasvu on tuonut merkittäviä hyötyjä, se on myös aiheuttanut vakavia kielteisiä vaikutuksia, kuten ihmisoikeusloukkauksia ja ympäristövahinkoja. Sosiaaliseen vastuuseen liittyvien kysymysten hallinnassa toimitusketjuissa on todettu merkittävä heikkous: valvonnan monimutkaisuus. CSRD, ESRS ja CSDDD ovat osa EU:n sääntelyaloitteita, joiden tavoitteena on lisätä läpinäkyvyyttä organisaatioiden toiminnasta vaikuttaen sosiaalisiin ja ympäristöriskeihin. ESRS S2 edellyttää yrityksiä tunnistamaan, arvioimaan ja käsittelemään arvoketjun työntekijöiden sosiaalisia riskejä. Jotta yritys voi noudattaa kehittyvää sääntelyä, sillä on myös oltava käytössään riskienhallintamalli, kuten COSO ERM.

Tutkimusta yritysvastuun ja huolellisuusvelvoitteen toteuttamisesta toimittajaverkostoissa, sekä riskienhallinnasta arvoketjun työntekijöihin liittyen tarvitaan lisää. Tämän tutkimuksen tavoitteena on selvittää, kuinka parhaat käytännöt sosiaaliseen vastuuseen ja riskeihin varautumisen osalta voidaan toteuttaa ja ottaa käyttöön siten, että ne tukevat ESRS S2 -standardin noudattamista ja parantavat arvoketjun työntekijöihin liittyvien riskien hallintaa. Metsä Groupin on noudatettava CSRD-direktiiviä ja siihen liittyviä raportointivaatimuksia. Metsä Group voidaan katsoa oikeudellisesti vastuulliseksi, mikäli toimittajien työvoima aiheuttaa vahinkoa itselleen, muille ihmisille, yritykselle tai sidosryhmille, mukaan lukien ympäristölle. Tämän vuoksi parhaiden käytäntöjen määrittely toimitusketjun työntekijöihin liittyvien riskien tunnistamiseen ja hallintaan liittyen on tärkeää. Tutkimuksen tuloksena identifioidut parhaat käytännöt näiden riskien ehkäisemistä varten voivat toimia apuna myös muille yrityksille, jotka kohtaavat vastaavia haasteita. Tutkimus pyrkii tarjoamaan arvokasta tietoa proaktiivisista riskienhallintakäytännöistä, joita ei ole vielä laajasti käsitelty teoreettisessa kirjallisuudessa metsäalan toimitusketjun työntekijöiden näkökulmasta. Tutkimuksen laadullinen aineisto on kerätty projektityöpajojen ja -tapaamisten, neljän puolistrukturoidun haastattelun sekä virallisista lähteistä kerätyn aineiston kautta.

Yksi keskeisistä havainnoista on passiivisen ja proaktiivisen riskienhallinnan käytäntöjen erottaminen toisistaan. Tutkimuksen tulokset osoittavat, että yksi keskeisistä toimitusketjun työntekijöiden ennaltaehkäisevistä riskienhallinnan käytännöistä on ulkoisen työvoiman tunnistaminen ja tarvittavan pätevyyden hallinta. Suodatin, jonka avulla voidaan tunnistaa riskialttiimmat tai haavoittuvimmat toimittajat mahdollistavat tehokkaamman riskienhallinnan, sillä arvoketjun työntekijöihin liittyvät riskit vaihtelevat esimerkiksi työn luonteen mukaan. Anonyymit kyselyt, jotka tullaan lähettämään suoraan toimittajien työntekijöille, voivat tulevaisuudessa muodostua yleiseksi tehokkaaksi riskienhallintakäytännöksi. Ne tarjoavat uuden tavan riskien ennaltaehkäisemiseen, viestintään ulkoisen työvoiman kanssa, sekä CSDDD- ja ESRS S2 -vaatimuksien noudattamiseen. Parhaiden käytäntöjen käyttöönottoa ja toteutusta ei kuitenkaan ohjaa pelkästään sääntelyn noudattamisen tarve, vaan ne ovat osa laajempaa sitoutumista vastuulliseen ja eettiseen liiketoimintaan, kestävään kasvuun sekä ennakoivaan riskienhallintaan.

**AVAINSANAT:** CSDDD, CSR, CSRD, ERM, ESG, ESRS, supply chain network, value chain worker

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## Abbreviations

| | |
|---|---|
| CSDDD | Corporate Sustainability Due Diligence Directive |
| CSR | Corporate Social Responsibility |
| CSRD | Corporate Sustainability Reporting Directive |
| DMA | Double Materiality Assessment |
| ERM | Enterprise Risk Management |
| ESG | Environmental, Social and Governance |
| ESRS | European Sustainability Reporting Standards |
| SCM | Supply Chain Management |

# 1 Introduction

A significant environmental damage was discovered in August 2024, when Stora Enso's forestry machinery repeatedly crossed a river inhabited by numerous endangered freshwater pearl mussels (*raakku*) (Erämaa, 2024; Kauppinen, 2024; Tiilikainen, 2024). The police are investigating the case as a severe environmental crime (Erämaa, 2024; Kauppinen, 2024; Mäntylä, 2024). According to Pelli (2024), Stora Enso had hired a contractor who had ordered the logging from a subcontractor and announced that they had guidelines for protecting the mussels, that had not been complied with. The subcontractor states that the logging guidelines did not mention anything about the mussels. It has since been discovered that both the landowner and Stora Enso's local forest buyer were familiar of the mussels in the river, but it remains unclear why, nevertheless, the mussels were not mentioned in the logging plan and guidelines. However, the subcontractor has stated that they were following the logging plan and orders from Stora Enso's representative to continue the work (Pelli, 2024). As the contractor for the harvesting operations, Stora Enso is responsible for the entire wood procurement chain. The incident is attributed to factors such as communication issues, the functionality of information systems, and individual misjudgements, also within Stora Enso's own organization (Tiilikainen, 2024). The preliminary investigation into the environmental crime includes the entire supply chain: supervision, planning, and execution, and all parties must identify natural sites and act in accordance with the law (Pelli, 2024). The event has already caused severe damage to the company's reputation (Jurvelin, 2024; Kauppinen, 2024; Mäntylä, 2024). This incident serves as a cautionary tale of how such incident can adversely impact a brand's or industry's credibility and reputation for an extended period of time.

While the expansion of international supply chains and globalization has delivered considerable benefits, it has also resulted in significant negative consequences, including human rights violations and environmental damage, such as environmental destruction, corruption, forced and child labour, and land appropriation (European Parliament, 2020, p. 1). Kogg and Mont (2012, p. 162) highlight that while companies are able to manage

their immediate suppliers, controlling entities further up the supply chain is considerably more complex and often beyond reach. While workers in the value chain may encounter risks that require mitigation, they may also pose risk to themselves or others, including the main company, stakeholders, fellow workers, or the environment (Lietonen & Ollus, 2018). If a company within a supply chain performs unethically or improperly, those actions may affect other companies in the chain, exposing them to reputational risk as well (Mateska & al., 2024, p. 287; Petersen & Lemke, 2015, p. 495; Sancha et al., 2016, p. 1934; Seuring & Müller, 2008, p. 1703). According to Wang et al. (2023, p. 97), effective risk management within forestry supply chains enhances both resilience and sustainability in the forestry sector. They further highlight that addressing risks, uncertainties, and complexities is essential for maintaining the economic viability of forest-based businesses. Additionally, organizations operating in the forestry sector can reduce their environmental footprint, enhance their reputation, and gain competitive advantage by adopting sustainable practices within their operations (Kjellberg, 2023).

Significant developments in corporate sustainability reporting and transparency are being implemented rapidly. The Corporate Sustainability Reporting Directive (CSRD) requires organizations to include annual sustainability reports alongside their financial statements (Kuparinen, 2023). This directive adopts a double materiality approach, which entails a thorough examination of the social and environmental impacts produced by their business operations, as well as reporting on how these sustainability themes affect the business itself. Under CSRD, large companies and listed entities within the EU are required to disclose information on their environmental, social, and governance (ESG) practices, including the impacts of their activities and related risks and opportunities, ensuring greater transparency and corporate responsibility (European Parliament and Council, 2022). As of January 2024, large enterprises and publicly listed firms in the EU have been required to adhere to the European Sustainability Reporting Standard (ESRS), as outlined in CSRD (European Commission, n.d. -b). ESRS S2 offers comprehensive guidelines per sub-topic on ESG reporting, such as working conditions, human rights, and due diligence in the value chain (EFRAG, 2022c, pp. 3–10). The primary objective is

to enhance corporate responsibility and transparency concerning labour conditions and workers' rights. The Corporate Sustainability Due Diligence Directive (CSDDD) mandates companies to identify and mitigate both existing and potential future negative effects on human rights and the environment (Työ- ja elinkeinoministeriö, n.d.).

However, it has been acknowledged that a thorough evaluation of the anticipated impacts of the due diligence regulations is essential, given the complexity of the associated interactions (Schilling-Vacaflor & Lenschow, 2021, p. 689). Mezzanotte (2024, pp. 661–663) highlights the need for further research on how due diligence processes can be effectively implemented in practice, and on carefully evaluating the CSRD developments. Fatima and Elbanna (2022, p. 105) further argue that additional research is needed to explore the corporate social responsibility (CSR) implementation process. To comply with the evolving CSR regulations, companies must implement effective risk management practices—a process that, according to Bromiley et al. (2015, pp. 272–273), is often influenced by factors such as regulatory pressure. They further argue that more practical research on enterprise risk management (ERM), focusing more on the effectiveness of different risk management practices, is needed. This study aims to address that need. In addition, this study answers to the call of Nocco and Stulz (2006, p. 20), who argue that despite the solid theoretical foundation of ERM, there is a need for research supporting its practical implementation within organizations. Furthermore, they raise concerns regarding limited understanding of complex risk types—such as reputational risks—which remain difficult to assess, yet are critical to effective risk management. In response, this study explores how to effectively identify, assess and manage such risks, specifically focusing on the risks related to value chain workers. Additionally, this study answers to the call of Wang et al. (2023, p. 98), who state that forest supply chain management has received limited attention in academic discussion, and recognizing and understanding the specific risks associated with forest supply chains is a fundamental step toward effective risk mitigation that needs further exploration.

The afore-mentioned regulatory and academic discussions highlight the need for further research into the practical implementation of social responsibility and due diligence in supplier networks and operations. The purpose of this study is to answer the following research question: **“How can best practices for social responsibility and enterprise risk management be adopted and implemented across a supplier network and operations to comply with ESRS S2 while enhancing risk mitigation related to value chain workers?”** Since 2024, Metsä Group must comply with the CSRD and its associated reporting requirements, which have shaped both the content and structure of the 2023 report (Metsä Group, n.d. -c). Simultaneously Metsä Group has recognized potential to further develop transparency of its sustainability work and develop new practices benefitting the business and its stakeholders. Metsä Group has already published its Sustainability Report for reporting years 2023 as well as 2024 within the ESRS framework and is further enhancing both operative processes as well as reporting capabilities. Therefore, Metsä Group is a representative case company for examining this phenomenon. According to Lindfors (2024, pp. 97–98), Metsä Group has succeeded in implementing the structure and analysis required by ESRS and fulfilling the majority of the requirements of the directive, with the positive contribution of the expertise, collaboration and good planning in the company. Metsä Group's preparation process provides a concrete example of how a company, which is quite exceptional at the EU level in already reporting extensively in line with the ESRS one year in advance, has prepared for the implementation of the directive.

The aim of this study is to explore how best practices for social responsibility and risk management can be integrated across a supplier network and operations to meet ESRS S2 requirements and improve risk mitigation for value chain workers. In this thesis, value chain worker refers only to suppliers’ employees, customers’ employees are not included. While the theoretical scope of this study covers the broader supplier network, its empirical focus is on the upstream value chain. It is also important to understand that the adoption and implementation of best practices are not driven solely by the need to comply with the evolving corporate social responsibility regulations. Rather, they are integral

to a broader commitment to responsible and ethical business practices, sustainable growth, and proactive risk management. The definition of these practices is highly relevant, and they can serve as a guideline for other businesses navigating similar challenges. Therefore, this work can contribute valuable insights into industry-tailored best practices—a need that is still underexplored in academic literature.

This study uses qualitative data collection methods. The data have been gathered primarily from the case company's project workshops and meetings, secondarily from four semi-structured interviews, and additionally from publicly available official sources. The assignment for defining and implementing best practices to ensure social responsibility in Metsä Group operations was initiated by Metsä Group CEO, Internal controls and Procurement in June 2024. While there can be various viewpoints and perspectives on how value chain worker-related social responsibility within organizations can be organized, this study reviews the topic from a single case study point of view within the scope of the case company project, providing a clear structure and delimitation for the study.

This study is structured into five chapters. The first chapter serves as the introduction, providing an overview of the research objectives, scope, and significance. This is followed by theoretical background on the key EU regulations, enterprise risk management, supply chain management, and corporate social responsibility. Both risks and mitigation measures related to value chain workers and risks the company and other related stakeholders may face when utilizing external labour are also considered. The third chapter outlines the research methodology including an introduction of the case company, data collection process, and methods used for the analysis. Next, the fourth chapter discusses the findings of the research, providing a thorough analysis of the data collected. Finally, the fifth chapter presents the conclusion and summary of the study, where theoretical and managerial contributions are explained, limitations of the study are acknowledged, and suggestions for future research are offered.

# 2 Theoretical background

This theoretical background chapter addresses the two main topics central to the study; the key regulatory and risk management frameworks, and social responsibility within supplier networks and operations. The first section outlines the most relevant directives and standards for this study, providing important context for understanding the analysis. The second part focuses on supply chain management and social responsibility, exploring the associated risks value chain workers may face, as well as how these risks could be mitigated. Risks the company and other related stakeholders may face when utilizing external labour is also taken into consideration. The literature review is summarized with a theoretical framework.

## 2.1 Regulatory and risk management frameworks for social responsibility

European Union regulations obligate large and publicly listed companies to regularly disclose reports on the social and environmental risks they encounter (European Commission, n.d. -b). These reports must explain not only how their operations affect the environment, but also how people are affected by their activities. This requirement is part of the broader effort to increase transparency and corporate accountability regarding sustainability issues. Therefore, Corporate Sustainability Reporting Directive (CSRD), European Sustainability Reporting Standards (ESRS), and Corporate Sustainability Due Diligence Directive (CSDDD), hereafter referred to as CSRD, ESRS and CSDDD, are all part of the EU's regulatory initiatives aimed at enhancing transparency regarding organizations' operations affecting social and environmental risks (European Commission, n.d. -b). The principle of double materiality is a core element of the CSRD, mandating organizations to address both the impact of their activities on sustainability (impact materiality to surrounding society) and the financial implications of sustainability issues (materiality into the company itself) in their reporting (EFRAG, 2022a, pp. 3–6).

However, according to Järvinen & Ilmonen (2025), it is important to note that on 26 February 2025, the European Commission proposed reductions to CSRD's and CSDDD's content and scope. For the CSRD, the main change would be to delay reporting by two years and apply it only to larger companies. For the CSDDD, fewer companies would need to follow the directive, and the focus would be on direct business partners, aiming to lighten the workload and simplify the rules. Simultaneously, it needs to be acknowledged that while companies are required to comply with social responsibility regulations, they must also ensure that their overall risk management practices are in place. Hence, COSO ERM is widely recognized and used as a framework for integrating various types of risks into enterprise risk management, including those related to social responsibility (COSO, 2017).

### 2.1.1 Conducting double materiality assessment

The concept of double materiality is a fundamental aspect of CSRD as it requires organizations to consider two important views: impact materiality to surrounding society and financial materiality into the company itself, as demonstrated in Figure 1 (EFRAG, 2022a, pp. 4–6). Impact materiality explores how a company's practices affect societal and environmental conditions, particularly the negative effects that may arise. Conversely, financial materiality examines how sustainability-related factors could influence the company's economic performance or legitimacy to operate, looking at potential risks and opportunities that could impact future revenue and overall enterprise value.

