Nordic Sustainability Reporting Standard

NSRS Theoretical Annex

The theoretical foundation of Nordic Sustainability Reporting Standard.

12.10.2021

Nordic Sustainability Reporting Standard (NSRS)
'NSRS Reporting Requirements, 1st Edition' (2021)

Main Developers:
Hans Christian Ellefsen, Marthe Sofie L. Eide, Marit Svälas, Leonard Breukers, Abel Crawford & Kaja Koppang.

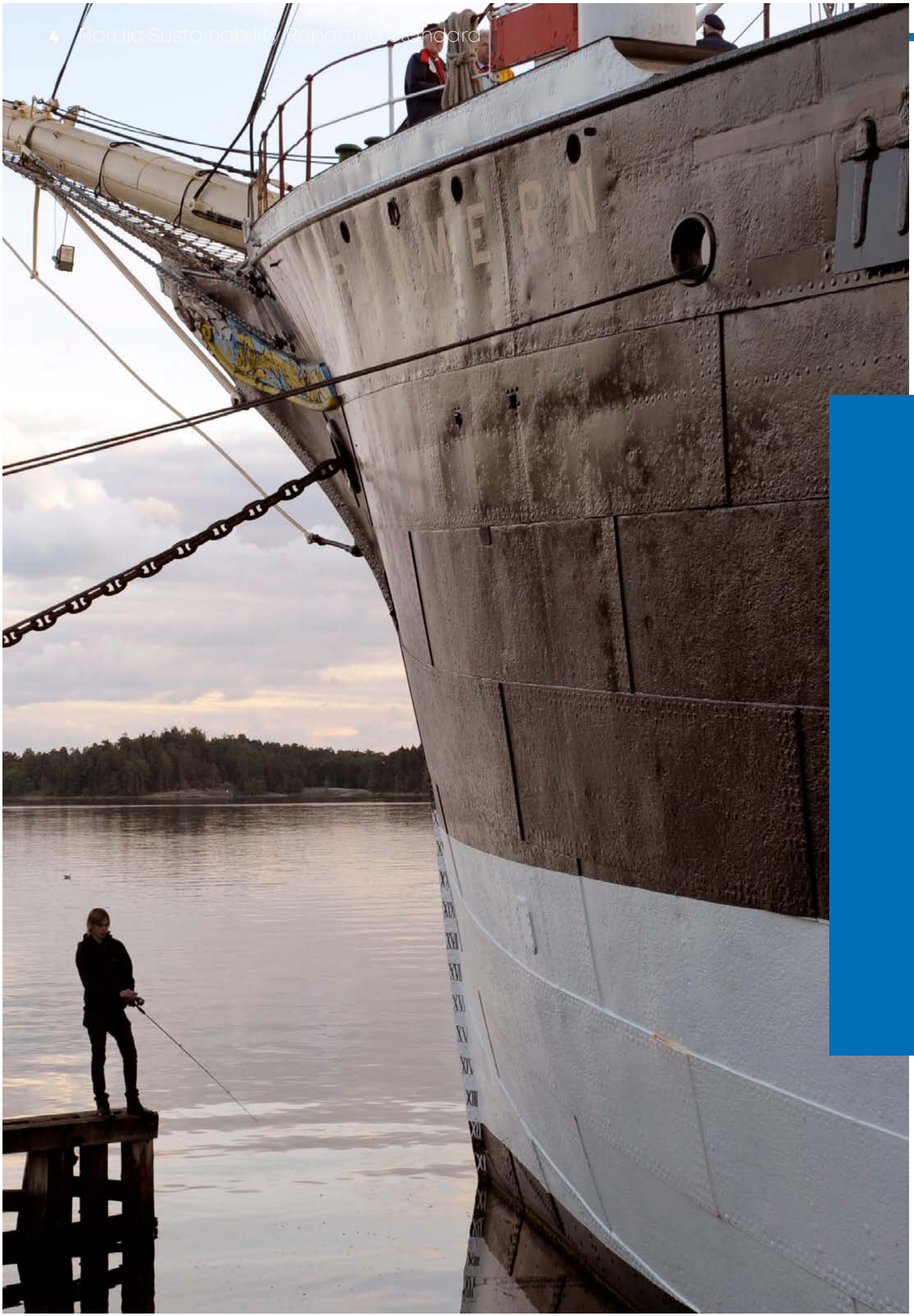
Contributors:
Lene N. Sundalskleiv, Lali Fjellström, Janne Fredman, Eeva Lyytinen, Christine L. Larsen, Roland Sigbladh, Ari Lahdenkauppi, Svein Austheim & Jari Seppä.

Funded by Nordic Innovation.

Peer reviewed by CICERO Green.

“We have made it the biggest business in the world to destroy the planet. Now, let’s make it an even bigger business to fix it.”

Andreas Slettevold, CEO, Chooose



Greetings from the Nordics

The NSRS aims to develop a simplified sustainability reporting framework for for Nordic SMEs. The first prototype was launched for testing 3rd of March 2021.

We are proud to share some of the main findings from the continuously ongoing research process. On behalf of the team, I hereby welcome you to join us in our exploratory journey.

The deeper we dive, the more we find. We do not aim to reinvent the wheel by adding to the already complex sustainability reporting jungle. We do aim, however, at identify missing links in the current landscape and to build up a solid knowledge foundation in order to best assist Nordic SMEs with their sustainability disclosures – hand in hand with their closest advisor, the accountant.

NSRS is a project by the Nordic Accountant Federation made up by TAL, Srf konsulterna and Accounting Norway. The project is funded by Nordic Innovation.