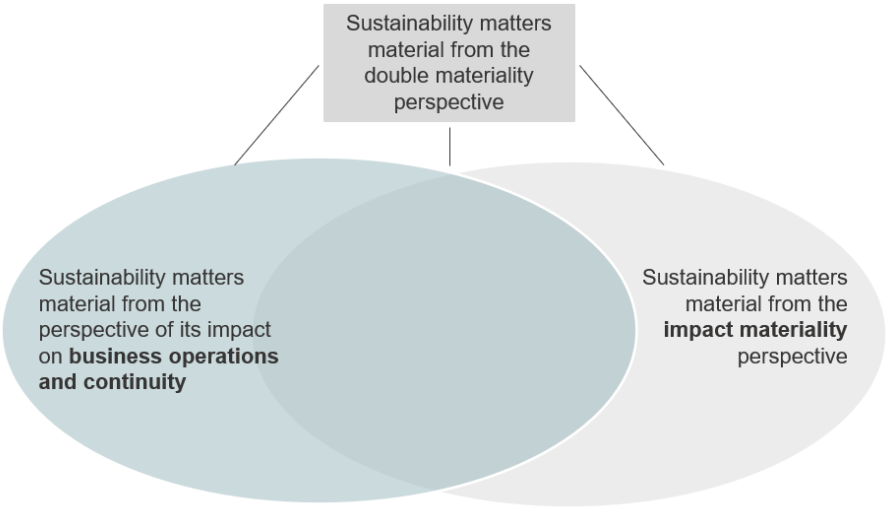


**Figure 1.** Double materiality (adapted from EFRAG, 2022a, p. 5).

Companies must evaluate and disclose how their operations affect the environment and society (impact materiality to surrounding world) (EFRAG, 2022a, pp. 3–6). This focus ensures that organizations recognize and report on the significant negative consequences that their activities may have. Similarly, companies are required to assess how sustainability issues could impact their financial performance (financial materiality) but especially company's capability to exist and operate.

Therefore, it can be concluded that if a company operates in an industry where legitimacy needs to be proven or it is challenged, it is mandatory to understand that adverse impacts on the company itself are not always immediate or financially relevant. However, double materiality involves looking at potential risks and opportunities that might influence future cash flows and the overall value of the business (EFRAG, 2022a, pp. 3–6). By mandating that companies report on both of these aspects, the CSRD aims to provide stakeholders with a full understanding of the organization's sustainability practices and their impacts. This dual focus supports the directive's objectives of improving transparency and accountability in how companies approach sustainability.

While conducting double materiality assessment under the CSRD, companies begin by understanding the directive's requirements and defining the scope of their analysis, including identifying the stakeholders who may be affected by or have an interest in their sustainability performance (PwC, n.d.). They then gather and evaluate a range of sustainability topics, considering both the company's impact on people and the environment and the potential financial implications of these issues affecting the company's operations. This assessment helps determine which topics are the most significant and should be prioritized. The insights gained are integrated into business strategy and reporting, ensuring that sustainability is not treated as a separate concern but embedded in decision-making. As sustainability risks and expectations evolve, companies are expected to revisit and update their assessments regularly to stay aligned with stakeholder needs and regulatory standards (PwC, n.d.).

The term regenerative business typically refers to a way of doing business that does not just aim to avoid harm, but actively helps nature and communities recover and thrive (Drupsteen & Wakkee, 2024, pp. 1–3). Regenerative business goes beyond sustainability by actively restoring ecological and social systems, ensuring benefits for nature, society, and the economy. Companies that follow this approach aim to create value not only for themselves, but also for nature, local communities, customers, suppliers, employees, and others involved in or affected by their business (Konietzko et al., 2023, p. 385). Regenerative business models enhance social and ecological value by making economic investments, thereby positively impacting the entire value chain (Drupsteen & Wakkee, 2024, pp. 7–8). However, organizations that become truly sustainable do not just include environmental or social goals to their strategies—they also change the way people think and work within the company (Carter & Rogers, 2008, p. 368). One useful method in this change is double materiality analysis. For example, regenerative forest management may require upfront investment, but it helps forests recover and produce resources more sustainably, which supports long-term business and reduces environmental harm (Walter, 2022). From a double materiality perspective, using forests might seem environmentally damaging but financially beneficial. However, regenerative forestry helps forests

stay healthy and adapt to change, which means they can keep providing long-term benefits for the climate, nature, and local communities (Walter, 2022). This shows that double materiality is a complex concept that emphasizes the value of investing in practices such as regenerative forestry, which may cost more at first but support long-term sustainability and business success.

### 2.1.2 Corporate Sustainability Reporting Directive

The European Parliament and the Council finalized a political agreement on the CSRD in June 2021 (European Commission, 2022). It aims to improve the uniformity and comparability of sustainability reports across companies, tackling the existing inconsistencies and lack of standardization in the disclosed information. CSRD requires companies and listed entities within the EU to report on their ESG impacts and corporate responsibility in accordance with ESRS (European Parliament and Council, 2022). In essence, ESRS clarifies the disclosure requirements for companies, helping them manage the growing demand for sustainability information (European Commission, 2022; Gilbert-d'Halluin, 2024, p. 11). These standards create a structured framework for companies to report their sustainability performance in a consistent, reliable, and comparable way. CSRD is a crucial component of the European Green Deal and marks a significant shift in sustainability reporting globally and within the EU (European Commission, 2022). CSRD also introduces an EU-wide requirement for independent assurance of sustainability reports to improve their reliability, which will be implemented gradually, starting with limited assurance and moving toward more rigorous standards (Gilbert-d'Halluin, 2024, p. 30).

Additionally, there is an assumption that investors are eager to learn about the broader impacts of their investments on society and the environment and to understand the potential risks to their investments (European Commission, 2022). According to Kuparinen (2023), it is important to understand, that the new obligations brought by this reporting directive require major investments, new resources and actions within companies as they need to adjust to and prepare for the new regulations. However, it is an inevitable and necessary development direction, that companies need to report their sustainability

practices and data based on uniform, scientific and comparable information (Kuparinen, 2023). To conclude the main objectives of CSRD are demonstrated in Table 1.

**Table 1.** The main objectives of CSRD (Gilbert-d'Halluin, 2024, pp. 4–31).

| |
|---|
| CSRD aims to make sustainability reporting more consistent and comparable, as it introduces mandatory use of the ESRS, which provides detailed disclosure requirements across ESG topics. |
| CSRD requires companies to assess and report both how their activities affect people and the environment, and how sustainability issues affect their financial performance to ensure companies are accountable for their broader impacts (double materiality). |
| To expand the reach of sustainability reporting, the directive significantly increases the number and types of companies required to report, including large, listed, and non-EU companies with substantial operations in the EU. |
| To improve the reliability of sustainability information, external assurance of the disclosures is necessary. |

### 2.1.3 European Sustainability Reporting Standards

On July 31, 2023, the European Commission approved the initial set of ESRS (Denkstatt, 2023). The ESRS standards are sustainability reporting standards within the EU and are a key component of the CSRD from the European Parliament and Council. The ESRS is the compulsory reporting standard for all companies subject to the directive (Gilbert-d'Halluin, 2024, p. 11). The CSRD outlines the scope of the ESRS by specifying which companies are subject to the new reporting requirements and the timeline for compliance (Denkstatt, 2023). In brief, this is based on various criteria, as the CSRD implements a phased approach to introducing these new reporting obligations. Figure 2 demonstrates that there are 12 ESRS in place. The initial set of ESRS includes two cross-cutting standards and 10 topical standards, each addressing specific ESG issues. These reporting standards provide a clear and coherent structure for presenting sustainability information.

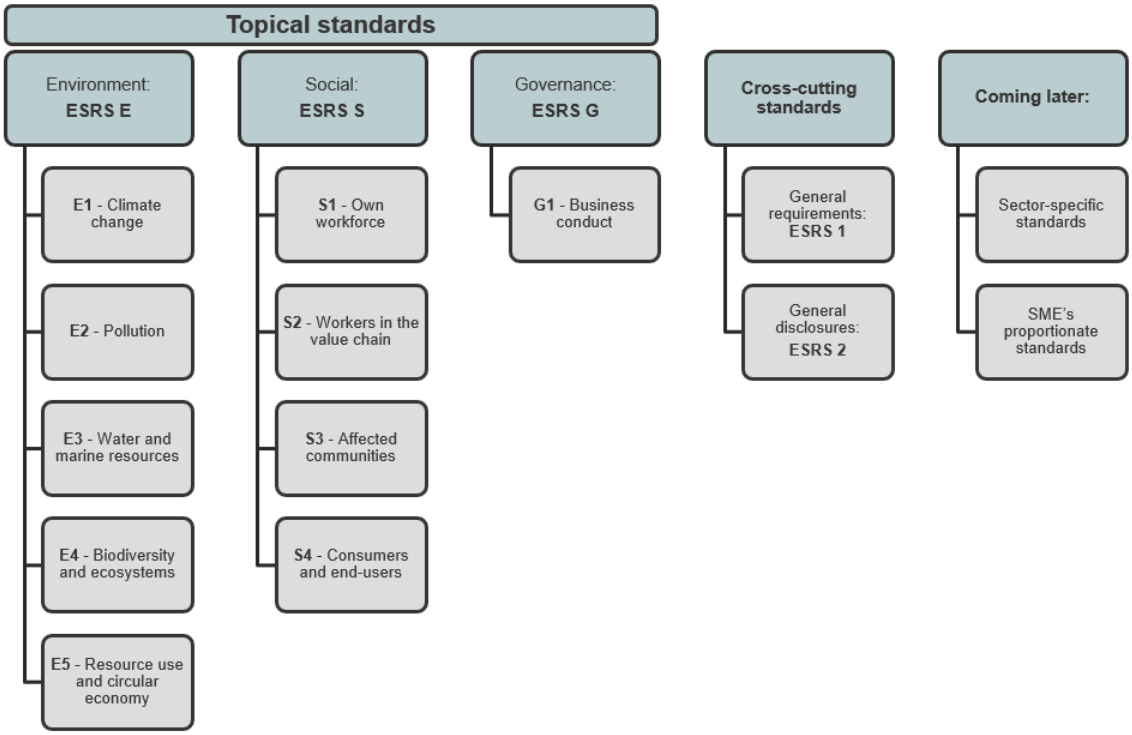


**Figure 2.** ESRS standards (Denkstatt, 2023).

As demonstrated in Figure 2, the five environmental standards (ESRS E1-E5) address climate change, pollution, water and marine resources, biodiversity, and resource use, requiring companies to report on their transition to sustainable practices and contributions to the EU Green Deal (Denkstatt, 2023). The four social standards (ESRS S1-S4) focus on workforce reporting, employees in the value chain, affected communities, and consumers, emphasizing qualitative information. The governance standard (ESRS G1) outlines a company's strategy and performance, detailing the roles of management bodies and specifying reporting on impacts, risks, and corporate policies, including measures against corruption and political influence. Additionally, simplified ESRS standards for capital market-oriented SMEs and voluntary standards for non-listed SMEs are being created to meet the needs of smaller companies and allow for proportional sustainability reporting. The European Financial Reporting Advisory Group (EFRAG), plays a central role in developing and updating the ESRS, and has issued implementation guidance to support companies in applying the standards (Gilbert-d'Halluin, 2024, p. 11).

The ESRS S2 standard requires companies to report on the impacts on value chain workers, and to outline their policies regarding value chain workers (EFRAG, 2022c, pp. 4–10). It highlights the need for effective remediation processes for negative impacts and provides channels for value chain workers to raise concerns which should be aligned with established guidelines such as the UN Guiding Principles on Business and Human Rights. The standard focuses on the actions taken to address material impacts on workers and efforts to mitigate risks and enhance positive outcomes. Integration with general disclosures is essential, as companies must ensure that their disclosures under ESRS S2 are coherent and linked to disclosures about their own workforce as specified in ESRS S1. The standard aims to align with existing human rights frameworks and corporate governance guidelines, facilitating transparency and accountability in managing value chain workers' rights. The key requirements of ESRS S2 standard are summarized in Table 2.

**Table 2.** The key requirements of ESRS S2 standard (EFRAG, 2022c).

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| Companies must report on the working conditions of workers in their value chain, including remuneration, occupational safety, working hours, and freedom of association. |
| Requirement to respect human rights across the entire value chain: companies must identify, assess, and address risks related to value chain workers' rights and other social impacts. |
| Companies must have due diligence processes in place to monitor the working conditions of workers in the value chain and manage risks that workers may pose to themselves or to other affected parties (such as nature, people, or property). |
| Emphasis is placed on the interaction with value chain workers and stakeholders, as well as mechanisms to prevent or remedy any adverse impacts. |

In this study the key focus is on ESRS S2 – Workers in the value chain. However, it is also important to understand the dimensions of ESRS G1 – Business conduct. ESRS G1 stand-

ard outlines how companies should disclose their approach to ethical practices, including corporate culture, supplier relationships, anti-corruption measures, and whistleblower protection (EFRAG, 2022b, pp. 4–8). It also covers governance roles, impact, risk and opportunity management, political influence, payment practices, and measurable outcomes such as confirmed incidents of misconduct. Together, these elements provide a fuller picture of a company's integrity and accountability.

ESRS G1 emphasizes ethical business practices, which are crucial for the fair treatment of workers in the value chain as outlined in ESRS S2 (EFRAG, 2022b; EFRAG, 2022c). Ensuring ethical conduct helps protect workers' rights and promotes fair labour practices. Both standards highlight the importance of managing supplier relationships effectively. ESRS G1 aims to prevent unethical practices in supply chains, while ESRS S2 focuses on the well-being and fair treatment of workers employed by these suppliers. Companies must disclose how they manage risks and opportunities related to business conduct (ESRS G1) and the treatment of workers in the value chain (ESRS S2) ensuring comprehensive risk management across the organization. Hence, the way to respond to, for example, a reported human rights violation comes from ESRS G1, as it defines how to address the reported issue. The policies required under ESRS G1 for business conduct should align with those for protecting workers in the value chain as per ESRS S2. This alignment ensures consistency in ethical behaviour and worker protection throughout the business operations (EFRAG, 2022b; EFRAG, 2022c).

### 2.1.4 Corporate Sustainability Due Diligence Directive

The aim of CSDDD is to encourage companies to operate sustainably and responsibly within global value chains, while integrating human rights and environmental protection into companies' core operations and governance (Työ- ja elinkeinoministeriö, n.d.). The due diligence requirement supports fair competition, risk management, and consumer trust, while also protecting workers in developing countries and encouraging sustainable investment. Companies must identify, assess, and address actual or potential negative

impacts, implement and monitor an effective grievance mechanism, and publicly report on their due diligence efforts.

According to Työ- ja elinkeinoministeriö (n.d.), the directive applies to the following types of companies:

- EU-based companies and parent companies with over 1,000 employees and global revenue above €450 million
- Franchise businesses in the EU with revenue over €80 million
- Non-EU companies operating in the EU that meet the same revenue thresholds within the EU market.

The directive will be implemented in phases, beginning with the largest corporations (Työ- ja elinkeinoministeriö, n.d.):

- From 2027, the directive will apply to companies with over 5,000 employees and more than €1.5 billion in annual revenue.
- In 2028, it will expand to companies with over 3,000 employees and revenue above €900 million.
- By 2029, it will cover all remaining companies in scope—those with at least 1,000 employees and over €450 million in revenue.

The CSDDD offers several benefits for citizens, companies, and developing countries (European Commission, n.d. -a). For citizens, it helps protect human and labor rights, supports a healthier environment, increases transparency, and builds trust in businesses. It also enables more informed consumer choices. For companies, it creates a unified legal framework across the EU, ensuring fair competition. It strengthens customer trust, employee engagement, and understanding of their social and environmental impacts. Better risk management improves resilience and competitiveness. For developing countries, it promotes human rights and environmental protection. This would lead to enhanced

sustainability practices, ultimately resulting in better living conditions for people. The main objectives of CSDDD are summarized in Table 3.

**Table 3.** The main objectives of CSDDD (European Parliament and Council, 2024).

| |
|---|
| To identify, prevent, mitigate and address actual and potential adverse impacts on human rights and environmental risks in their own operations and value chains. |
| To ensure companies are held legally accountable if they do not meet these responsibilities. |
| To require organizations to adopt and execute successful transition for reducing climate change. |
| To maintain existing national and EU protections for human rights, labour rights, and the environment. |

To conclude, CSRD and CSDDD are interconnected, as demonstrated in Figure 3. CSDDD outlines the necessary due diligence steps that companies must follow (Worldfavor, 2024). Companies under this directive are legally required to examine and address the environmental and human rights impacts of their operations and supply chains. CSRD, on the other hand, defines how companies should report these actions, as outlined in the ESRS. CSDDD extends beyond the EU, applying to both EU and non-EU companies, whereas CSRD is primarily EU-centric. The key objective of CSDDD is to make sure that companies take concrete actions to mitigate or eliminate any adverse effects their activities may have on the environment and human rights. The primary aim of the CSRD is to ensure uniform ESG performance reporting, providing stakeholders with a clear and comprehensive understanding of a company's sustainability performance (Worldfavor, 2024).

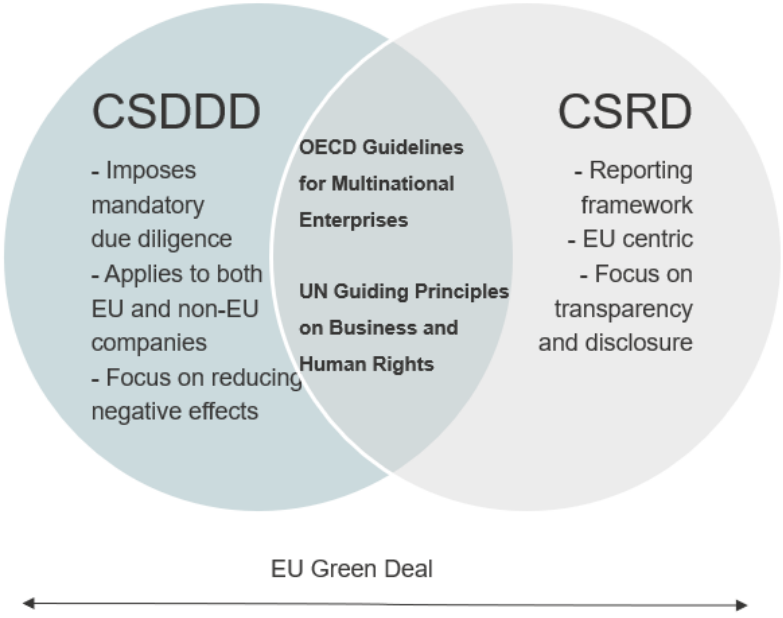


**Figure 3.** The intersection between the CSDDD and the CSRD (Worldfavor, 2024).

### 2.1.5 COSO Enterprise Risk Management Framework

In today's complex business environment, companies face a wide range of risks that can affect their operations and profitability (COSO, 2017, p. 1; Thomson Reuters, 2024). As uncertainty grows, organizations should integrate risk thinking into strategy to remain resilient, build trust, and respond to constant change (COSO, 2017, p. 1). Enterprise risk management (ERM) offers a framework that enables companies to manage risks in a unified and coordinated way, rather than handling them separately (Bromiley et al., 2015, p. 265; Hoyt & Liebenberg, 2011, p. 798; Nocco & Stulz, 2006, p. 8).

The Committee of Sponsoring Organizations (COSO) aims to guide organizations with ERM, Internal Control, Fraud Deterrence and Governance (COSO, 2023). In 2017, COSO introduced the revised framework "Enterprise Risk Management-–Integrating with Strategy and Performance," emphasizing the critical role of risk in shaping strategy and enhancing organizational performance. As risk plays a key role in positioning strategy and performance throughout the entire organization, the framework aims to highlight the importance of integrating ERM into strategic planning (COSO, 2017, p. 6). The framework

is organized into five interconnected elements: Governance and Culture, Strategy and Objective-Setting, Performance, Review and Revision, and Information, Communication and Reporting. As illustrated in Figure 4, the framework progresses from more passive practices such as Governance toward increasingly proactive approaches including Reporting.

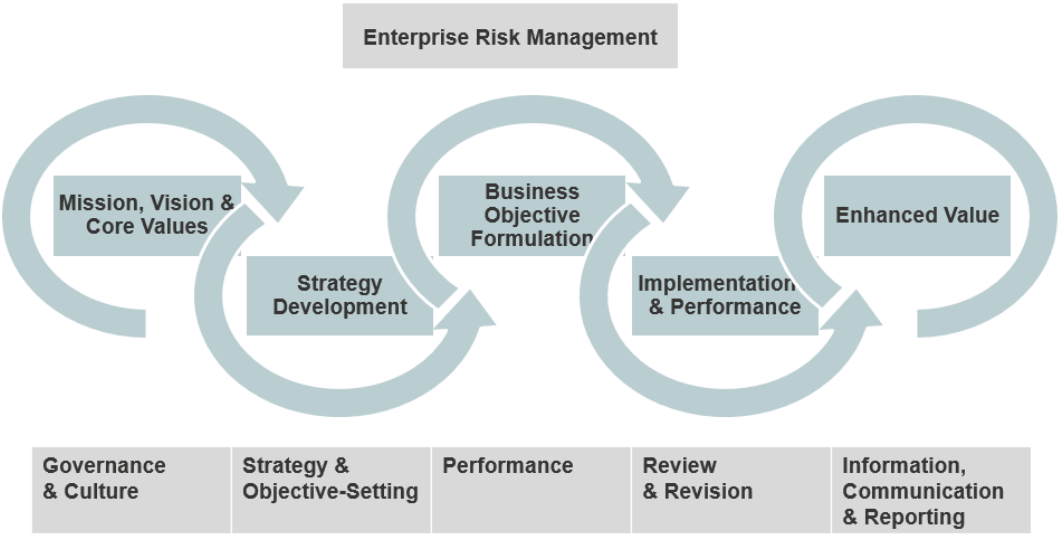


**Figure 4.** Enterprise Risk Management—Integrating with Strategy and Performance (adapted from COSO, 2017, p. 6).

Governance and company culture influence company's risk management and determine what kinds of risks must be managed (Thomson Reuters, 2024). Governance includes elements such as code of conducts and internal controls. Culture, on the other hand, reflects the values and preferred ways of acting within an organization (COSO, 2017, p. 6). Strategy and objective-setting includes aligning them with the company's risk tolerance (Thomson Reuters, 2024). This involves for example conducting double materiality assessment. The objectives turn strategy into practice and help identify and manage risks effectively (COSO, 2017, p. 6). Performance includes assessing and prioritizing risks (COSO, 2017, p. 6) after which the company develops and implements processes for managing the risks (Thomson Reuters, 2024). Review and revision ensure ongoing evaluation of risks to ensure effectiveness and adaptability (Thomson Reuters, 2024). Finally, information, communication, and reporting aim to secure that relevant information is

shared internally and externally (COSO, 2017, p. 6). The COSO ERM framework also involves tracking risk-related performance through key risk indicators (KRIs), which help measure how well risks are being assessed and managed (Thomson Reuters, 2024). To conclude, ERM provides a structured approach for identifying and managing various risks, integrating them into risk management practices within a company (COSO, 2017). Furthermore, COSO ERM framework is a strong and useful tool for conducting double materiality assessment.

## 2.2 Social responsibility within supplier networks

As demonstrated in the first part of the theoretical background regarding the demands and requirements introduced by the directives, and according to research by e.g. Kogg and Mont (2012, p. 154) and Marano et al. (2024, p. 413) there is an increasing emphasis on addressing ESG issues within supply chains, rather than focusing solely on organization's own operations. Additionally, it can be assumed that policy makers, regulators and governments are showing more interest in how modern supply chains are designed, managed, and controlled (MacCarthy et al., 2022, pp. 1–2).

Due to globalization it is common for organizations to work with multiple international suppliers (Herkenhoff et al., 2023, p. 1; Parmigiani et al. 2011; Petersen & Lemke, 2015, p. 499). Today, consumers tend to be increasingly concerned about the ethical implications and human rights issues throughout organizations' entire value chain (Duan et al., 2022, p. 68; Herkenhoff et al., 2023, p. 1; Lu & Tomlin, 2021, p. 902). This, along with the growing awareness and demands of stakeholders regarding sustainability challenges encourages suppliers to invest in CSR (Duan et al., 2022, p. 68; Herkenhoff et al., 2023, p. 1) and ensure CSR compliance throughout organizations' entire value chains (Herkenhoff et al., 2023, p. 1; Kogg & Mont, 2012, p. 155).

However, Herkenhoff et al. (2023, p. 1) and Guo et al. (2015, p. 2722) recognize that enforcing CSR on suppliers may be challenging, and ensuring compliance across multiple supplier tiers can be difficult (Seuring & Müller, 2008 pp. 1703–1704). The expansion of

global supply chain production has introduced new risks for workers, for example, subcontracting can lead to value chain workers' rights violations such as late working hours and lack of adequate compensation (Mosley, 2017, p. 154; Petersen & Lemke, 2015, p. 499). Kogg and Mont (2012, p. 162) highlight that managing environmental and social issues in the supply chain has a significant weakness: the complexity of control. Additionally, Wang et al. (2023, p. 97) argue that greater complexity increases risk. Companies that proactively address these issues tend to be viewed more favourably if violations become public (Kogg & Mont, 2012, p. 162). Thus, ethical and sustainable practices have become a key concern in global supply chains (Mateska et al., 2024, p. 285).

### 2.2.1 Supply chain management

Lambert et al. (1998, p. 1) define supply chain as a network comprising different businesses and relationships. In this context, a supply chain is seen as a network of organizations connected through production and distribution phases, working together to produce and deliver products and services to the end consumer (Mentzer et al., 2011, p. 3). According to Harland (1996, p. 64) supply chain management (SCM) is defined as “the management of a network of interconnected businesses involved in the ultimate provision of product and service packages required by end customers”. Today, organizations may able to decide which activities in their supply networks will be outsourced or managed directly (Mills et at al., 2004, p. 1014). To remain competitive, organizations can enhance consumer value by optimizing supply chain operations, improving efficiency and effectiveness (Kogg & Mont, 2012, p. 157).

For both companies and the general public, social and environmental responsibility are becoming increasingly critical, particularly from the perspective of SCM (Guo et al., 2015, p. 2741). According to Kogg & Mont (2012, p. 157), procurement and supply management play a key role in addressing environmental and social issues upstream in the supply chain, ensuring that sustainability standards are met. Thus, success in supply chains needs a balance of economic, environmental, and social goals. A streamlined supply

base, where participants co-operate and gain deeper insights into each other's operations, usually provides environmental benefits. One key advantage is the improved ability to monitor and manage the environmental and social impacts within the supply chain. Additionally, closer collaboration and integration among supply chain actors are required for effective environmentally and socially responsible SCM.

### 2.2.2 Corporate social responsibility

Organizations implement corporate social responsibility in various ways. Lindgreen et al. (2008, p. 320) state that CSR includes economic, societal, and environmental responsibilities, and investing in CSR can help businesses meet stakeholder expectations, enhance their reputation, attract customers, and strengthen their market position. Petersen and Lemke (2015, p. 499) further categorize CSR into four key dimensions: governance, ethics, environment, and social. This structured framework helps organizations define and implement CSR in a more comprehensive way. As shown in Figure 5, the first dimension, ‘governance,’ focuses on an organization’s interaction with stakeholders and its role within social and economic networks. Effective governance involves ethical management and transparent decision-making, fostering strong relationships with employees, customers, and investors. Responsible organizations tend to be more successful at mitigating risks, attracting investments, and maintaining high levels of employee satisfaction and customer loyalty. Lindgreen et al. (2008, p. 318) further argue, that organizations with advanced CSR initiatives may also achieve a stronger corporate image and contribute more positively to social and economic well-being.

In the context of CSR, ethics refers to a company's commitment to ethical behaviour across its operations and its responsibility to meet stakeholders' moral expectations (Petersen & Lemke, 2015, p. 499). Companies perceived as ethical are usually seen by stakeholders as more trustworthy, financially stable, and committed to long-term success. Ensuring that ethical principles are consistently upheld throughout the supply chain can be challenging, as cultural perspectives on ethics and legal regulations vary across different regions. Therefore, organizations and their supply chains should try to align their ethical

principles across their supply chains to maintain consistency, meet stakeholder expectations and avoid reputational damage (Petersen & Lemke, 2015, p. 499).

The third sphere 'environment' focuses on organizations' responsibility to manage and mitigate its risks and impacts on the environment, building a mutually beneficial relationship between the organization and the environment (Petersen & Lemke, 2015, p. 499). By adopting proactive environmental strategies, organizations can protect the environment while gaining financial benefits such as cost savings, enhanced reputation, and new investments. Regarding 'social' dimension, organizations are expected to take actions that benefit society and to do more than just fulfil their responsibility to maximize profits for shareholders. They are expected to contribute to addressing human and labour rights violations. Overall, according to Lindgreen et al. (2008, pp. 311–319), CSR plays a crucial role in developing and maintaining corporate reputation, building connections with customers, and having a positive impact on customer satisfaction, corporate image, and employee engagement.

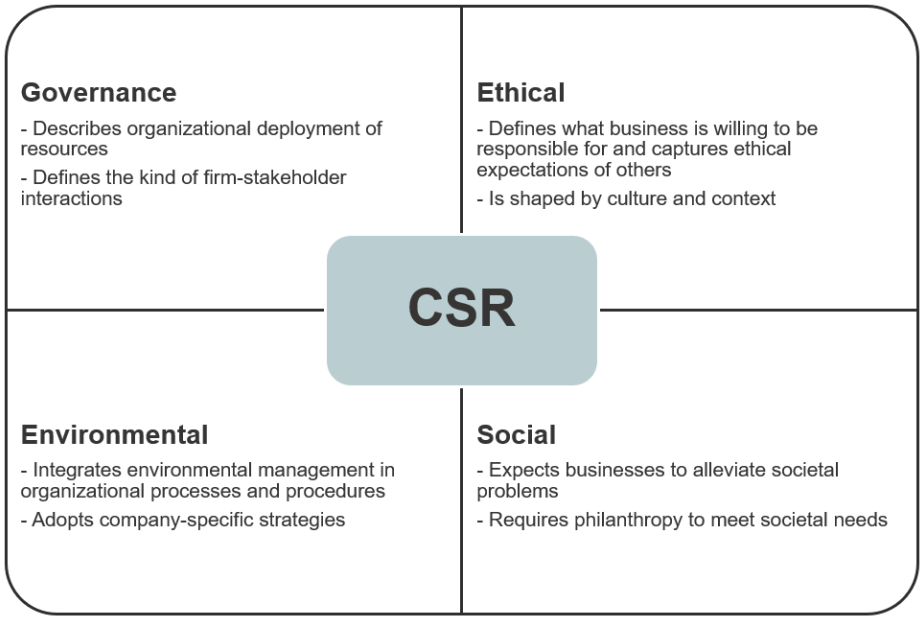


**Figure 5.** Four spheres of CSR (Petersen & Lemke, 2015, p. 499).

Corporate citizenship is one of the most commonly used terms businesses adopt to describe their approach to CSR (Carroll, 2015, p. 93). It reflects the idea that companies, like individuals, are members of the communities in which they operate and therefore have certain responsibilities. Carroll (2003, pp. 1–2) further argue that a good corporate citizen fulfills its economic, legal, ethical, and philanthropic responsibilities – being profitable, complying with laws, acting ethically, and contributing positively to the community through charitable actions.

Good corporate citizenship involves a holistic approach, where businesses not only focus on profit-making but also actively engage with stakeholders and address societal needs, ensuring that they fulfill their obligations to both their shareholders and the wider community (Carroll, 2003, pp. 1–2). CSR and corporate citizenship both highlight a company's responsibility to do good for society, and both aim to align business with social values to build trust and credibility (Carroll, 2015, pp. 90–93). This is especially important when operating within the forestry industry. Companies adopt good citizenship practices to enhance their reputation, improve employee well-being, and create a sustainable business environment, all of which can support long-term shareholder value (Marsden & Andriof, 2007, p. 350).

### 2.2.3 Risks value chain workers may face

Some business practices within supply chains, such as outsourcing, inadequate governance, irresponsible sourcing, and power imbalances among different supplier levels, increase the risk of forced labour (Vanpoucke & Klassen, 2024, pp. 1806–1807). These challenges are heightened by the complexities of multitiered supply chains where companies and suppliers operate across various countries with diverse cultures and legal systems. Unfortunately, this situation may lead to various forms of forced labour that are hard to identify. Forced labour or other forms of worker exploitation is not limited to traditionally high-risk countries in global supply chains but also exists in Finland (Nousjoki et al., 2024; Saloranta, 2023). According to (Aaltonen, 2025), the police regularly investigate multiple degrees of labor exploitation cases, and they have become

more common during the past years. Exploitation of foreign workers, especially related to wages and working conditions, is common especially within subcontracting chains (Aaltonen, 2025).

Complex outsourcing and subcontracting decentralize oversight and increase the likelihood that employment issues go unnoticed in high-risk industries known in Europe, such as forestry, agriculture, and in sectors identified as high-risk in Finland, such as construction, cleaning, and hospitality (Lietonen et al., 2020, p. 17). Aaltonen (2025) also states that the highest risk is typically faced by foreign workers in the construction and cleaning sectors, where there has been a decline in CSR. For example, regarding the construction industry, representatives of the Construction Workers' Union and inspectors from the Regional State Administrative Agency (AVI) frequently encounter underpayment, illegal working hours, undocumented workers, and other issues indicating that simply reviewing contractor compliance documents is not enough to ensure social responsibility (Hellsten, 2025).