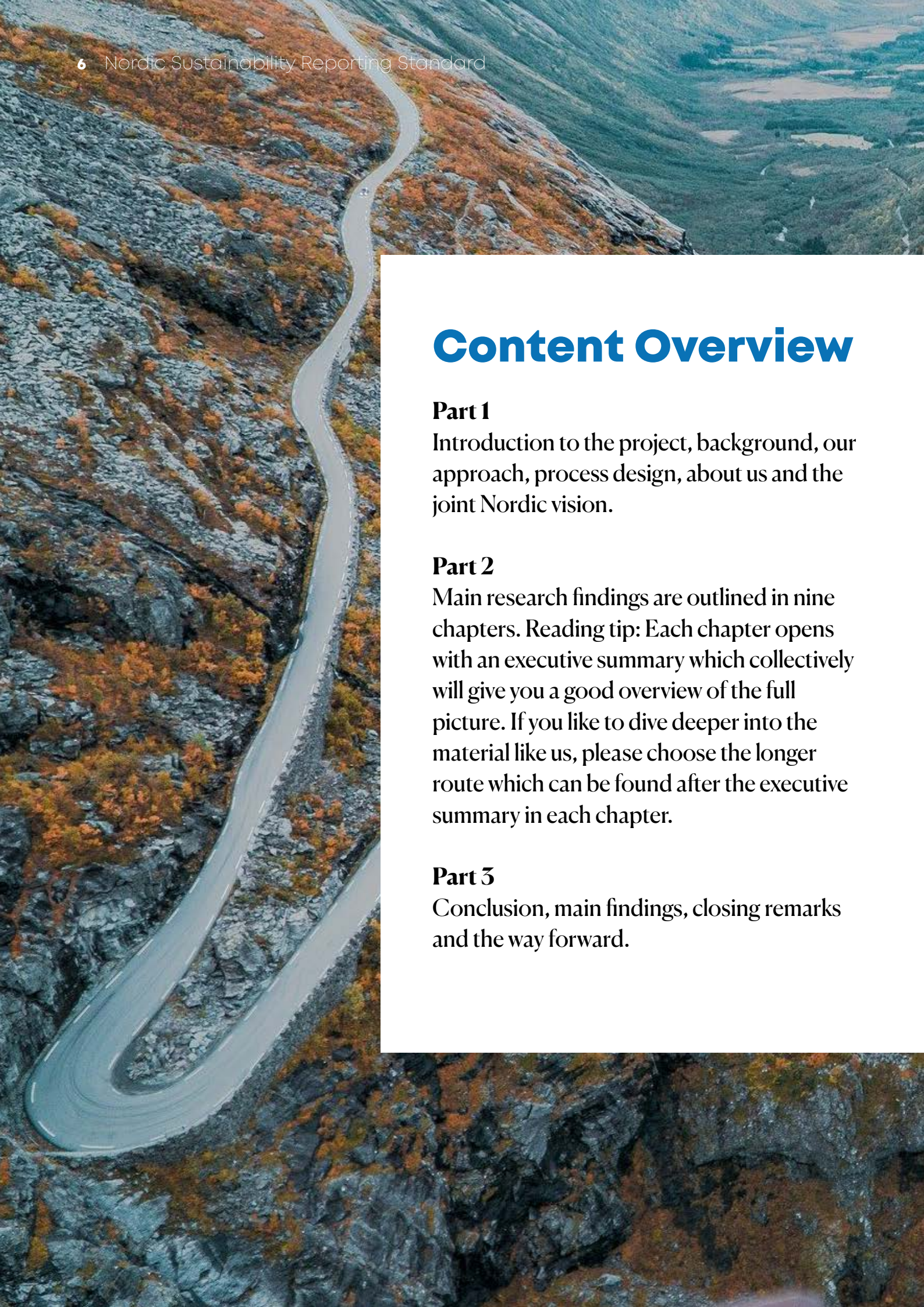
We are seeking potential collaboration partners. If you are on a similar journey as ourselves, please consider this as an invitation to reach out for a digital coffee and further exploration of potential synergies.

> Fundamental transformations in the way the world lives, works, and does business are needed for building the low carbon, climate resilient, green and inclusive economies and societies of the future.
>
> Helen Clark
> Former Director of the UNDP

REGNSKAP NORGE

Srf konsulterna

Taloushallintoliitto



Content Overview

Part 1
Introduction to the project, background, our approach, process design, about us and the joint Nordic vision.

Part 2
Main research findings are outlined in nine chapters. Reading tip: Each chapter opens with an executive summary which collectively will give you a good overview of the full picture. If you like to dive deeper into the material like us, please choose the longer route which can be found after the executive summary in each chapter.

Part 3
Conclusion, main findings, closing remarks and the way forward.

Dear reader,

This is the Nordic Sustainability Reporting Standard's (NSRS) Milestone 1 Report. It is the first out of three Milestone Reports to be released in the design process leading up to the standard prototype. The goal with the Milestone 1 Report is to lay the theoretical foundation for the NSRS project.

Transparency and joint learning are core values for the NSRS team. We therefore choose to actively share our findings, assumptions, trade-offs and potential dilemmas as we go. The NSRS project aims to provide a simplified standard for Nordic SMEs to kick start their sustainability reporting journey. Insights gained throughout the project may not only prove crucial for sustainability-related decision-making in the future. They also demonstrate the need for SMEs to transition – the sooner the better – if they seek to maintain a competitive advantage in the ever-more uncertain world.

Often the closest advisor to SMEs, the accountant plays a key role in this context. The NSRS project emphasizes benefitting from accountants already established practice of gathering, structuring, and reporting on financial matters. They are, after all, the masters of numbers.

We work iteratively, so please consider this a first draft of the Milestone 1 Report. It will be updated with more findings already in February 2021. We highly welcome your contribution therefore, be it in the form of feedback, ideas or any other relevant matter you might be triggered to share with us after reading the preliminary findings presented here.

For contact details and further readings, please visit our website *www.nsrs.eu*.

Enjoy the read!

About this report

The aim with the Theoretical Annex 1 is research, research, research. An in-depth understanding of the current landscape is essential if we aim for a successful ideation and development process. With this, we acknowledge the existing sustainability reporting conundrum, and emphasize that we do not seek to reinvent the wheel.

Our intention is to gain a thorough understanding of current practices, to identify what works and what doesn't, and align different paths to optimize the system as a whole. You can read more about the project, our approach and methodology in part one of the report.

In part two, we investigate if a) a simplified framework for sustainability reporting can serve as a transition tool for Nordic SMEs and contribute to accelerate the larger sustainability transition in the region?, and b) if so, what would the key leverage points of that framework be?

We started to approach the first question by conducting a scoping review of existing literature. Findings were synthesised to identify main topics, key insights, dilemmas, and knowledge-gaps. Several qualitative and quantitative studies were then conducted, with the aim of digging deeper into each topic and fully understanding the knowledge gaps identified. Our research findings are presented in part two, categorised by topics that emerged throughout the process.

As for the second question, we have extracted key leverage points – here presented as main findings – throughout the process, which we deem crucial for the successful implementation of a sustainability reporting framework for Nordic SMEs. If the objective is to contribute to accelerate the sustainability transition in the region, these findings should be taken closely into consideration. All main findings are summarized in the conclusion of the report.

Table of content

Part 1

Part 2

Part 3

Part 1

Introduction to the project, background, our approach, process design, about us and the joint Nordic vision.

Let's set the scene

In the following section you will get an introduction to the NSRS project.

1.1
Problem definition: General background to the project

The need for sustainability transitions is urgent and global in scale. In this project we have chosen to zoom in on one specific region – the Nordics – to see how such a transition can be fruitfully accelerated here. Since the Nordics and Europe for most part are embedded in each other's socio-ecological fabric, the larger European context is moreover covered to some extent. These geographical areas have played, and still do, a key role in the great acceleration of human development that has come to pose such severe social and environmental challenges that it today threatens all life on earth. Researchers have found that strengthening niche innovations from a bottom-up perspective is key if we aim to accelerate a fruitful sustainability transition. Small to medium sized enterprises (SMEs) are an important group of niche actors to address in this regard, as they provide 55 - 80% of total employment in Western Europe, Japan and USA (Katua, 2014: 466), generate more than half of the total European GDP (European Commission, 2020), and count for 64% of industrial pollution in the region (European Commission, 2014). As for today however, there are few tools and guidelines supporting SMEs in their transition. In the Nordics, the majority of SMEs are aware of the great climate- and transition risks ahead. Avoiding these risks however, call for resources in the form of time, money and know-how, which the SME segment are typically short of.

These resources can therefore be identified as main barriers, preventing SMEs to undergo the transition currently demanded by consumers, market, regulatory landscape, citizens and the planetary system as a whole. There are several approaches by which one can support SMEs in their sustainability transitions. In NSRS, we have focused on sustainability reporting. By uncovering significant insights on operations and indicating ways of ensuring value creation from a social, environmental and economic perspective, we reckon that the great potential of effective sustainability reporting is yet to materialize. Looking at today's sustainability reporting

Characterisation of key challenges	Key features	In policy since	Policy approaches (examples)	Assessment approaches and tools (examples)
Specific	Linear cause-effect, point source, local	1970s	Targeted policies and single-use instruments	Data sets, indicators
Diffuse	Cumulative causes	1990s	Policy integration, market-based instruments, raising public awareness	Data sets, indicators, environmental accounts, outlooks
Systemic	Systemic causes	2010s	Policy coherence, systemic focus (e.g. mobility), multidimensional goals (e.g. SDGs)	Indicators, accounts, practice-based knowledge, systems assessment, stakeholder participation, foresight

Table 1: *Example on how the framing of sustainability and sustainable development has evolved. Here exemplified by the discourse evolution in environmental sustainability.*

practices however, it is clear that we face several challenges. Firstly, established methods are poorly adapted to the SME segment, who often struggle to find the resources – time, money and know-how – to even get started. Secondly, sustainability reports are seldom used as a strategic decision-making tool internally. This does not only deprive businesses of sustainability improvements, it also deprives them of business opportunities. The potential of the report itself to function as a key transition tool is hence missed. Finally, the inherent complexity of the socio-ecological regime makes the process of quantifying impact performance very difficult. Lock-ins and trade-offs, often invisible at first glance, may generate escalating uncertainties throughout the process and findings end up misleading. These are the challenges that the NSRS seeks to address.

1.2
Our proposed solution: The goal with NSRS

The main objective of the NSRS is to develop a simplified sustainability reporting standard for Nordic SMEs. The project is carried out by exploring the cross-section between existing standards, user needs and the reality of the greater context, hereunder regulatory risks and industry-specific challenges. We further aim to develop a business case for utilizing the standard, where the target group is Nordic accountants alongside SMEs. The chances of a successful market integration of the standard will be secured by inviting a broad range of stakeholders to take part in our process. We welcome private and public sector actors alike to share their expertise with us, for the mutually beneficial improvement of sustainability reporting practices more generally.

1.3
What will NSRS measure?

Sustainable development is a multifaceted concept as well as a buzz-phrase of our times. It stems from the 1987 Brundtland report, which defines it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs and that balances social, economic and environmental concerns" (WCED, 1987). Today, the concept of sustainable development is used in a broad range of sectors and settings, often with differing connotations and substantive content. What researchers within the field increasingly agree upon however, is the interconnectedness of earthly systems. Partly leaving their technocratic

silo approaches behind, most researchers and stakeholders now acknowledge the need for holistic responses to the range of challenges that the world is currently facing. Table 1.1 presents an example of this, on how the public understanding of environmental challenges has developed and is now perceived as systemic rather than specific (Geels, 2019). With this conceptual development, we now know that any targeted economic intervention will produce ripple effects in the environmental and social sphere, and vice versa. Any technical quick-fix or silver-bullet must therefore be contextualized in order to bring about sustainability in the long run. Promoting sustainable development is consequently no easy undertaking. It demands systemic, holistic and multisectoral approaches in order to be successful.

The NSRS project focuses on SMEs in the Nordics. In relative terms, the region is known for well-functioning state and judicial institutions, low economic inequality and corruption rates, and strong labour laws and social protection systems. As recently shown in the 2020 UNDP Human Development Report however, the region is among the worst in the world when it comes to resource use and carbon footprint. The NSRS aims to help accelerate a sustainable transition in the region by providing a simplified sustainability reporting standard for SMEs. Fully acknowledging the multifaceted nature of sustainable development, the NSRS project will nonetheless address environmental aspects first, more specifically climate-related indicators, to later broaden the scope of the standard to include other components of the sustainability agenda, resulting in a final product covering all aspects. With that, we fully acknowledge the limitations of the first prototype of the standard, including the temporary undermining of the holistic approach that this will entail.