According to Nousjoki et al. (2024, pp. 4–12), the term modern slavery is a broader definition including various forms of exploitation beyond traditional labour abuse. They further argue that the most modern slavery victims typically work in different service industries, manufacturing, construction, agriculture, and domestic work. The risk of for example forced labour increases when workers are in vulnerable situations; children, women, migrant workers, temporary workers, seasonal workers, and workers with limited knowledge of their rights, language barriers, or low literacy. The risk is further heightened by the demand for cheap, flexible labour, long and complex subcontracting and recruitment chains, certain high-risk industries, low-wage, low-skill jobs, and work conducted in remote, hidden locations away from external oversight.

Foreign forestry workers may face problems due to readjustment, language barriers, cultural differences, and various requirements with collective agreements and occupational health and safety (Saloranta, 2023). According to Aaltonen (2025), a major issue is that

workers may not fully understand their employment contracts or they may be unaware of their rights. A worker's background may play a role in their awareness regarding their basic rights (Hellsten, 2025). Foreign workers may also lack of understanding of Finnish laws and collective agreements, and low trust in authorities or trade unions, often due to past experiences with corruption (Oksa, 2025). According to Kjellberg (2023), employer obligations may be neglected by certain forest service contractors who employ non-Finnish loggers. According to inspections conducted by AVI, it is common for the basic salary to be lower or additional payments to be unpaid required by the collective agreement, occupational health services to be inadequately provided, and workplace safety and work hour reports to be incomplete (Kjellberg, 2023). Unfortunately, it may not be uncommon for foreign workers to accept these conditions, because they may be afraid of losing their jobs (Saloranta, 2023). This is one of the reasons why value chain workers may not report any incidents or suspicious matters (Aaltonen, 2025; Herkenhoff et al., 2023, p. 5). According to Hellsten (2025), reporting grievances may also be difficult because foreign workers may not know how to do it or lack a common language.

### 2.2.4 Value chain worker-related risk management practices

According to Sancha et al. (2016, pp. 1934–1944), assessing suppliers on sustainability challenges provides many advantages for organizations such as enhancing performance and possibly avoiding reputational damage. They further state, that implementing assessment practices entails evaluating and overseeing suppliers on social matters such as working conditions, child labour, and adherence to human rights standards. This process involves detailed assessments of suppliers' social performance, typically carried out through audits and surveys. To reach a socially responsible supply chain, both assessing and collaborating with suppliers is essential: assessment enhances company's social reputation, while collaboration boosts the supplier's social performance.

Nousjoki et al. (2024, pp. 4–12) argue that modern slavery victims in Finland are often vulnerable foreign workers who may be unaware of their rights and may work in long subcontracting chains. They further state that in order to manage forced labour risks, it

is recommended to limit the length of subcontracting chains. Educating and training employees on identifying and understanding these risks is crucial, and monitoring working conditions, such as through employee interviews during audits, is essential. It is also necessary to share information about workers' rights, reporting channels, and support organizations in multiple languages and through various communication methods. Reporting of grievances can be encouraged by providing information in as many languages as possible (Hellsten, 2025).

Minimum standards for social, labour, and environmental practices can be outlined in Supplier Codes of Conduct (SCC) and similar agreements (Herkenhoff et al., 2023, p. 5). They mandate for example safe working conditions, prohibit child labour, regulate working hours, and ensure fair wages for workers (Jiang, 2008, p. 77). However, the benefits of ethical practices may not always reach all participants in the supply chains equally, and in more complex supply networks, second and third-tier suppliers may collaborate to bypass compliance with codes of conduct (Hoang & Jones, 2012, p. 69). Without clearly defining own intentions, actions, and expectations for both direct suppliers and their suppliers, organization cannot effectively oversee its supply chain partners (Hoang, 2019, p. 16). Hoang (2019, p. 16) further argues that while codes of conduct have increased workers' understanding of their rights and labour standards, the ongoing issues of long working hours and labour rights violations suggest SCCs’ ineffectiveness in identifying and addressing these problems. Merely claiming compliance is not sufficient; verifying these claims through governance or auditing to ensure credibility is also needed (Jiang, 2008, p. 77).

Audits serve as a trust-building mechanism, assuring stakeholders that the products or services are accurate and comply with necessary regulations and standards (McGrath et al., 2021, p. 73). Supplier audits ensure compliance with quality and legal standards while encouraging continuous improvement (Afteni et al., 2021, pp. 6–12). They help identify risks and issues, allowing companies to take corrective action and strengthen

supply chain reliability. This is especially important in industries with high quality demands. Organizations should assess whether they have the right skills and resources to perform audits internally or if external experts are needed, particularly in complex locations. If companies lack the financial resources or internal expertise to perform their own supplier audits, they may partner with external auditors (Kogg & Mont, 2012, p. 161). Organizations may also directly monitor their suppliers by conducting on-site visits, which improve the quality of feedback and allow stakeholders to observe working conditions, while also enhancing stronger relationships with suppliers (McGrath et al., 2021, p. 75).

Anonymous supplier surveys can be used alongside audits, particularly to evaluate social concerns (McGrath et al., 2021, p. 75). For example, at a Finnish construction site, an anonymous, regularly conducted survey was introduced to collect employee feedback on issues such as safety, communication, and leadership (Oksa, 2025). The survey was available in different languages to ensure broad accessibility within a multilingual workforce. This approach demonstrates how an anonymous survey can serve as an effective communication channel, especially in situations where face-to-face feedback may be hindered by hesitation or fear. In this case the management also felt that they received more feedback through the anonymous survey.

Lu and Tomlin (2021, p. 903) argue that a combination of self-assessment questionnaires and auditing can also be used to ensure sustainable practices and compliance. However, they also acknowledge that it is difficult to confirm whether the questions are answered truthfully. To encourage suppliers to report honestly, various audit levels should be available and avoid committing to a specific one in advance. This can be achieved by creating special audit methods that target specific compliance issues, which are used alongside regular supplier responsibility audits (Lu & Tomlin, 2021, p. 903). Also, encouraging suppliers to volunteer helps strengthen the relationship between the buying firm and its suppliers, leading to more efficient and effective supply chains (Boyd et al., 2007, p. 352). However, one of the key concerns in discussions about audits and inspections is to what

extent companies may attempt to conceal non-compliance with regulations and codes of conduct (Welford & Frost, 2006, p. 169). Therefore, it is important to remember that conducting audits is not enough to deeply understand what the actions are to take to enhance the situation or why for example misappropriate treatment of workers is occurring (Sancha et al., 2016, p. 1944).

### 2.2.5 Risks value chain workers may pose to others

While value chain workers may face labour risks that need to be mitigated, they may also pose risks to themselves or others including the main company, related stakeholders, other workers, or the environment. Companies must address not only internal risks related to worker safety but also the broader impacts of their actions on consumers and surrounding communities (Klassen & Vereecke, 2012, p. 104–105). According to Lietonen and Ollus (2018, p. 9), extensive use of subcontractors can reduce the transparency of supply chains and increase the risk that subcontractors use illegal labour or workers without the right to work. It is not necessarily known whether a particular job has been done well or who has carried out the task (Aaltonen, 2025) and it is difficult to keep tract on who is present at worksite (Saloranta, 2023). The risk includes for example that the work is performed by someone other than the supposed hired employee (Lietonen & Ollus, 2018, p. 10). Lietonen and Ollus (2018, p. 10) continue, that if there are individuals working at the company's premises whose identities are not clearly known, it can pose a serious security risk to themselves or others, and company's trade secrets may be compromised. In addition, if companies are not aware of workers' identities, they cannot be sure if correct training and education for the work has been neglected or if employee competencies are not otherwise in place. Safety of other employees may also be endangered if subcontractors have not fulfilled their employer obligations or occupational safety regulations.

The purpose of access control is to ensure that only individuals with the required training and qualifications can enter for example a construction site (Halonen, n.d.; Hellsten, 2025). According to Halonen (n.d.), both the employer and the main contractor must

make sure that the worker has the required competence and qualifications to perform the tasks, so that neither the worker, others, nor the environment are posed to danger. They also state that According to the Occupational Safety and Health Act, workers on for example construction sites must have an identification badge, where their name, photo, tax number and employer's information are shown. To tackle grey economy, the transparency of contractor liability information is crucial. It also ensures that everyone on site acts responsibly and in compliance with legal obligations.

For a company to exercise proper due diligence, it must first identify the areas of operation where the risk of exploitation is highest, and evaluating and managing risks is crucial for identifying vulnerabilities and ensuring effectiveness of supply chain management (Byju et al., 2023, pp. 35–42). During the evaluation phase of supply chain risk management, companies must first recognize potential risks affecting their supply chain. They then assess the likelihood and potential impact of these risks, allowing them to prioritize threats and allocate resources. Once risks have been evaluated, the next step is to create strategies to reduce them. Constant oversight and monitoring are vital in managing supply chain risks, as the environment is ever-changing, and new threats can occur unexpectedly. Organizations should also continuously review and refine their risk assessment and management approaches.

It can be concluded that successful risk mitigation requires identifying high-risk activities and ensuring that the workforce involved is properly trained, capable, and adequately supported to manage those risks. Only after this can organizations assess whether the suppliers involved are in vulnerable positions. According to Lietonen et al. (2020, pp. 29–31), when considering the high risk operations where subcontractors are involved, it is important to review at least the following questions:

- Does your company use temporary, and/or seasonal labour?
- Does your company employ many foreign workers who may not be familiar with the collective labour agreement of the country or industry?

- Has your company outsourced operations to foreign or temporary workers who work in conditions that are difficult to monitor, such as at night or in remote locations?
- Does your company use subcontractors, staffing agencies, and short-term seasonal contracts?
- Does the identity of workers sometimes cause confusion, for example, at worksites with complex subcontracting structures?
- Does your company lack an internal or external reporting channel through which all employees (direct and indirect, local and foreign) can report problems to the company's management, if necessary, anonymously?
- Does your company operate in an industry where there has been use of undeclared labour, labour exploitation, and/or human trafficking, or where public oversight is lacking e.g. working conditions are not inspected or labour exploitation is not investigated?

A company's reputation can also be damaged by the lack of effective practices and failure to follow proper due diligence. Companies' reputation includes both "business reputation," which relates to the customers, stakeholders, and employees, and "social reputation," which relates to the perceptions of stakeholders who are less closely connected to the company (Sancha et al., 2016, p. 1935). Reputational risks can arise from economic, social, or environmental events involving the firm, directly or indirectly, through the actions of other companies in the supply chain (Petersen & Lemke, 2015, pp. 496–498). Poor practices in the supply chain can significantly threaten brand reputation and shareholder value (Klassen & Vereecke, 2012, p. 104–105; McGrath et al., 2021, p. 75). Such negative exposure can lead to financial harm for the company, potentially resulting in adverse consequences (Kogg & Mont, 2012, p. 158). To ensure sustainable performance across the supply chain, implementing best practices is essential (Sancha et al., 2016, pp. 1934–1935).

### 2.2.6 Forestry industry context

In forestry and logging, workplace incidents are usually of a physical nature (Ovaskainen et al. 2022, p. 18). Räsänen et al. (2024) argue that the forestry industry primarily considers occupational safety a matter of individual actions and responsibility. However, true occupational safety is only achieved when all tasks are performed using safe work methods and routines that everyone is aware of, properly trained in, and required to follow (Ovaskainen et al. 2022, p. 3). To enhance safety in the forestry industry, training should be better targeted, and companies should actively share observations to prevent accidents (Asikainen & Heikkilä, 2024). Asikainen and Heikkilä (2024) continue, that improvement could come from stronger collaboration among industry stakeholders. Forestry organizations could also engage more closely with their subcontractors, for example, by increasing field visits to better understand safety challenges on-site. As it is common to use multiple subcontracting chains in the forestry industry (Kjellberg, 2023), these efforts introduced by Asikainen & Heikkilä (2024) would help reduce the risk of harm to workers, other employees, stakeholders, and the environment.

Negative impacts caused to nature by inadequate risk management of harvesting operations is also an issue in the forestry industry. The forest supply chain differs from other industries due to its unique characteristics (Wang et al., 2023, pp. 97–108). Forests take decades to grow and regenerate, and forest supply chains involve a wide range of stakeholders, creating complex interdependencies. According to Sihvonen et al. (2022, pp. 3–36), these Ecosystem services are especially crucial for the forestry industry, which depends directly on these natural resources for raw materials. The most significant environmental effects are often found at both the beginning and end of these value chains (Sihvonen et al., 2022, pp. 3–36).

According to Latokartano (2024, pp. 14–17), to mitigate the impact of biodiversity loss, effective cooperation between stakeholders, including authorities, logging right holders, forest owners, and harvesting contractors, it is essential to make sure that natural sites are considered in forest management. Harvesting workforce competencies are crucial

when mitigation biodiversity loss. Natural sites, such as grass fens and streams, are protected as they are crucial habitats for endangered species, such as freshwater pearl mussels. Nature Conservation Act regulates the protection of these sites. Geospatial data provided by the Finnish Forest Centre and ELY Centres (Centre for Economic Development, Transport and the Environment) is necessary to identify these natural sites. Before harvesting begins, a forest use declaration is filed, and the Finnish Forest Centre checks for protected areas. If identified, the ELY Centre ensures compliance with the Nature Conservation Act. Harvesting instructions are sent electronically to contractors, and GPS tracking in forest machines monitors location and alerts when approaching protected sites. Valid data and efficient system support is an essential tool in biodiversity risk mitigation for people working in harvesting. After harvesting, a final inspection is conducted by the company responsible to make sure all procedures have been followed and natural sites are preserved (Latokartano, 2024, pp. 14–17). Given the critical role of the environment, particularly for the forestry industry, protecting natural resources is vital. The preservation of these resources is not only essential for biodiversity, but also forms the backbone of the entire forestry value chain.

## 2.3 Theoretical framework

Figure 6 presents the theoretical framework, which summarizes the key elements of the literature review. It aims to demonstrate the key requirements set by ESRS S2 and CSDDD for companies and their supply chain for value chain worker-related social responsibility. It also highlights that to comply with the evolving regulations, a risk management framework such as COSO ERM must be in place within a company to ensure a structured approach for identifying and managing risks. The theoretical framework presents the main operative risk management activities and supplier base management practices for ensuring social responsibility for value chain workers. It also aims to demonstrate that while value chain workers may face risks that need to be mitigated with these practices, they may also pose risks to themselves or others. These parties may include the company's reputation, society, other workers or stakeholders, with the environment being a particularly important stakeholder for companies in the forestry industry.

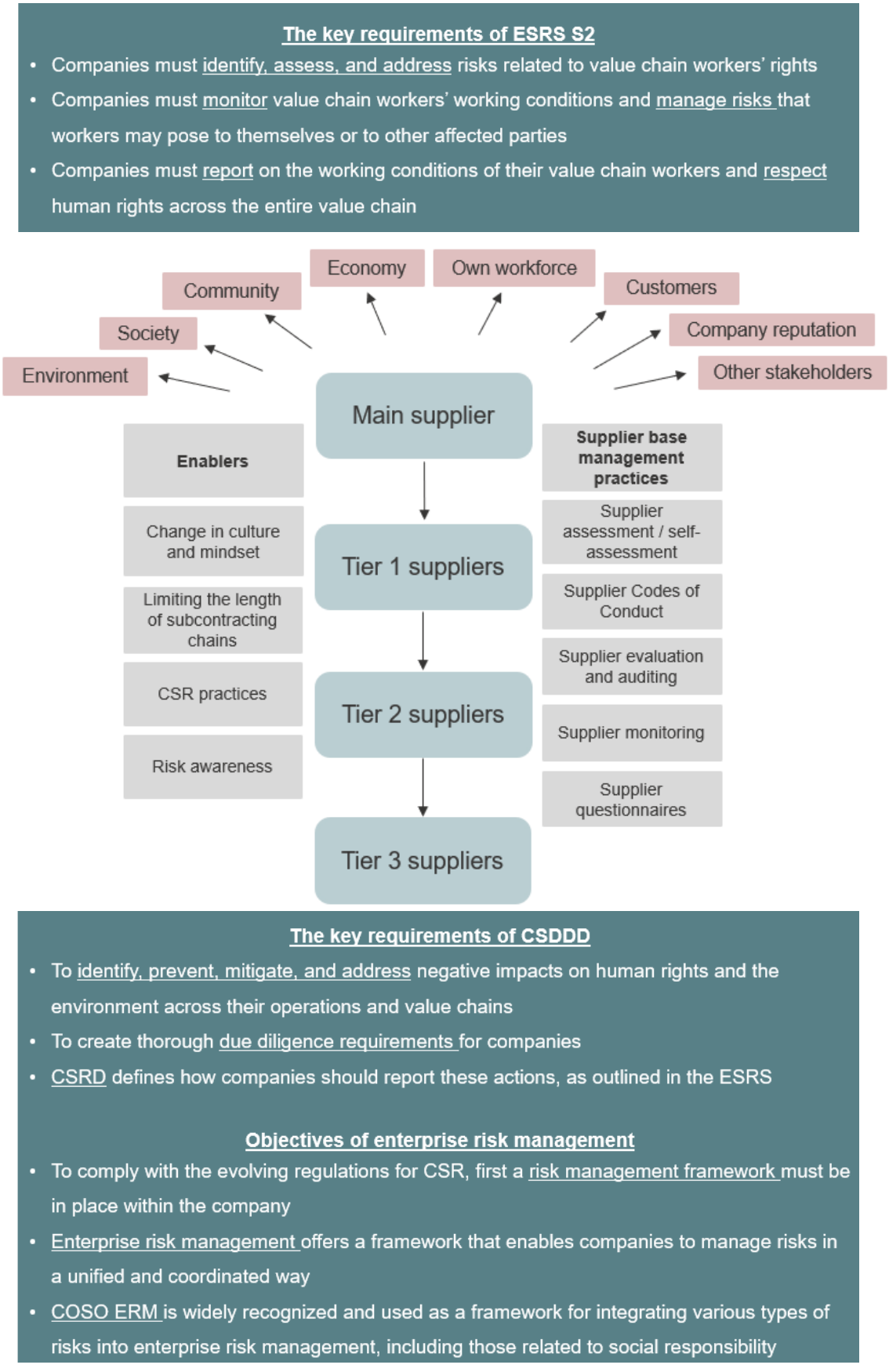


**Figure 6.** Theoretical framework.

# 3 Methodology

This methodology chapter addresses the methodological approach of the conducted research, starting with outlining the rationale behind the chosen research methodology. Following this the case company Metsä Group will be introduced. The chapter continues with providing a detailed examination of the research data, including how the data were collected and analysed, and an assessment of its quality. Finally, this methodology chapter, together with the theoretical background demonstrated earlier, will form the foundation for the research findings that will be presented in the next chapter.