1.4 Our approach – a systemic perspective

We do not, by any means, claim to perform systemic change through the NSRS project, but rather acknowledge our contribution as a small intervention in the larger system. We do apply a holistic perspective when developing the standard however, and aspire to be one of the multiple initiatives that in sum and over time generate a systemic shift. The design of our standard is moreover inspired by cutting edge research on sustainability transitions. A short introduction to the systemic perspective and to sustainability transitions is therefore briefly presented below.

1.4.1 What is a systemic perspective on sustainable development?

Research on sustainability transitions has gained growing attention in recent years (Markard, 2017). In the field of sustainable development, sustainability transition theory provides added value by applying a systemic perspective. Instead of reducing sustainability to a normative or abstract goal somewhere in the future (Geels et al, 2019), the theory argues that sustainability can in fact be achieved within our current socio-economic system. To proactively design new structures and mechanisms that would facilitate an effective sustainability transition however, one must first gain insight into the structures upholding the current system. The kind of change required to transform the prevailing trajectory of human affairs is thereafter presented as a second level change: one that requires a major shift and a complete transformation of the system itself, not only components of it. This approach has gained growing acceptance among sustainability front runners, as visible in the EU Commission's Green Deal (2019) and EUs Action Plan for Sustainable

Finance (European Commission, 2017).

1.4.2 Features of sustainability transitions – seen from a systemic perspective

According to this perspective, transitions are non-linear, society-wide processes where bottom-up activities of innovation, experimentation, learning and networking play a key role. Change occurs through interdependent adjustments in technologies, business models, behaviours, rules, values, and so on, collectively producing non-linear and highly unpredictable results (Meadows, 2008). A transition is never a single actor endeavor but materializes in the interactions between multiple actors, including businesses, consumers, academia, policymakers, social movements and other interest groups (Markard et al, 2021). Founded upon iterative processes, they are evolutionary by nature, inherently uncertain and open-ended rather than a one-stop-shop. Surprises and unintended outcomes should therefore be expected. Transitions are also highly political and sometimes conflictual. They produce winners, losers, trade-offs, and spark related struggles, since influential and well-resourced incumbents often tend to resist change. Their long-term success is thus highly dependent upon broad social acceptance.

In an EEA report from 2019 (Geels et al, 2019), leading researchers identify 10 key areas of intervention to leverage a socio-environmental transition in the European Union. Amongst others, they highlight the need to 1) stimulate green niche innovations by means of standardisation, 2) promote experimentation and sustainability innovation, 3) build transformative coalitions, and 4) reorient financial flows to sustainable and transformative innovations. To develop a standard therefore, that provides niche actors with insights about their current operations as well as potential future directions from a sustainability perspective, largely correlates with the societal trajectory above. Not only an external validation of the NSRS project, the report also provides crucial insights that enable us to optimize the process ahead, as one of many contributors to the global sustainability transition.

1.4.3 How we are including systemic features in our approach

We seek to develop a standard that takes into consideration the socio-environmental system as a whole. One the one hand, the level of complexity dramatically increases when adopting a systemic rather than a narrow silo-based perspective. On the other hand, it enables us to spot crucial interdependencies that otherwise would have been missed. Since we aim to explore how a sustainability reporting standard can accelerate a greater sustainability transition in the region, it is only natural to take into consideration the broader perspective. The blue box provides an introduction to key concepts we have utilized in the process. Trade-offs, for instance, are central to the field as a whole and crucial for understanding the NSRS approach. A so-called trade-off exists when facing a dilemma in which, if you choose A, B will suffer and the other way around. Trade-offs are common characteristics of the systemic perspective – picturing the world as highly paradoxical and complex rather than black or white, right or wrong. We are painfully aware that we most certainly are not able to find a "perfect" solution within the scope of this project. We nonetheless believe that a systemic perspective will bring us closer to identifying key focus areas, leverages and challenges when navigating the field. It also tends to bring underlying assumptions to the surface. And since we value transparency,

awareness and reflection in our innovation process, we appreciate shining a light on our collective jungle of assumptions and narratives – both old and new.

1.5
Our theory of change: If you can't measure it, you can't manage it.
The business world is part of a larger system. In that system, information and its flow is what Donella Meadows – 'system thinker' and the author of the 'Limits to Growth' report – define as key leverage points, or places to intervene. The goal of intervention being to rearrange system structures to preference desirable effects (Meadows, 2008). The logic aligns well with that of Morioka & de Carvalho (2016), who link sustainability performance measurement to increased corporate sustainability performance. It also corresponds with Hauser & Katz (1998),

Systemic features and characteristics relevant to this project

Trade-off
A situation in which you balance two opposing situations or qualities (ex: There is a trade-off between doing a job accurately and doing it quickly) (Cambridge, 2020). In the context of sustainability, where multiple values and perspectives are represented, trade-offs are very common. So-called sustainability trade-offs can be classified into two groups:

1. Process, or procedural trade-offs reflect the realities of decision-making in an imperfect world, in which neither resources nor the cognitive capacity or political power of key decision-makers are unlimited. Such trade-offs are compromises between the ideal and the practical and are often concealed within opaque organizational processes.

2. Substantive trade-offs, on the other hand, as the actual win–loss outcomes of all decisions made, are more exposed for public scrutiny. They often arise from process trade-offs in the decision-making process, whether these are acknowledged or not. Substantive trade-offs arise whenever there are positives and negatives that must be weighed against each other in the selection of competing outcomes. These can involve substitutions of impacts in time, place and kind.

Lock-in
A situation in which the future development of a system, including infrastructure, technologies, investments, institutions and behavioural norms, is determined or constrained ('locked in') by historic developments (IPCC, 2019).

Leverage point
Places within a complex system (a corporation, an economy, a living body, a city, an ecosystem) where a small shift in one thing can produce a big change in everything (Aksu, 2018).

who emphasize the centrality of measurements in a global sustainability transition, as epitomized in "you are what you measure". Neither Morioka & de Carvalho nor Hauser & Katz claim that measuring and documenting is the single solution to a successful global sustainability transition, but still insist on the importance of exposing current practices to such in order to intervene in the system. Echoing Meadows' theory, we argue that information regulation holds the potential of changing – or greatly contributing to changing – the current system, in this context being the sustainability conundrum.

1.6
The methodologies of the project

The methodologies utilized in this project is Design Thinking and Participatory Methods.

Design thinking is a powerful process of problem solving that starts with understanding previously unmet customer needs. That insight kick-starts a process of innovation, encompassing concept development, applied creativity, prototyping, and experimentation. Design thinking has five main stages; 1) emphasize, 2) define, 3) ideate, 4) prototype and 5) test. The methodology suggests an iterative approach that entails going back and visiting the previous process stages throughout the project. This report covers the two first steps of design thinking, namely emphasizing and defining, in which we have reached out, researched, harvested insights identified main findings through an iterative process that will continue throughout the project.
The report represents the outcome of the first iteration phase.

Participatory Methods has proven successful in generating specific information on a particular theme, typically for a new program or policy where several stakeholders are involved. It might involve focus groups, multi-stakeholder meetings, participatory inquiry, action research, oral testimonies or story collection, which collectively serve as foundation for analysis.

We believe that a mixed-method approach is beneficial for our scope of study, as we not only seek to gain a systemic overview of the field, but also aim to develop a standard that can serve all users – and their respective contexts – well. Several methodologies have moreover been used in the writing process of this report. These are introduced in part two.

The Process

The overall objective of the NSRS project is to get a first prototype a process which we have divided into six steps and four milestones. The full overview, including deliverables and overall goals, can be seen by scanning the qr-code below with your phone camera:


KUHANKEITTAJA

1.8 About us

We are a multidisciplinary team stretching across the Nordic region. NSRS was initiated by the Nordic Accountant Federation and is funded through Nordic Innovation. The team consists of members from all member organizations in the Nordic Accountant Federation (NAF). The project is also supported by an expertise group of consultants within the field of sustainability, innovation, and system design.

Nordic Accountant Federation (NAF)

1 **Collaboration**
Accounting Norway, TAL and Srf Konsulterna have successfully created common principles for accounting and payroll practices in Norway, Finland and Sweden. The organizations now aim to develop common principles for sustainability reporting as well.

2 **Joint Mission**
NAF is the association for the Nordic accounting organizations in Sweden, Finland and Norway; Accounting Norway, TAL and Srf konsulterna.

3 **Practice**
The organizations establish, among other things, regulations on accounting practices, and arrange a number of courses and seminars for their members to ensure high professional standards in the field.

4 **Shared Goal**
NAF's main goal is to promote high professional and ethical standards among accountants in the Nordic region.

Srf konsulterna

Srf konsulterna is the association of Swedish accounting and payroll consultants and was formed in 1936. Srf konsulterna has 3 500 authorized accountants and payroll consultants as active members and 5 500 members in total, engaged by 330 000 Swedish and international companies. Srf konsulterna values high quality, commitment and personal development in their members. The consultants' competence is thoroughly screened in the recruitment process.

Read more at: srfkonsult.se

Taloushallintolliitto

The Finnish Financial Management Association (TAL) is the national industry association for authorized companies and organizations providing financial administration services. Related to TAL, the Accounting Institute Foundation maintains expert qualifications in the field of financial administration. As the national industry association, TAL authorizes companies and organizations within the field. It's goal is to further develop the industry together with its member companies.

Read more at: taloushallintoliitto.fi

Accounting Norway

Accounting Norway's goal is to prepare its members – accountants and accounting firms – for the future. The Norwegian association is a leading provider of economic training and competence services. It safeguards the interests of its members and is an active business policy influencer as well as an important consultative body for the authorities. Accounting Norway often provide input for the development of laws and regulations and communicate industry challenges to the media.

Read more at: regnskapnorge.no

1.8.1 NSRS Team Members

The NSRS is an interdisciplinary team stretching across three generations, five countries and multiple genders. Participants represent the member organisations of NAF and are experienced accounting standard developers. The team is further supplemented with five external sustainability experts covering a wide range of topics, hereunder climate accounting, circular economy, sustainability transitions, system innovation and climate governance. Facing a complex and multifaceted task, we see the inclusion of different perspectives as the best route to success.

Abel Crawford
Regenerative System Designer, NSRS

Ari Lahdenkauppi
Deputy CEO, TAL

Christine L. Larsen
COO, ECIT

Eeva Lyytinen
Development Advisor, TAL

Hans Christian Ellefsen
Leader Technology & Innovation, Regnskap Norge

Janne Fredman
Senior Advisor, TAL

Kaja Koppang
Project Manager & System Designer, NSRS

Lali Fjellström
Industry Manager Accounting, Srf konsulterna

Lene Naustvik
Communication Advisor, Regnskap Norge

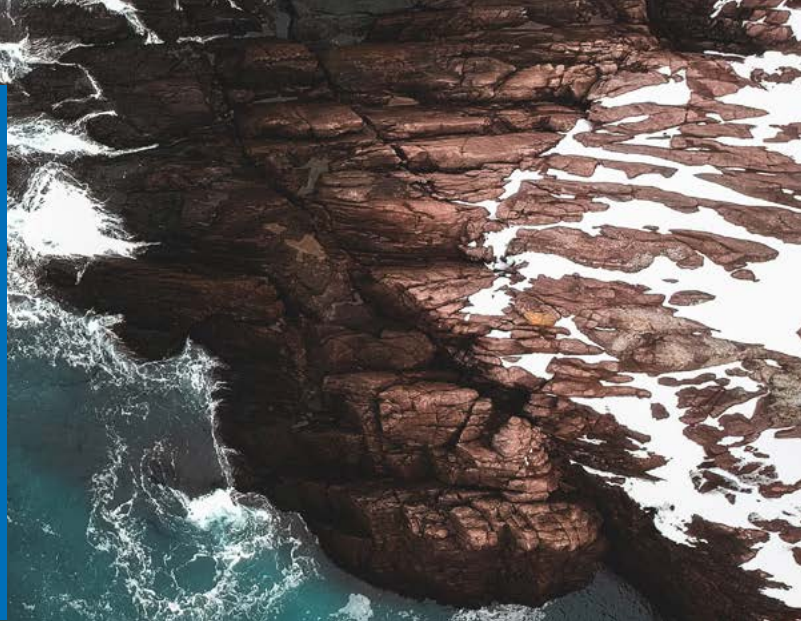
Leonard Breukers
Sustainability Consultant, Azets Insight Oy

Marit Svälas
Sustainability Consultant, NSRS

Marthe Sofie L. Eide
Process Manager & System Designer, NSRS

Roland Sigbladh
CEO, Srf konsulterna

Jari Seppä
CEO, TAL



1.9 The joint Nordic vision

The NSRS will contribute to the joint Nordic vision by taking a lead in the regional sustainability transition and showcasing what successful integration between the countries can look like.