## 3.1 Research approach

The methodology describes the overall approach to conducting research. It includes the beliefs and assumptions that shape how research questions are understood and how methods are chosen (Melnikovas, 2018, p. 33). This part of a thesis is essential for making sure that the chosen tools, techniques, and philosophical background are consistent. One way to build a research methodology is by using the theoretical framework known as the "research onion" (Melnikovas, 2018, p. 33). As shown in Figure 7, the "research onion" offers a clear structure to help researchers plan their work step by step, ensuring that each part of the process supports their research goals (Saunders et al., 2007, p. 100). Next, the key layers of the research onion are described from this study’s perspective.

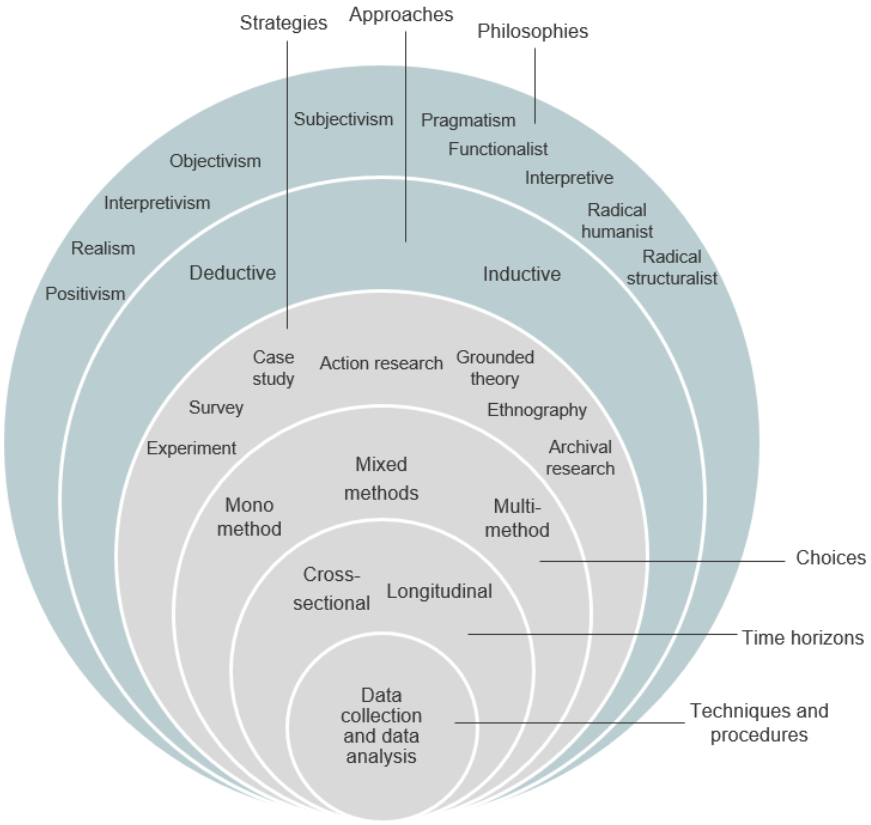


**Figure 7.** The research 'onion' (Saunders et al., 2007, p. 102).

Common research philosophies include positivism, interpretivism, realism, and pragmatism (Saunders et al., 2007, pp. 101–110). This study uses interpretivism as its research philosophy. By using interpretivist and qualitative methods, researchers can explore participants' thoughts and experiences in more depth, leading to richer insights into social situations (Alharahsheh & Pius, 2020, pp. 41–42). The research approach refers to the strategy used to build knowledge—deduction, induction, or abduction (Melnikovas, 2018, p. 34). Abduction begins with an observation and moves between inductive and deductive reasoning to find the most likely explanation. Strange et al. (2022, p. 9) further argue that abductive reasoning involves using incomplete information, existing knowledge, and creative thinking to reach the most logical conclusion. For this reason, an abductive approach is suitable for this study.

According to Saunders et al. (2007, p. 135), a research strategy describes how the research will be carried out. A case study can focus on a single case or multiple cases (Saunders et al., 2007, p. 139; Viera, 2023, p. 125) and it can include both qualitative and quantitative data (Gehman et al., 2018, p. 287). Case studies are especially useful for answering "how" or "why" questions, while multiple case studies allow for comparisons and broader conclusions (Eisenhardt & Graebner, 2007, pp. 26–27; Saunders et al., 2007, p. 139). On the other hand, a single case study is ideal for exploring an underexplored and complex issues (Saunders et al., 2007, p. 139), making it possible to closely examine important topics in specific, real-life situations (Eisenhardt & Graebner, 2007, p. 27). Hence, this study uses a single case study approach to gain a deep understanding of the topic. A key strength of this method is that it allows the use of different types of data, which suits the needs of this research well (Saunders et al., 2007, p. 139; Sibbald et al., 2021, pp. 291–294).

Research Choices, as demonstrated in Figure 8, refer to how the study is designed. Unlike the mono method, which uses only one type of data (either qualitative or quantitative), which combine both, the multi-method approach uses several ways to collect either qualitative or quantitative data (Saunders et al., 2007, pp. 145–146). In this study, a multi-method qualitative approach is used, combining data primarily from the case company's project workshops and meetings, secondarily from four semi-structured interviews, and additionally from publicly available sources such as annual reviews, official websites, books and articles. This allows for a deeper understanding of the topic through different qualitative sources. Qualitative research is especially useful for answering "how" questions, as it focuses on people's experiences and views rather than numbers. It is well-suited for studying processes in detail (Pratt, 2017, p. 856). Since this study aims to explore how best practices for social responsibility and risk management can be integrated across a supplier network and operations to meet ESRS S2 requirements and improve risk mitigation for value chain workers, qualitative data is needed and the approach is justified.

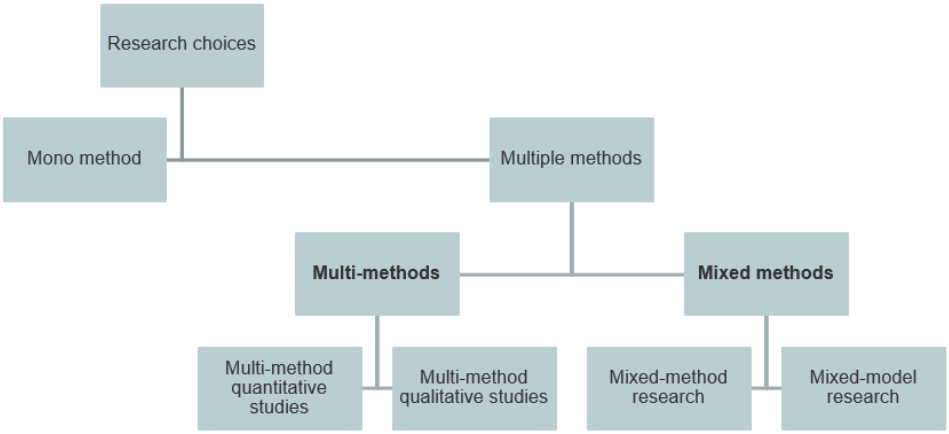


**Figure 8.** Research choices (Saunders et al., 2007, p. 146).

Time Horizons describe how long the research lasts, indicating whether the study is cross-sectional (data collected at a single point in time) or longitudinal (data gathered over an extended period) (Melnikovas, 2018, p. 34; Saunders et al., 2007, p. 148). This study uses longitudinal approach, with data collected between autumn 2024 and spring 2025. Data Collection Techniques and Analysis Procedures involve gathering primary and secondary data, selecting sample groups, and organizing interviews and questionnaires (Melnikovas, 2018, p. 34). Case studies often use different types of data, such as interviews, observations, and documents, with interviews being especially useful for collecting detailed information (Eisenhardt & Graebner, 2007, p. 28). Interviews are a valuable tool for collecting data that is both valid and reliable (Saunders et al., 2007, pp. 310–312). Semi-structured interviews were used in this study, allowing flexibility in how questions are asked, making it easier to explore topics in more depth as they come up during the conversation (Saunders et al., 2007, pp. 310–312). This approach suited the research well.

## 3.2 Case company

The case company, Metsä Group, is a Finnish forest industry group with international operations producing a wide range of wood-based products. The company reports total sales of 6.1 billion euros, operates in 28 countries, and has production in seven of them

(Metsä Group, n.d.-a). Metsä Group employs approximately 9,500 people and consists of Metsäliitto Cooperative and its business areas Metsä Wood and Metsä Forest, along with its subsidiaries Metsä Tissue, Metsä Board, Metsä Fibre, and Metsä Spring. Metsäliitto Cooperative, the parent company, is owned by over 90,000 Finnish forest owners. One of the stated goals of Metsä Group is to increase the long-term value of its members' forest assets by processing wood into products for global markets (Metsä Group, n.d.-b).

According to its official website (Metsä Group, n.d.-d), Metsä Group states that it is committed to maintaining sustainability throughout its value chain and requires all suppliers to comply with the Metsä Group Supplier Code of Conduct. This code of conduct outlines minimum requirements related to environmental standards, human rights, and responsible business practices. In the Annual Review 2024 (Metsä Group Annual Review 2024, pp. 91–92), it is reported that the Supplier Code of Conduct obliges suppliers to respect internationally recognized human rights, including those outlined in the United Nations' Universal Declaration of Human Rights and the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work. It also requires compliance with the UN Guiding Principles on Business and Human Rights (UNGPs), addressing any negative human rights impacts—particularly those affecting vulnerable groups such as migrant workers—and prohibits forced and child labour.

According to the Metsä Group official website (Metsä Group, n.d.-d), supplier compliance is monitored through background checks, risk assessments, and audits. It is stated that these evaluations aim to identify and mitigate risks related to working conditions and employee rights, with a focus on suppliers critical to operations or located in high-risk regions (Metsä Group Annual Review 2024, p. 93; Metsä Group, n.d.-d). In the Annual Review 2024 (Metsä Group Annual Review, 2024, pp. 92–93), it is reported that in construction projects, on-site inspections and a model to prevent grey economy practices are used to ensure legal and contractual compliance. Metsä Group also provides a

reporting channel for stakeholders, including value chain workers, to anonymously report legal or ethical concerns (Metsä Group Annual Review, 2024, pp. 92–93).

Metsä Group's internal control function, control procedures, and risk management practices are aligned with the principles of the COSO ERM framework (Metsä Group Annual Review 2024 p. 24). Metsä Group has recognized that the greatest risk of human rights, especially modern slavery, lies within their value chain rather than their own operations, and the most serious human rights risks often stem from suppliers' suppliers or even further down the value chain (Metsä Group Modern Slavery Act Transparency Statement for the financial year 2023, 2024).

The material impacts, risks and opportunities related to value chain workers have been identified in a double materiality assessment, which has been conducted utilizing the COSO ERM framework (Metsä Group Annual Review 2024, p. 91). Value chain workers in Metsä Group are primarily involved in various types of investment projects, production unit maintenance, and harvesting and transport. Independent contractors in harvesting, transport, and forestry are also considered value chain workers. Findings of material impacts on value chain workers were further assessed through a human rights impact assessment and incorporated into the double materiality assessment. The most significant impacts, risks, and opportunities related to value chain workers that were identified through the double materiality assessment include:

1. Impacts on Workers: The company's operations impact the workers' conditions, including health and safety, fair wages, and human rights such as child labour and freedom of association.
2. Risks and Opportunities: The company faces risks such as regulatory non-compliance and operational disruptions, but also opportunities to enhance reputation and meet market expectations through ethical labour practices.

## 3.3 Data collection

Data for this study have been collected using qualitative methods. As this study uses a single case study approach, gathering qualitative data was considered the most suitable decision for gaining a deep understanding of the topic. Additionally, a qualitative research approach is typically characterized by the use of multiple data sources (Gehman et al., 2018, p. 288). The data gathered relies on three main elements: the case company project workshops and meetings, four semi-structured interviews, and publicly available material. Next, the purpose and background of the project is introduced, and the data collection methods are explained in more detail.

The case company project was initiated in June 2024 by Metsä Group CEO, Internal controls and Procurement in order to strengthen internal frameworks and procurement activities for social responsibility. Hence, there has been a real commitment for conducting the project. The aim of the project was to define and implement sustainable and long lasting best practices for ensuring effective risk management and social responsibility for value chain workers in accordance with the ESRS S2 requirements. Furthermore, the information gained through the double materiality assessment already further supported the project.

Internal Controls and Procurement, as the departments responsible for ensuring the implementation of the defined best practices, took the lead in executing the project. They were responsible for engaging ICT, Wood Supply and Production (Construction) to apply these best practices in their operations, in accordance with the project scope and commitment. The workshops and meetings, as well as regular status calls and meetings held after the workshops, took place both at the Metsä Group headquarters and via Microsoft Teams during Autumn 2024 through Spring 2025. In these various meetings, representatives and professionals from ICT, Wood Supply, Production (Construction), Procurement, Internal Controls, Legal Compliance, and HR were present. The list of the workshops and meetings is provided in Table 4.

**Table 4.** List of case company project workshops and meetings.

| Date | Type of the meeting | Scope |
|---|---|---|
| 14 June 2024 | Workshop | Procurement, Internal controls |
| 26 August 2024 | Workshop | Procurement, Internal controls, ICT, Wood Supply, Production |
| 11 September 2024 | Workshop | Procurement, Internal controls, ICT |
| 12 September 2024 | Workshop | Procurement, Internal controls, Wood Supply |
| 12 September 2024 | Workshop | Procurement, Internal controls |
| 23 September 2024 | Workshop | Procurement, Internal controls, Production |
| 27 September 2024 | Workshop | Procurement, Internal controls, ICT, Wood Supply, Production |
| Following the workshops from Autumn 2024 and ongoing through 2025 | Meetings and status calls | Representatives and professionals from Procurement, Internal controls, ICT, Wood Supply, Production and HR |

The data gathered through the project have been enriched with secondary data. The secondary data included background material gathered through publicly available sources such as annual reviews, official websites, and books and articles, serving as valuable sources for compiled information (Saunders et al., 2007, p. 248) and gaining a deeper understanding of the study's topic. Furthermore, the secondary data included data gathered through four semi-structured interviews with selected Metsä Group professionals. The interviews were conducted for this thesis to enrich the data gathered

though the project, and to provide new perspectives into the project outcomes from ICT, HR, Legal Compliance and Forestry perspectives.

The interviews were held during two weeks in April 2025. To support the research question of this thesis, the interview questions were designed based on insights gained through the project and literature review. The questions were categorized into two themes; risk management and risk mitigation. Questions under the first theme were related to current risk management processes regarding value chain workers in case they face e.g. unethical behavior or if they cause harm to others. Questions under the second theme focused on how the current practices mitigate risks related to value chain workers before they materialize, and how these practices could be improved. The semi-structured interview guide is provided in Appendix 1 and the original interview guide in Finnish is provided in Appendix 2.

The interviewees were selected in collaboration with the case company's representative based on the project scope, the interviewees' profession, and extensive expertise in Legal Compliance, ICT, HR and Forestry to increase research objectivity and quality. To maintain comparability, all interviewees were asked the same set of questions, and the interviews were held as online Microsoft Teams meetings. The interviews were held in all the interviewees' native language, Finnish, and they were informed that their responses would remain anonymous. The interviews with HR, Legal Compliance and ICT took place online as one-on-one meetings. The interviewees demonstrated a deep knowledge of ICT, HR, and Legal Compliance processes. As the information regarding Forestry was distributed across different areas of expertise, a joint interview was conducted with four Forestry professionals representing production, forest harvesting and management operations, safety, certifications and training, quality and risk management, and forestry contract maintenance. The joint interview allowed the interviewees to complement each other's knowledge, providing more accurate and comprehensive responses, also enabling interaction, shared reflection, and richer insights on the topic. Details of the interviews are provided in Table 5.

**Table 5.** List of interviews.

| Interviewee | Area of expertise | Years in organization | Interview length |
|---|---|---|---|
| 1 | HR | 10 | 38 min 6 s |
| 2 | ICT | 4 | 45 min 39 s |
| 3 | Legal Compliance | 2 | 32 min 59 s |
| 4 | Forest[1] | 22 | 1 t 2 min 5 s |
| 5 | Forest | 25 | 1 t 2 min 5 s |
| 6 | Forest | 35 | 1 t 2 min 5 s |
| 7 | Forest[2] | 39 | 1 t 2 min 5 s |

## 3.4 Data analysis

The process of qualitative data analysis typically involves organizing data into relevant categories (Grodal et al., 2021, p. 591; Saunders et al., 2007, p. 508). It includes identifying connections within and across them, and clarifying insights to develop conclusions. Various tools, such as interview and observation summaries, document reviews, personal memos, and research diaries, support the process by helping in organizing data (Saunders et al., 2007, p. 508).

Throughout the case company's workshops and meetings, I played an active role in observing discussions and taking notes on key insights. The notes were systematically organized according to project scope areas. Within these categories, key aspects and main discussion points were identified and highlighted by each meeting. Additionally, the data

[1] Joint interview with interviewees 5, 6 and 7
[2] Interviewee had to leave approximately 20 minutes after the start of the interview

were assessed in terms of recurring themes, patterns and differences within the categories (Gehman et al, 2018, p. 286). Finally, a theoretical framework was created by organizing the categories more clearly and combining the key ideas, so that the conclusions are well-supported and clearly based on the data (Grodal et al., 2021, p. 603).

The interviews were video recorded and transcribed, converting spoken words into written text (Saunders et al., 2007, p. 475). They were transcribed into Word using Microsoft Teams' built-in tool with the interviewees' consent and the transcriptions were reviewed immediately after each interview to correct any spelling errors or inaccuracies between the spoken word and the transcribed text. A summary of the key aspects of each interview was created to help identify main themes and relationships between the responses (Saunders et al., 2007, pp. 485–486). According to Grodal et al. (2021, p. 591), identifying categories is a key step in qualitative data analysis. This was done in Word highlighting similarities and different themes with different colours and codes. The data were categorized according to the theoretical framework to ensure alignment with the study's findings. The selection of categories was guided by the research aim, as outlined in the research question and objectives (Saunders et al., 2007, pp. 479–480). Identifying the most relevant themes helped exclude unrelated parts of the interview transcripts. As a result, 39 Word document pages remained for deeper analysis.

## 3.5 The assessment of the quality of the data

Ensuring and justifying the reliability and validity of thesis results and research design is crucial (Saunders et al. 2007, pp. 149–154). Research accuracy is generally evaluated based on four key criteria: internal validity, construct validity, external validity, and reliability (Gibbert et al., 2008, pp. 1466–1469). Internal validity refers to how believable the cause-and-effect relationships in the study are. Strengthening internal validity requires a well-defined theoretical framework. Construct validity relates to the data collection phase and explaining how the data were gathered. External validity explains why the specific case and context were chosen for the study. Reliability means that the research results are consistent and could be repeated in a similar setting.

To ensure the internal reliability, the theoretical background is built upon various existing research and literature in the field (Gibbert et al., 2008, pp. 1466–1468). It defines the key concepts and themes by first presenting the main directives and frameworks needed to understand the topic. This foundation sets the context for examining supplier networks and social responsibility. The theoretical background then explores risks and mitigation methods for value chain workers, risks they may pose to others, an overview of the forestry industry in relation to the topic. Using multiple data collection methods improves construct validity and strengthens the credibility of the findings by including different perspectives on the phenomenon (Sibbald et al., 2021, pp. 291–294). Therefore, this study uses both primary and secondary data sources. However, regarding external validity, the findings are specific to the context and scope of the case company project and may not be fully applicable to organizations in other industries or of different sizes (Saunders et al. 2007, p. 151).

To ensure the quality and trustworthiness of the research, several key elements need to be included: clearly defined research question, a study design aligned with the research objectives, purposeful sampling, systematic data collection, and thorough analysis (Viera, 2023, p. 128). The research process is clearly documented in the methodology chapter to support both reliability and transparency. Transparency is further strengthened by including the semi-structured interview guide (see Appendices 1 and 2). By informing the interviewees in advance about the topic and questions, and by assuring them that their responses remain anonymous improves reliability (Saunders et al. 2007, p. 149). The interviews were conducted via Microsoft Teams, which allowed for consistent documentation and made replication easier (Gehman et al., 2018, p. 287). Recording and transcribing the interviews ensures accurate documentation of the responses, further enhancing data reliability (Saunders et al. 2007, p. 149). The interviewees represent diverse perspectives on the topic, limiting bias (Eisenhardt & Graebner, 2007, p. 28). To ensure accuracy, the interviewee selection, the interview questions, and the findings were reviewed and discussed with a case company representative.

# 4 Findings

This chapter presents the findings of the study. First, the most common risks identified related to value chain workers are listed. Next, the already existing passive and proactive value chain worker-related risk management practices Metsä Group has in place are presented. How Metsä Group ensures that external workforce is aware of their rights and responsibilities, and what kind of training and resources are provided for them are explained, and improvement opportunities are considered. Finally, the new risk management practices for value chain worker-related social responsibility are defined and the key insights of the findings are summarized with a revised theoretical framework.

## 4.1 Current value chain worker-related risk management practices

Before being able to implement new risk management best practices for ensuring social responsibility for value chain workers, current processes need to be understood. This first section of the findings outlines Metsä Group's current approach for managing value chain worker-related risks based on the case company project, double materiality assessment (DMA), and interviews. It is important to note, that the interview findings further strengthen the information already gathered through the project and DMA. Additionally, they provide complementary insights, and an even more thorough understanding of the matter specifically from the perspectives of HR, ICT, Legal Compliance and Forestry. Based on the findings, one of the key insights is the recognition of the distinction between passive and proactive risk management practices. This suggests a clear structure for reviewing the data by dividing this section into four parts: key value chain worker-related risks identified, current passive and proactive value chain worker-related risk management practices, and improvement opportunities.

### 4.1.1 Key value chain worker-related risks identified

The risks associated with value chain workers, along with the potential harm their activities may cause to themselves, others, the company or the environment, that had already

become apparent through the DMA and project findings, were also further acknowledged in the interviews. The key value chain worker-related risks identified include physical safety, modern slavery and harm to nature.

The risks vary depending on the types of tasks value chain workers perform or the functions they operate within the company. In addition to the project and DMA findings, the Legal Compliance interviewee emphasized that the most common risks include those related to CSR and human rights, particularly on construction sites, and logistics within value chains. The HR interviewee also further acknowledged that typically risk lies in subcontracting, which requires ensuring compliance at the lowest level of the chain through pre-documentation and monitoring.

Based on the project and DMA findings, due to the physical nature of forestry work, the key value chain worker-related risk from Forestry perspective typically include occupational accidents and unsafe working conditions, particularly in harvesting, transport, and construction. Hence, value chain workers may cause harm to themselves, others, or the environment due to inappropriate operations activities. The Forestry interviewees further emphasize this acknowledgment. Metsä Group's overall goal is zero accidents. All accidents, hazardous situations, and near-miss incidents are investigated, and corrective or preventive measures are taken. They are monitored with safety metrics such as "accident frequency" and "incidents requiring medical treatment", which cover external workforce in addition to own workforce. Accident and hazard investigations are also conducted regarding environmental issues. It was noted by Forestry interviewee, that if environmental incidents are included, there are between fifty and one hundred incidents annually. Transparency was also highlighted as the incidents are reported in the Sustainability and Annual report as well as Metsä Group's website.

> *"We publicly announce on our website if there have been any environmental law violations or similar certification breaches. Metsä Group reports these related to our wood procurement and forestry services on our website, and of course, the*

*reported issues are investigated, meaning that we want to be transparent with the general public." (Interviewee 4, Forestry)*

Typical risks related to value chain workers include competence-related issues, such as ensuring that people have the necessary skills. The Forestry interviewees further emphasize this acknowledgment. As Metsä Group has responsibility to establish that all foreign workers have a valid permit to work in Finland, ensuring that work permits and all other obligatory requirements e.g. mandatory trainings are in order is a pre-requisite. The risks associated with using foreign labor include having employees who speak many different languages. To provide the orientation, and e-learning materials effectively, they must include the key safety-related aspects, as well as nature protection principles to be available in all required languages, and be delivered in a way that is truly beneficial.

*"From our perspective, a key challenge is the multilingual nature of the workforce and how to ensure that the induction materials are delivered in a way that is genuinely useful and understood. --- E-learning materials should be available in all the languages spoken by the workforce, with a focus on the key safety-related topics. That is, comprehensibility and seasonal workforce—such as the length of the training, competence verification, language skills, and cultural differences." (Interviewee 5, Forest)*

Modern slavery was also identified as one of the key risks related to value chain workers based on the project and DMA findings. These include issues such as unequal treatment or workers, excessive working hours, and inadequate wages. As ICT white-collar workers are not on-site causing environmental damage or physical harm, they may rather harm themselves, other employees, or the company. From a human rights perspective, ICT white-collar issues may involve modern slavery issues related to workload, job demands, salaries, and vacations. It was also emphasized by the ICT interviewee, that more complicated issues emerge in services provided from India, for example, when there needs to be trust in the supplier's risk management processes.

> *"There is a wide range of risks due to the extensive operational scope. The workforce is diverse, with external employees performing various tasks. This directly impacts the risk profile. --- We need to be able to trust how the supplier says it manages these issues and what kind of mechanisms and procedures it has. Additionally, we must consider how we react when we see our colleagues from that company always working. It's not a simple question." (Interviewee 2, ICT)*

The ICT interviewee additionally noted an important viewpoint that white-collar workers may cause risk to the company by compromising data integrity or jeopardizing the protection of confidential information. The risks are similar for both internal and external employees. The more advanced expertise an employee has, the broader access rights the employee usually has across environments, therefore increasing the potential risk of causing harm to the company. From an ESRS S2 perspective, this risk highlights the importance of managing the working conditions, responsibilities, and access rights of both internal and external workers, ensuring that everyone who handles sensitive data is properly trained and follows the same rules to prevent harm to Metsä Group and its stakeholders.

### 4.1.2 Passive risk management practices

Fundamentally, value chain workers are subject to the same rules as Metsä Group's own staff. In case a value chain worker causes harm to themselves, another employee, or the environment, Metsä Group has certain responsibilities how to handle such incidents. Passive risk management practices typically serve as frameworks for setting expectations and responding to risks after they are recognized.

Based on the findings gathered through the project and Metsä Group's official website, Metsä Group follows ethical principles, including local legislation, salary payments, and

minimum wages, and operates according to laws and contracts. These aspects are defined in Metsä Group's procurement contracts and ensured in practice by project organizations or the client organization.

> *"In all contracts, we include ethical principles as an attachment, ensuring that all contractors who work for Forest have reviewed them." (Interviewee 7, Forest)*

> *"Risks are addressed and monitored through ethical guidelines, supplier monitoring, auditing, and background checks. Suppliers are required to sign the supplier code of conduct. Metsä Group's risk management covers the entire value chain. We are committed to human rights principles and require the same from all our business partners. All employees, both internal and external, receive regular training on ethics and responsibility". (Interviewee 3, Legal Compliance)*

It was further emphasized by the Forestry interviewees, that there are system-based channels through which contractors and their employees can submit safety, environmental, or quality concerns, which are then directed to Metsä Group's system and processed accordingly. A root cause analysis investigation is conducted with those involved. The root cause, how to prevent similar concerns in the future, and what lessons can be learned for others in similar situations, are determined. Whether there is a need for official notifications and if there were any sanctions or intentionality involved is also assessed. Additionally, all employees, contractors and drivers are obligated to report if they encounter dangerous activities or actions, or any errors or concerns regarding instructions or operations.

In addition to commitment to Metsä Group's ethical principles, Metsä Group's Compliance and Ethics Channel, also known as ethical reporting channel or whistleblowing (channel), emerged from all the interviews as the only anonymous reporting channel in case an external workforce member or Metsä Group's own staff wants to report issues such as bribery, discrimination or other unethical behavior. It is also used for providing

other feedback and observations either by name or anonymously in multiple languages. However, it was mentioned by the HR interviewee that it is desirable that primary reporting regarding such issues go through supervisors as soon as issues arise to encourage open communication. All Compliance and Ethics Channel's reports are reviewed and handled by the Group Compliance team. The number and variation of reports are quite significant, as the aim is for a low-threshold reporting channel, and the primary emphasis is that the issues must be addressed with a low threshold. It was also highlighted that instructions on how to use and find the channel are provided in trainings.

However, some of the interviewees stated that the ethical reporting channel is easily accessible, while others suggested that locating it requires some effort. An important perspective arose from the ICT interviewee regarding cultural differences: even when the reporting channels are available, their use may not be obvious or straightforward for everyone. Therefore, relying solely on value chain workers to report such incidents when necessary is not a reliable approach.

> *"How well our external workforce is aware of it [the ethical reporting channel] and how readily available it is for them [value chain workers] is a good question. This is also a cultural question. --- We also have so-called offshore workforce, which may involve higher risks and cultural differences, meaning that even if a whistle-blowing channel is easily accessible, using them can be behind a high threshold." (Interviewee 2, ICT)*

> *"In my opinion, it's easy to access and it's available in several different languages. However, finding the link does require some effort." (Interviewee 1, HR)*

As demonstrated in COSO ERM, to which Metsä Group's risk management practices are aligned, Metsä Group's ethical principles, along with regulatory compliance and ethical reporting channels, are essential elements for demonstrating a company's value base, due diligence, and accountability. However, it can be concluded based on the project,

DMA and interview findings, that while the Ethics Channel has been the only available channel for employees to raise concerns anonymously, and codes of conduct and other ethical principles must be complied with, they alone are not enough to genuinely support effective risk management in the day-to-day work of suppliers' employees. Hence, their actual impact and effectiveness in identifying and addressing value chain worker-related risks proactively is limited. Also, while Metsä Group maintains oversight responsibility across the entire value chain, based on the project and interview findings, this still needs further reinforcement within the organization. Recognizing this responsibility highlights the growing importance and need for effective and proactive risk mitigation within the company. It also indicates that the theme of this study is highly relevant and important and requires more attention.

> *"When considering the risk from our perspective, we might sometimes mistakenly think that the risk transfers to our supplier or contractor when we make agreements with them. However, the responsibility for oversight remains with us throughout the entire chain. Perhaps strengthening this focus at all levels of our organization is a mitigation measure we need to take." (Interviewee 1, HR)*

### 4.1.3 Proactive risk management practices

Proactive risk management measures aim to identify and address potential risks before they occur. In line with the project findings, a shared opinion among the interviewees was that it is essential to effectively prevent and mitigate risks related to value chain workers before they materialize.

The importance of regular training and clear orientation materials, which serve as proactive risk mitigation measures, was further emphasized in the interviews when discussing how Metsä Group ensures that external workforce members understand their rights and responsibilities. All employees are provided with the necessary tools and safety guidelines. Many orientations and briefings begin with how Metsä Group operates, emphasizing the duty aspect. Safety training is mandatory for all employees and contractors

before accessing mill areas and occupational safety card is mandatory for working in Finnish mills. Work permits are managed in Metsä Group's systems, which is crucial, especially for foreign workers. There are safety orientations at mills: a general one valid for three years and a more condensed shutdown orientation valid for one year which must be completed by everyone and linked to systems for verifying that they are valid.