Transition as a competitive advantage
The aim of the project is to create a We have entered an era in which sustainability can no longer be perceived as an economic sacrifice. Firstly, the EU launches progressive new climate regulations on a streak. Secondly, banks and financiers increasingly screen enterprises on the sustainability of their business models and strategies, making capital more expensive for sustainability laggards. Thirdly, consumers all over the world have shown an altered appetite for green products and services. In the current business landscape therefore, transition is no longer a matter of choice, but rather a question of survival. According to the UNDP 'Better Business, Better World' report (UNDP, 2017), the Sustainable Development Goals (SDGs) collectively open up an estimated US$12 trillion in market opportunities. A sustainable transition, therefore, is a crucial lever for innovation, growth and competitive performance.

A Nordic Sustainability Reporting Standard (NSRS) will not only facilitate a smooth sustainability transition in SMEs, it will also prove a new business opportunity for accountants. The standard can thereby contribute to provide a competitive advantage to a variety of end users.

Collaboration as a competitive advantage
We believe that the fruitful collaboration in the NSRS project can contribute to making the Nordics greener and more socially sustainable, but also to gaining more competitive advantage as a region.
The NSRS project is not only about utilizing the expertise of the Norwegian, Swedish and Finish accounting associations in the interest of climate and society, it is also about securing long term profits for SMEs in the region. We achieve results by engaging a wide variety of stakeholders, hereunder companies, organizations, associations, governments, and the general public, for a common goal. Securing broad and inter-organizational expertise is key to gain a competitive advantage in complex fields such. This was visible in the previously achieved collaborative successes of Accounting Norway, TAL and Srf Konsulterna, and can be re-proven in the case of sustainability.

Part 2

Part two is made up of four sections divided into nine chapters.
Tip: Each chapter opens with an executive summary which collectively will give you a good overview of the full picture. If you like to dive deeper into the material like us, please choose the longer route which can be found after the executive summary in each chapter.

Part 2 – Introduction to research summary

In part two, we investigate whether a) a simplified framework for sustainability reporting can serve as a transition tool for Nordic SMEs and contribute to accelerate the larger sustainability transition in the region?, and b) if so, what would the key leverage points of that framework be?

We started to approach the first question by conducting a scoping review of existing literature. Findings were synthesised to identify main topics, key insights, dilemmas, and knowledge-gaps. Several qualitative and quantitative studies were then conducted, with the aim of digging deeper into each topic and fully understand the knowledge gaps identified. This is the chapter where we present our findings, all categorised by topics that emerged throughout the process. Figure one provides an overview of the nine topics that have emerged in the research process. Findings are organized after the classic funnel approach (see figure). The first four chapters outline the challenges, hereunder the corporate sustainability conundrum and the sustainability reporting landscape, that the NSRS seeks to amend.

The second section introduces the niche actor

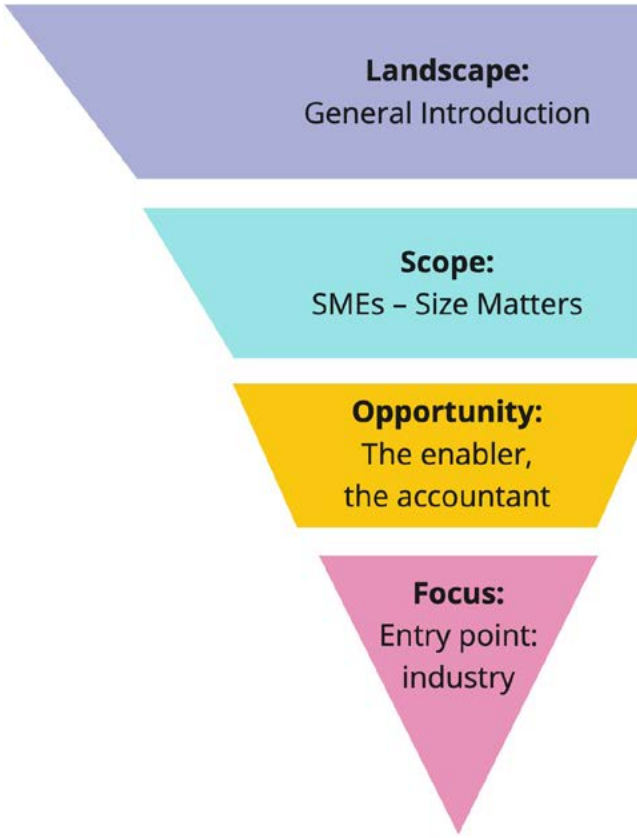
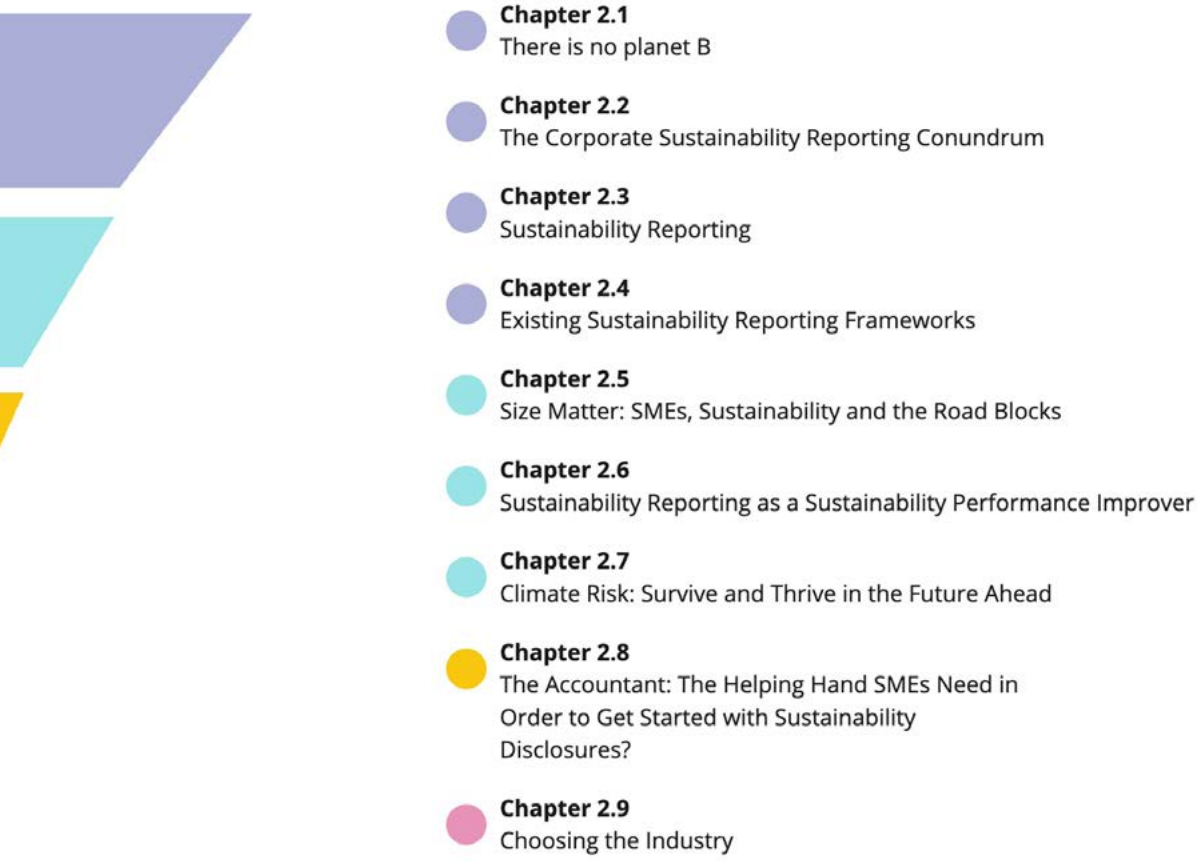