However, the HR interviewee noted, that training and orientations and their core elements should be condensed and described concisely as possible. Combining social responsibility topics with safety training could possibly simplify the process for contractors as training varies between companies and topics may be repeated. It is important to consider also how contractors manage the overall process with different stakeholders and clients.

> *"There's no other way but to make them [value chain workers] aware [of their rights and responsibilities]. It's the training that ensures they are educated and familiarized with working with us and what is required. --- Mills have access control systems in place, and to enter the mill area, certain basic requirements must be completed and documented. It is the responsibility of the representatives, such as supervisors, of these workers, whether they are foreign workers or subcontractors' employees, to provide this information. This includes occupational safety cards, orientations, work permits, etc." (Interviewee 1, HR)*

> *"Metsä Group's safety management is based on active and proactive occupational safety work, which includes preventive risk identification, adherence to safety guidelines, and safety training." (Interviewee 3, Legal Compliance)*

Ensuring that the required expertise is in place by offering required training and instructions for value chain workers in a way that they are understood by everyone in different languages is part of effective risk mitigation. The Forestry interviewees further high-

lighted that tools and equipment provided for value chain workers involve safety equipment and safety and operational instructions, also on e.g. required practices related to natural habitats. When field visits are conducted, it is ensured that work permits and the safety equipment are in order. Employment and contract related risks are mitigated by recording all workers in Metsä Group Supplier Portal, after which they must complete all required mandatory courses. Completion of mandatory courses is systematically monitored. However, it is important to note, that the contractor is responsible for ensuring that, in addition to the mandatory courses, the worker has the necessary skills and is familiar with the tasks. In addition, HR processes for value chain workers in large projects, such as the Kemi bioproduct mill project, include specific processes to combat the grey economy, with allocated resources.

As Metsä Group has Forest specialists located across Finland and occasional encounters occur, forest owners, contractors, and drivers can provide feedback and raise concerns during these interactions with Metsä Group's own staff. Important proactive risk mitigation methods also include conducting regular meetings with contractors and encounters with employees. Risk and safety issues are systematically addressed through structured discussions with contractors and operations specialists. Safety walks are conducted at forest work sites, including those with foreign workers. Key responsibilities, rights, and best practices are reviewed in regular contractor information sessions. Metsä Group is also responsible for ensuring that contractors comply with their statutory obligations.

Audits, task- and site-specific risk assessments and site inspections are one of the key processes for mitigating risks related to value chain workers. The Forestry interviewees further acknowledged that inspections are carried out at work sites where risks and safety-related matters as well as issues related to the execution of the work are reviewed. Metsä Group has also commissioned audits for companies employing foreign labor, and there are official inspections carried out by the administrative authority randomly so that no one knows when or who will be inspected. If something comes up from those inspections, they are addressed, in the worst case leading to the termination of the

agreement if the issues are not resolved. Also, when committed to a certification, additional requirements are imposed, and there is also an obligation for continuous improvement, meaning that what Metsä Group offers and demands is constantly increasing.

> *”If a company has deficiencies, regardless of the issue, and they are not addressed, it can ultimately lead to us no longer working with that contractor. There are various practices and processes in place to tackle these problems and catch them before they escalate into something bigger.” (Interviewee 6, Forestry).*

Planning of logging sites is an essential part of Forestry’s risk mitigation process. Before handing over the site to contractors, safety and environmental considerations and risks are reviewed, and specific risk assessment questions are addressed. The system, through which forestry experts plan the harvesting and forest management sites, helps identify whether additional planning or closer inspection is needed, especially in areas involving safety concerns, environmental sensitivity, or protected natural sites.

> *“Whether they are forest management, harvesting or transport contractors, we continuously identify environmental and safety information for these sites. This is an ongoing activity for us.” (Interviewee 4, Forestry)*

In line with the project findings, the ICT interviewee noted that identity management and access control are essential for mitigating risks associated with external workforce, and a more proactive risk mitigation approach is needed.

> *“I would like to respond differently, but I will say honestly how I see this matter. In terms of ICT, I would guess that it's not sufficiently well managed. I would say that it's in our lap before we react to it. --- If we think specifically about problems or risks related to external workforce before they materialize, I would say that we are somewhat in a reactive mode.” (Interviewee 2, ICT)*

Furthermore, since external workforce members in ICT are not physically present at the mills to harm themselves, others, or the environment, information security plays a key role when discussing safety and operational guidelines from ICT perspective. Knowledge work is always done using Metsä Group's tools, either a physical laptop provided to the external employee or their own device through virtual workstation, ensuring security and control. However, an interesting perspective arose from the ICT interviewee that unverified individual identities cause a risk that someone other than the officially assigned person may carry out the work.

> *"I don't know if we have such cases, but it is theoretically possible, for example, coding to be done so that it is performed by someone else." (Interviewee 2, ICT)*

This creates a challenge for visibility, increasing the risk for inappropriate business practices and human rights violations such as excessive working hours, unmonitored labor conditions, and failure to ensure fair and ethical treatment of workers. Therefore, it is essential to consider whether there are situations, particularly in complex or remote operational environments, where certain work tasks cannot be clearly identified. However, it can be concluded based on the project and interview findings, that Metsä Group has made efforts to move from a reactive approach to a more proactive risk management, aiming to strengthen the identification and mitigation of value chain worker-related risks more effectively.

### 4.1.4 Improvement opportunities

Valuable improvement suggestions arose from the interviews regarding the current value chain worker-related risk management practices. In line with the project findings, it was noted by the HR interviewee that combating grey economy is important and will likely require increased monitoring, and integrating this into safety orientations could be an area for improvement, ensuring contractors' employees know their rights. Current processes could also be improved to better identify, manage, and prevent risks related to value chain workers by simplifying and streamlining processes.

> *"We shouldn't talk separately about Sourcing processes and HR processes but have a single process that encompasses these different aspects. This would clarify and mitigate many issues. --- The next thing we should consider is whether our process map is too fragmented from a practical implementation perspective." (Interviewee 1, HR)*

If ICT white-collar workers cause harm to the company, the issue is promptly addressed with the supplier. However, it was suggested by the ICT interviewee that such cases should be monitored and included in the ICT risk portfolio to better detect them. It is crucial to a) prevent risks from arising and b) proactively detect issues that need attention before they escalate.

> *"The risk often raised is whether we have enough expertise and skilled labour available as technologies change so much that the change curve is very steep, and we need to keep up. However, identifying risks related to specifically external labour as part of the basic risk management process and the ICT risk catalogue could be a step towards development. --- The key here is to identify what the potential risks are, as you cannot prepare for something you haven't even recognized/identified. Identifying risks and planning management strategies for them is extremely important." (Interviewee 2, ICT)*

In the ICT risk catalogue, it is important to consider whether there is a differentiation between external and internal workforce or risks assessment from a specific perspective, for example, human rights perspective. The question is different when discussing knowledge workers in Finland or Sweden compared to China, Sri Lanka, or India for example. Using a whistleblower channel to report how bad things are can impact the entire family's livelihood. While good and sustainable practices from suppliers is demanded, it is important to recognize that the demands also have repercussions.

> *”Of course, I don't mean that we shouldn't demand and expect good practices and sustainable actions from our suppliers. However, it is something we need to be aware of, that our demands always come with a cost on the other end.” (Interviewee 2, ICT)*

Identifying the workforce in forest work is not a straightforward task. However, in line with the project and DMA findings, the Forestry interviewees further emphasized that identity management is a key approach for recognizing and managing risks—especially those related to foreign labor. For instance, the identification of drivers and workers using tax numbers is a relatively new development. A valuable development opportunity would be to increasingly require contractors to report these matters to Metsä Group on a regular and direct basis, without the need for separate audits or inspections. For example, contractors could be required to submit monthly updates on topics such as completed training, attended courses, and any inspections carried out by authorities or other third parties. This requires a cultural change and a change in mindset.

> *“The contractors must pay more attention to it [reporting] themselves, and it is present in their actions. It is a cultural change.” (Interviewee 4, Forestry)*

Communicating safety-related findings, not only within your own organization, plays an important role in improving future risk prevention and identification from a Forestry point of view. When targeted contractor evaluations are conducted and extremely good safety practices are noted, they could be shared more effectively with other contractors and within the network. An area for improvement would be offering model task-specific risk assessments based on the risks Metsä Group identifies, in addition to the contractors’ own assessments. This would allow Metsä Group to support those who may lack the resources to develop assessments as detailed as those used by larger contractual partners. Additionally, the safety of working alone could be further improved. An application to support working on your own in the forest is offered to Metsä Group’s own staff, and as experience has been gained from it, it could perhaps also be adapted to be suitable

for contractual partners as well. In many fields, the threat of violence has increased, and it has been recognized that it could also affect external labor. This is a threat that Metsä Group should be prepared for as well.

> *"The development work is increasingly moving towards better management of the workforce and improving the identification processes even further. That is likely to be the near-future focus. In other words, we aim to control who is present at our work sites. That is the direction." (Interviewee 6, Forestry)*

In conclusion, a common view among the interviewees was that the directives and standards have positively forced Metsä Group to consider their implications. In line with the project findings, it was a shared view that in the future, the risks related to value chain workers should be considered more closely. It was also emphasized that this subject is highly important, and that it is very much appreciated that Metsä Group is taking this matter seriously and striving to find solutions and to comply not only the directives and standards but really have an impact on this matter at its early stages. At Metsä Group, understanding of these matters has improved over the past years and continues to grow. Knowledge is indeed a key factor in this issue; if the requirements of the new regulations and standards are not well understood, how could the processes be further developed? Hence, the discussion starts with understanding what the changes mean for the company and its various business or process areas, involving especially identifying, reacting, avoiding, and preventing issues and risks.

> *"I think we have done a good job and have continuously moved forward. We observe and monitor these matters, and we ourselves understand and know more about them, making it easier for us to address them. The knowledge and awareness within our organization have significantly increased in recent years, and these issues are prominent and being addressed." (Interviewee 1, HR)*

*"The directives and standards in a positive way force us to think about what this means for us. --- I think Metsä Group's message is incredibly clear, and I am very proud of Metsä Group for how important these matters are here. It's not just about meeting the minimum level of some directive to check a box, but about integrating this into the culture and making it a natural part of our actions. That is worth striving for." Interviewee 2, ICT)*

## 4.2 New value chain worker-related risk management best practices defined

The aim of this study is to examine how best practices for social responsibility and risk management can be adopted and implemented to comply with ESRS S2 and simultaneously improve overall competitiveness, company reputation and sustainability. This second section of the findings aims to answer this question by presenting the best practices defined for implementing value chain worker-related social responsibility, in compliance with the social responsibility regulations. While the passive risk management practices such as codes of conduct and ethical reporting channels are mandatory to be in place and serve as important measures for risk management, they alone are limited in providing effective and sufficient support for managing risks related to suppliers' employees in practice. Based on the project and interview findings, Metsä Group is committed to develop its value chain worker-related risk management practices to be more proactive. Hence, based on the key findings gathered through the project workshops and meetings, the following selected best practices were identified:

1. **Filter to identify the most risky suppliers**

The first best practice defined is a system-based approach for filtering and mitigating risks. The aim of the filter is to identify the most risky or vulnerable suppliers that require measures, such as auditing and monitoring. The purpose is to reduce potential harm and prevent issues related to social responsibility regarding value chain workers. Factors identified determining the risk level of suppliers include, for example, supplier country, sensitive natural sites, multi-level subcontracting, seasonal workforce, and potential

negative impact to brand image. At first the focus is on the suppliers' employees of ICT, Wood Supply and investment and mill on-site suppliers based on the project scope. The main risk the filter aims to prevent is not being able to identify, recognize or correctly mitigate the most high-risk suppliers, which could result in their causing damage to the company, employees or stakeholders, including the environment.

**2. Anonymous supplier surveys**

Anonymous supplier surveys distributed to the supplier workforce is the second best practice defined. Suppliers are asked to collaborate on voluntary anonymous surveys or share the results of their own internal employee survey results. Anonymous supplier surveys will be a tool for supplier base management, and they introduce a new way to connect with suppliers and workers in the value chain and in the operative work. The primary risk to be mitigated is to gain a real understanding of how the value chain workers in remote supplier operations are doing, and to mitigate ESRS S2 related risks such as reputational risks and potential human rights violations. Additionally, the aim is to receive new insights and improvement ideas, that may not have been brought up by the external workforce via other system-based channels or face to face. Hence, by providing value chain workers with the opportunity to respond anonymously directly to a survey may result in valuable and meaningful collaboration. However, the purpose of the anonymous survey is not to serve as a whistleblowing channel, but rather to gain visibility into where the risks lie within the supply chain.

**3. Identity and qualification management of off-site suppliers**

Identity and qualifications validation and management of "invisible" off-site workers in Wood Supply and ICT subcontracting chains is the third best practice defined. The primary risk to be mitigated is identifying non-committed or non-qualified supplier workforce causing harm to themselves, others, the company or the environment, or causing financial or reputational damage to Metsä Group. The Wood Supply and ICT service providers must regularly update and verify the identities and qualifications of their employees through a controlled process to keep the information accurate. The potential risk

mitigation principles chosen for off-site Wood Supply workforce include for example sensitive natural site information, obligatory name or tax number tags carried by supplier workforce at harvesting and forestry service locations and announced and un-announced on-site visits with a focus on risky locations or suppliers. Risk mitigants in the ICT processes include a governance model with defined roles and responsibilities for managing ICT supplier risks, ensuring structured and controlled supplier quality, including ESRS S2 workforce risks.

**4. Access management of on-site suppliers**

The fourth best practice defined is improving gate access management quality of "visible" on-site supplier workforce within identified locations such as investment and production sites. Given that these are controlled locations, all data regarding workforce work permits, competence and qualification information must remain up to date. Access management ensures that only qualified personnel are involved with the work, which is essential for guaranteeing that the work is conducted safely. The primary risk to be mitigated is non-compliance or an unwanted incident occurring at Metsä Group site. The role of systematic site access control is essential, and the aim of the on-site work is to define and implement proactive measures to ensure sufficient knowledge and management of value chain workers.

These four best practices defined serve as proactive risk management practices. However, to be effective, these best practices need to cover all of the operations in scope systematically and to be part of daily work. Based on the project findings, the responsibility for addressing these issues needs to be embedded into Metsä Group's operational processes to effectively implement the work in practice. Additionally, mitigating these risks must be present in governance practices and a good business context. The issue is also connected to organizational culture and the leadership of people, requiring increasing attention from the company's own workforce toward the employees of the suppliers.

## 4.3 Summary of the key findings and the revised framework

Metsä Group, when procuring work from a supplier, may be legally responsible or may be considered responsible for any harm or damage the supplier workforce causes. If the supplier workforce is not competent or does not comply with the correct procedures, they may pose harm to themselves, other people, the company, and stakeholders, including the environment. Damage may be financial, or reputation related, or harm forest industry legitimation or capability to invest and operate. As recognized by the double materiality assessment, the greatest risk is found within Metsä Group's value chain rather than their own operations. Metsä Group holds ultimate responsibility for oversight throughout the entire value chain. Hence, supplier workforce risks cannot be outsourced and effective risk mitigation is needed. Even though knowledge about this topic is increasing and the matter is taken seriously within the company, the responsibility still needs to be more deeply integrated into Metsä Group's operations and practices, requiring cultural change and increasing awareness of the matter. This observation highlights the relevance of this study.

Based on the findings, there are various risks related to value chain workers due to Metsä Group's extensive operational scope. Therefore, a filter methodology is necessary to more accurately determine and identify which specific risks apply to which suppliers and activities, enabling more efficient risk prevention. The risks are further heightened when workforce is seasonal or temporary, if they come from different countries and cultures or are in vulnerable position. Thus, needed information, orientations, and training materials must be easily accessible and presented in a concise and understandable matter.

Mitigating these risks starts with ensuring that value chain workers are professionals in the field they are expected to operate in and that they are aware of their rights and responsibilities. This is something that can also be supported through proper training and orientation. For companies to rely solely on contractual obligations for ethical conduct is insufficient without active oversight. Foreign and seasonal workers may not be aware of whistleblowing channels or may hesitate to use them due to fear, lack of trust

in anonymity, or cultural differences. As a result, unethical behavior may go unreported. Sending anonymous surveys directly to the supplier workforce, through which they can genuinely report unethical behavior or concerns, could serve as a new way to create opportunities for communication and risk mitigation.

However, if companies do not know who might be causing harm to the company, other people, or the environment, or if they do not identify supplier workforce lacking proper qualifications or commitment, it is extremely hard or even impossible to execute effective risk mitigation and prevention. This is a matter of identity and qualification management; having clear visibility into who is where, what they are reported to be doing, and at what time, and whether they possess the necessary and claimed skills to carry them out. These are one of the most essential elements of managing and preventing risks related to value chain workers.

The best practices demonstrate a strong commitment to ethical conduct and also enable compliance with good corporate governance practices expected under ESRS G1. Additionally, in line with ESRS S2, they show a clear commitment to fair treatment and working conditions of value chain workers. The best practices also align with CSRD and CSDDD requirements by helping identify social risks, ensure worker safety, and transparency. However, implementing the new risk management best practices is not only essential for meeting the requirements introduced by CSDDD, CSRD, and ESRS S2, but it is also part of daily risk management, which the regulation has helped to structure.

Even though there has already been an existing risk management framework utilizing COSO ERM in place at Metsä Group, and risks arising from social responsibility had already been acknowledged, defining how these social risks would be effectively integrated into the risk management processes needed to be done. Based on the findings, it can be concluded that proactive supplier workforce risk mitigation development is in focus at Metsä Group in the near future.

A summary of the theory and empirical findings is presented in Figure 9. The revised theoretical framework aims to obtain a thorough understanding of the best practices and mitigation mechanisms for ensuring social responsibility for value chain workers. Furthermore, it reflects how the key concepts presented are implemented from the case company's perspective.

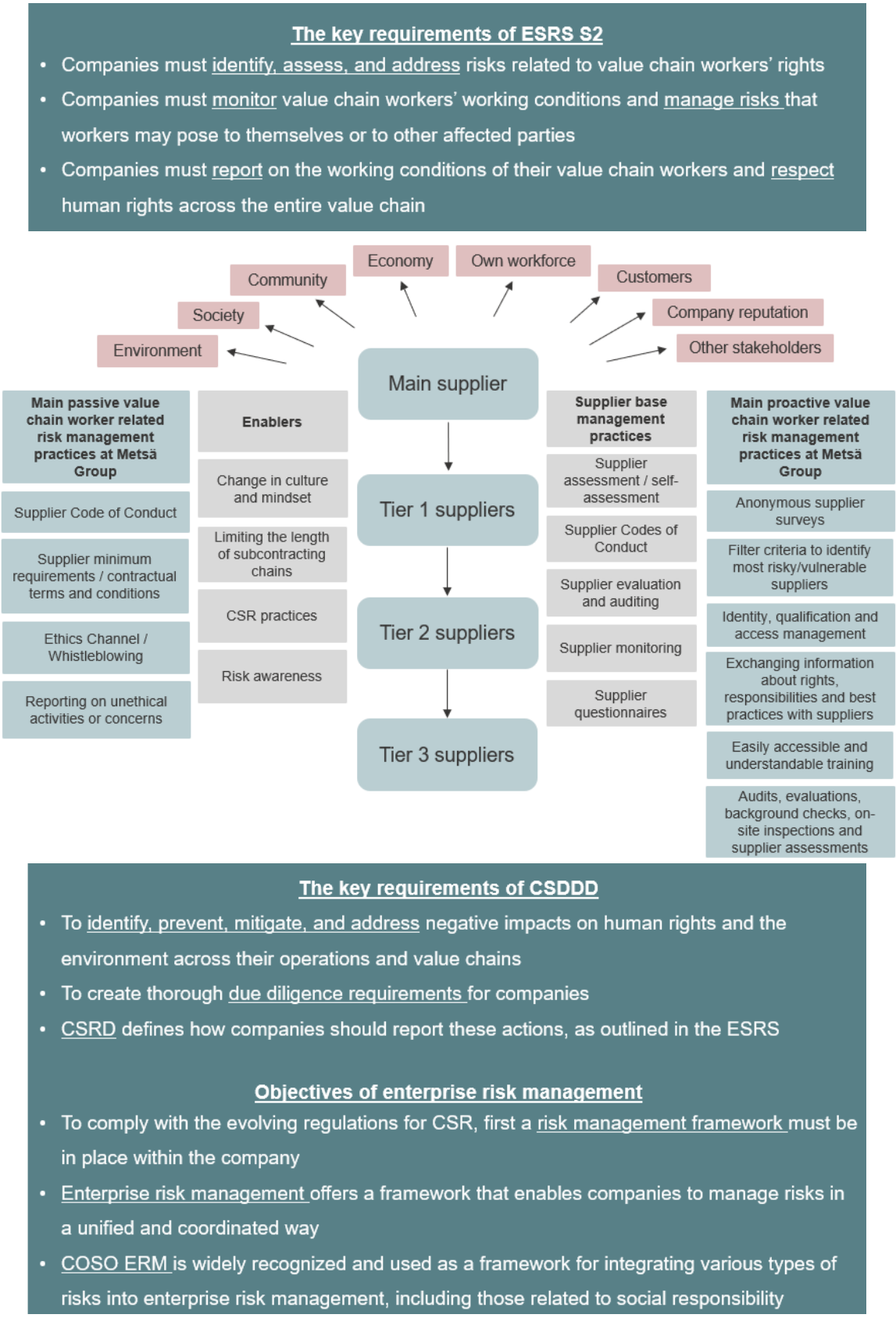


**Figure 9.** Synthesis of the theory and empirical findings.

# 5 Discussion

This chapter concludes the study. It begins with an overview of the theoretical contribution, discussing how the findings extend prior research. This will be followed by a presentation of the managerial implications, with a focus on analysing the results from an organizational perspective. Thereafter, the limitations of the study will be addressed, and finally, directions for future research are proposed.

## 5.1 Theoretical contribution

This study fills the research gap of this yet underexplored but highly relevant matter, and answers the call of Schilling-Vacaflor and Lenschow (2021) who argue that the potential effects of the new EU due diligence regulations must be thoroughly evaluated, and additional theoretical research is required. This study extends the prior literature by Nocco and Stulz (2006) by providing new perspectives on practical implementation on enterprise risk management and ways to identify, assess and manage risks, focusing on value chain workers. It also offers assessment of different risk management practices, further elaborating the research by Bromiley et al. (2015). Additionally, this study answers the call of Wang et al. (2023) who states that there is lack of academic discussion related to forest supply chain management and risk assessment.

Supported by multiple research (Lietonen et al., 2020; Mosley, 2017; Nousjoki et al., 2024; Vanpoucke & Klassen, 2024), the findings implicate that subcontracting can increase various risks for value chain workers. In line with Nousjoki et al., (2024) and Lietonen et al. (2020) the findings suggest that the risk of unethical treatment of workers increases if they are in vulnerable positions, and educating value chain workers about their rights and responsibilities is essential. While the importance of different value chain worker-related risk management mechanisms is recognized by various research (Afteni et al., 2021; Herkenhoff et al., 2023; McGrath et al., 2021; Sancha et al., 2016), the findings further highlight the importance of the mechanisms to be effectively implemented

within the company to gain a more proactive approach for risk management. The findings, as well as research (Byju et al., 2023; Lietonen et al., 2020) highlight that identifying risks and vulnerabilities is essential. Hence, this study offers novel insights regarding the filter mechanism for identifying the most risky or vulnerable suppliers who require measures to reduce potential harm and prevent issues related to social responsibility of value chain workers.

In line with Aaltonen (2025) and Herkenhoff et al. (2023), the findings implicate that even mechanisms, such as ethical reporting channels or codes of conduct, can be ineffective if employees are afraid of repercussions of utilizing them. While codes of conduct have raised awareness of labor rights, ongoing violations show they do not work well without proper enforcement (Hoang, 2019). This study identifies anonymous supplier surveys as a valuable and effective practice for enhancing risk mitigation and communication directly with external workforce. While there is some literature on anonymous supplier surveys (McGrath et al., 2021; Oksa, 2025), implementing them for mitigating value chain worker-related social responsibility, especially within the forestry industry, seems to be yet under examined.

The need for proactive risk management practices becomes even more apparent when considering the unique characteristics of the forestry industry, such as operations off-site, seasonal labor, and environmental sensitivity, which make managing social risks more complicated (Wang et al., 2023). In line with Lietonen and Ollus (2018), the findings suggest that the risk lies in not knowing who is actually doing the work, which can lead to safety issues, leaks of confidential information and environmental harm. Hence, the findings emphasize the importance of maintaining on-site and off-site external workforce's identity, qualification and access information up to date at all times. Additionally, in line with Asikainen and Heikkilä (2024), engaging more closely with subcontractors by increasing field visits on-site to better understand the safety challenges, and sharing observations more actively could help prevent accidents.

The findings support Carter and Rogers (2008) view on how becoming a sustainable organization requires the company's culture and mindsets to evolve as well, especially when it comes to social responsibility. In line with Carroll (2015) and Marsden and Andriof (2007), the findings suggest that in order to do good for society, improve employee well-being and build credibility, companies should adopt good corporate citizenship and CSR practices. However, despite the increasing CSR literature, many contributions (Lindgreen et al., 2009; Petersen and Lemke, 2015) still overlook the specific risks faced by value chain workers in sectors such as forestry, highlighting the relevance of this study. While existing literature in the field has largely focused on environmental aspects, this study brings forward new insights into the social dimension of value chain worker-related risks and effective risk management practices, addressing a clear research gap.

## 5.2 Managerial implications

Based on this study, in the forestry industry, the most significant risks are not necessarily primarily financial, but rather reputational and societal. One of the key risks today is the increasing critical evaluation of the industry's legitimacy. As a result, it is essential for companies to actively engage with a broader and more diverse group of stakeholders, whose expectations are evolving. At the same time, emerging regulatory frameworks, such as CSRD, CSDDD, and ESRS S2, provide structure and pressure for addressing and managing social risks, particularly those related to value chain workers. These regulations do not replace the need for risk management frameworks, such as COSO ERM, but they help align their practices with societal expectations maintaining the trust and legitimacy required to operate responsibly.

The findings suggest that the main risk related to forestry industry's value chain incidents are caused by the industry's unique characteristics such as remote operations and limited visibility into the activities of lower-tier suppliers, reliance on temporary seasonal workers, and the need to operate in ecologically sensitive environments. These elements make oversight and accountability more difficult. Therefore, to help reduce social and safety risks, the key focus should lie on establishing clear qualification requirements and

access control practices for ensuring that only trained and authorized personnel have access to specific sites or tasks.

One of the key insights based on the findings was introducing anonymous supplier surveys as a proactive risk management practice, offering an opportunity to gain valuable information directly from the workers in the value chain. Based on the project findings the current understanding is that anonymous supplier surveys have potential to become a standard expected risk management practice for effectively managing and building trust with large supplier groups in the future.

Ensuring that value chain workers are professionals in their field, properly trained and follow required procedures is essential, as companies may be held legally or reputationally accountable for any harm caused by unqualified or non-compliant workers in their value chain. Companies that fail to address issues such as poor working conditions, unfair wages, or discrimination within their supply chains risk serious consequences. Proactively identifying and addressing these risks is essential, requiring a comprehensive understanding of the potential risks across the value chain. In this context, social responsibility can be viewed as an integral part of risk management and may also contribute to a company's overall competitiveness.

## 5.3 Limitations

As this study is conducted from the perspective of the case company operating in the forestry industry, it is subject to some limitations. This study is conducted as a single case study, which limits the generalizability of the findings. The research is carried out within the scope of the project, which limits the possibility to explore the value chain worker-related risks and social responsibility from more various perspectives. However, as this topic can be approached from many angles, the case company and the scope of the project offered a clear structure and specific focus for the study.

Additionally, only four interviews were conducted with seven professionals from Forestry, ICT, Legal Compliance and HR. However, this is a justified decision, as already a substantial amount of data had been collected through the project, and the interviews were intended to further enrich the data. Another important consideration is the researcher's employment at the case company during the study. While this provided valuable data access and insight, it may have also subtly influenced the interpretation of the data. Therefore, potential researcher subjectivity and bias must be acknowledged.

While the insights gained offer valuable information for companies operating under CSRD, CSDDD, and ESRS S2 requirements, they should not be considered universally applicable due to variations in industry contexts, organizational structures, and regulatory environments. Furthermore, the study takes a mainly EU-centric perspective. Although sustainability is a global concern, political and cultural differences—such as those seen in North America—can affect how responsible business practices are recognized and valued, making it difficult to define sustainability and its legitimacy in the same way across different places around the world.

## 5.4 Suggestions for future research

As this study investigated how best practices for value chain worker-related social responsibility and risk management can be implemented to comply with ESRS S2 from a forestry industry point of view, future research could explore a comparative study across different industries. It could expand the current research by showing how different features of different industries affect how companies identify and manage social risks related to workers in the value chain.

Conducting benchmarking on how organizations across the same or different industries have responded to CSRD, CSDDD, and ESRS S2 after the regulations have been in effect for a longer period could offer an avenue for further research. This perspective could enhance the research by offering practical insights, lessons learned and empirical evidence on how organizations adapt to the evolving regulatory frameworks. It should also

be noted that the interpretation of the current regulation as of June 2025 is still to find its eventual form, and it is expected that further clarification and agreement will be needed before there is a clear and widely accepted understanding of the regulation.

Future research could also compare how companies' interpretations of these directives change over time, for example, between 2025 and five years later. It would be useful to see which risk management practices have become common, and what kinds of approaches have become standard in managing the S2 risks. This could show whether early expectations in 2025 turned into long-term practices.

Furthermore, future research could explore how political environments impact companies' interpretation of these regulations. For example, companies may invest more in sustainability if their main markets or trade partners have strong political support for such efforts. Comparing different countries' political climates and market priorities could help explain why companies choose certain approaches.

As this study offered insights from a unique case from the case company's point of view, future research could adopt a multi-case approach to improve the generalizability of the findings. Finally, a proposed research avenue could focus on the long-term impacts of value chain worker-related social risk management and identifying which practices lead to sustainable and effective improvements over time. This could help organizations better understand which actions truly contribute to positive outcomes for value chain worker-related social responsibility and risk mitigation.

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# Appendices

## **Appendix 1.** Semi-structured interview guide

1. What are your areas of responsibility, and how long have you been working at Metsä Group?

2. What processes or procedures does Metsä Group have in place if value chain worker wants to report issues such as bribery, discrimination, or other unethical behavior?

3. How does Metsä Group handle and what kind of responsibilities does Metsä Group have in situations where value chain worker could cause harm to themselves, another employee, or the environment?

    3.1. How many such situations have been addressed in the past two years?

4. What processes does Metsä Group have in place for managing risks related to value chain workers?

    4.1. What are the most common risks identified related to value chain workers?

5. How do we ensure that external workforce members understand their rights and responsibilities at Metsä Group?

6. What kind of training (e.g., safety, operating instructions) and resources (e.g., tools) are provided to value chain workers?

7. How do current practices and processes at Metsä Group prevent/mitigate risks related to value chain workers before they materialize?

8. How could we improve our processes to better identify, manage, and prevent risks related to value chain workers?

9. Is there anything else you would like to add on this topic that did not come up already during this interview?

## **Appendix 2.** Original semi-structured interview guide in Finnish

1. Mitä vastuualueita työhösi kuuluu, ja kuinka kauan olet työskennellyt Metsä Groupissa?

2. Millaisia prosesseja tai toimintamalleja Metsä Groupissa on käytössä, jos ulkoisen työvoiman jäsen haluaa kertoa ongelmista, kuten lahjonnasta, syrjinnästä tai muusta epäeettisestä toiminnasta?

3. Miten Metsä Group käsittelee ja millaisia velvollisuuksia Metsä Groupissa on tilanteissa, joissa ulkoisen työvoiman jäsen aiheuttaisi haittaa itselleen, toiselle työntekijälle tai ympäristölle?

    3.1. Kuinka monta tällaista tilannetta on mahdollisesti käsitelty viimeisen kahden vuoden aikana?

4. Millaiset prosessit Metsä Groupissa on käsitellä ulkoiseen työvoimaan liittyviä riskejä?

    4.1. Mitkä ovat tyypillisimmät riskit jotka on tunnistettu ulkoiseen työvoimaan liittyen?

5. Miten varmistamme, että ulkoisen työvoiman jäsenet (external-työntekijät) tuntevat oikeutensa ja velvollisuutensa Metsä Groupissa?

6. Millaisia koulutuksia (esim. turvallisuus ja toimintaohjeet) ja resursseja (esim. työvälineet) tarjoamme ulkoisen työvoiman jäsenille?

7. Miten nykyiset käytännöt ja prosessit Metsä Groupissa ehkäisevät/mitigoivat ulkoiseen työvoimaan liittyviä ongelmia tai riskejä ennen niiden materialisoitumista?

8. Miten voisimme kehittää prosessejamme, jotta pystyisimme paremmin tunnistamaan, käsittelemään ja ehkäisemään ulkoiseen työvoimaan liittyviä riskejä?

9. Onko sinulla jotain lisättävää mitä haluaisit mainita aiheeseen liittyen?