Figure 1: *Topics that emerged through the scoping revi*

of focus, namely the SME, and its particular characteristics. It outlines the features that work in their favor in terms of transitioning to become more sustainable, but also the ones that work in their disfavour. The section is finalized by providing an overview of key climate risks faced by SMEs in the Nordic region.

The third section explores the accountant's role – today and in the future. The accountant already has an established practice of gathering, structuring and reporting on financial data. Wie here explore the potential of extending the



ew are organised in a funnel approach and divided into 9 chapters.

accountant's work to include non-financial data. The fourth section gives a brief introduction to the first industry that the NSRS focuses on for the pilot of the standard, namely construction and building.

Each section provides and initial overview of the topic, investigative objective, method and main findings. If you are the executive summary kind of person, we therefore encourage you to focus on the first couple of pages in each chapter. If you like to dive deeper into the material like us, please choose the longer route and follow our exploration in detail – word by word.

Chapter 2.1

There is no planet B

Humanity and its current societies have
Humanity and its current societies have impacted the natural environment in such a radical manner (Rao et al, 1997) that the planetary systems, which supports all life on earth, is on the verge of collapse (Steffen et al, 2015). Scientists have observed changes in natural systems since 1890 (IPCC, 2018). Despite their multiple warnings (Ripple et al, 2017), findings have not rallied sufficient action to halt the trajectory towards a potential sixth mass-extinction.
Historically, the Western scientific tradition has perceived human activity and the natural environment as two separate systems (Markard et al, 2012). Recently however, a holistic worldview has emerged. These systems are increasingly acknowledged to be highly interlinked, producing feedback loops (Geels et al, 2019) that not only reinforce environmental degradation and biodiversity loss (Steffen et al, 2015), but also threatens human health and well-being (EEA, 2019). To give an example, researchers have found that air, soil, water and food-pollution lead to an annual approximate of 19 million premature deaths globally (Gueterres et al, 2018). Paradoxically, most of the pollution can be traced to human consumption, where agriculture, transport and energy stand out as the most high-emitting industries (Geels et al, 2019). Another example is seen in the fact that today, at least 30% of anthropogenic carbon dioxide is absorbed by the ocean. The current level of ocean acidification and radical disruption of the carbon-nitrogen phosphorus cycle has not been observed for the past 65 million years (Hoegh-Guldberg et al, 2018). This in turn, seriously threatens life below water, leading to the significant drop in marine catch (Ripple et al, 2017) while the demand for fish has increased. Efforts to feed a growing population then leads to increased fishing activities (Ripple et al, 2017), that in turn escalate the external pressure on life below water. These are only a few examples of the complex interconnectedness of natural and anthropogenic systems.
For most of our species' history – about 300,000 years – humans lived as hunter gatherers in sustainable communities of a few dozen people. Human life on earth, and our place within the planet's biophysical systems, changed dramatically

with the arrival of the Holocene, the geological epoch we entered into 12,000 years ago. On the whole however, human civilization still kept within the equilibrium of earth's natural regulatory systems up until the industrial revolution materialised by mid 1700th (Benini et al, 2020). From then on, human development gained a momentum that eventually led to the systemic environmental – and some would argue social as well – imbalance currently observed (Crutzen, 2006). This was further accelerated in the midst of the 20th Century, now referred to as 'the Great Acceleration' (Steffen & Broadgate et al, 2015). According to UNDESA (2019), the world population has tripled from around 2.5 billion then to approx. 7.5 billion today. Mass urbanisation has lead to a quadrupling of people that live in cities in the same time span, from less than 1 billion to more than 4 billion today (UNDESA, 2019). Simultaneously, our environmental footprint has grown at even faster rates. The consumption of fertiliser containing harming levels of nitrogen, phosphate and potassium is one example, which increased 12-fold between 1950 and 2016. Energy consumption constitute another example, seeing a fivefold increase between 1950 to 2008 (Steffen et al., 2011, 2015). This acceleration is not projected to double the pressure on natural resources by 2060 in comparison with current levels (Benini et al, 2020).

The acceleration of human development, as visible in economic growth and technological progress, has led to vast improvements in living standards and human well-being (Bolt et al., 2018), particularly in the highly industrialised parts of the world (Benini et al, 2020). Simultaneously and consequently however, humanity is now watching the planet's natural support systems being on the verge of a collapse – contributing to pulling the rug from under their feet. It is no exaggeration to claim therefore, that there is an urgent need for large-scale action.

Chapter 2.2

The Corporate Sustainability Conundrum

Keywords:
Systemic analysis, root causes, sustainability reporting, internal capacity, standardisation, harmonisation, integration, sustainability performance, regulation, frameworks.

Topic:
Relevant trends, systemic context and root causes of businesses taking action to address sustainability issues.

Objective:

1. To understand what are the historic and current trends of action for sustainability?

2. What are the underlying causes of a lack of action for sustainability by businesses

"Insufficient external drivers and incentives, both from governmental ministries and from the marketplace, are seen as major hindrances for SMEs to engage in sustainability management practices."

(Matthew P Johnson and Schaltegger, 2016)

PURPOSE

To paint the systemic context around the state of business motivations and challenges to take action to address the sustainability challenges and how the design of the standard could take this into consideration.

METHOD & APPROACH

Literature and report review

1. There are insufficient motivations for businesses to improve their sustainability performance. This is due to a lack of awareness on sustainability issues and non-financial risk, but also due to businesses or stakeholders being dominated by mindsets focused on short-term capital returns.

2. The scarce amount of corporations engaing with sustainability can further be linked to so called system rules;

   o There are insufficient sticks: constraints and punishments for businesses who are lagging or going backwards with their sustainability performance

   o The lack lack of carrots: rules that incentivize, reward or equip businesses who work to improve their sustainability performance.

3. Sustainability related governance, or as it is referred to in this section, "climate governance" is a complex and fragmented jungle of various mandates and guidelines for operationalizing actions to improve sustainability performance. That is both challenging and expensive for businesses, especially SMEs to navigate and conform to.

4. Mission oriented innovation policy is one such climate governance approach to see the economy become mission oriented to deliver growing quality.

5. For businsses who are mentally motivated to improve due to a positive mindset and having sufficient awareness, a lack of internal capacity to move forward in this jungle is often the major impediment that makes it difficult for businesses to improve (this is covered in

Chapter 2.2

The Corporate Sustainability Conundrum

Conundrum; *a confusing problem or question that is very difficult to solve (Oxford, 2020).*

The sustainability challenges faced by the world today can largely be traced to the modern enterprise, having scholars (Buller & McEvoy, 2016; Harts, 1997) focus on the corporate stewardship of sustainability transitions. Awareness of the severe socio-environmental degradation, but also of the corporate contributions in that process, can be traced back to the 1950s, when the term corporate social responsibility (CSR) rose to prominence (Andrew Crane, 2016, page 48).

This report focuses on sustainability in the context of the corporate world, following the prevailing convention in the business world today (Gatti & Seele, 2014). There is no universally adopted definition of corporate sustainability, but we shall hereby outline the NSRS take on it. Sustainability scholar John Elkington's famously introduced the triple bottom line in the 1990s. It refers to the three performance areas of a company: expanding the traditional accounting framework of calculating monetary profits alone to include the company's environmental and social impact as well. Elkington's definition has since been widely recognized in both corporate and academic circles (Nylund, 2017; Elkington, 2010), to which we choose to follow suit. In terms of sustainability performance, we will use Morioka & de Carvalho's (2016) definition, as in "the degree to which an organization improves its performance in respect to its global sustainable development responsibilities".
As we argued in the first section, the business community needs to play a key role if we are to successfully address the sustainability challenges faced by the world today. This argument is partly echoed from within the community as well, where we observe a growing tendency of sustainability strategies and environmental policies to this end. A compelling majority of 93% of CEOs worldwide, for example, view sustainability as crucial to the future success of their business (Hayward et al. 2013).

In terms of action however, one ca
n fairly claim that corporations still largely take the backseat in sustainability matters, where the response needs be significantly scaled up should we have any hope of amending the pressing situation we are currently facing (Burck et al., no date). In section 2.2, we provide an overview of key challenges faced by businesses in the process of transitioning and analyze how sustainability reporting can be a nuisance in this regard.

Firstly, the range of company motivations for incorporating sustainability will be presented. Section 2.3 then introduces how climate change is governed, and how it is relevant to the NSRS project. From a private sector perspective, climate governance mechanisms seek to advance corporate sustainability performance by means of external regulations or norms that either incentivize or sanction corporate activities. Having based our theory of change upon recent trends in the landscape, the NSRS project can fruitfully be contextualized within the field of climate governance.

2.2.1
Business motivations for incorporating sustainability

What drives the implementation of Drivers of corporate sustainability are manifold and the range of motivations paint a complex picture, leaving different sustainability paths and strategies open for exploration. Figure 2 provides an

overview of key business motivation factors and drivers. It is based on insights from Sprinkle & Maines (2010), Weber (2008), Polonsky & Jevons (2009), Nordea (2017), Bhattacharya & Sen (2004), Šontaitė-Petkevičienė (2015), Nylund (2017), Lindgreen, Swaen & Johnston (2009); and Du, Bhattacharya & Sen (2010). Motivation can be either internally or externally driven, which here comprises the key sorting criteria. One is externally motivated if the will to change is based on external pressure, including branding, communication and costumer demand. One is internally motivated if the will to change is based on internal pressure, hereunder cost reduction, resource efficiency or sustainability performance improvement.

Research shows that, in the current landscape, key motivations to enhance corporate sustainability are company reputation and stakeholder satisfaction. Weber (2008) has similarly pointed to the mutual positive effects between sustainability activities on the corporation's image and reputation one the one hand, and on employee motivation, retention and recruitment on the other.

Polonsky & Jevons (2009) underscore the positive link between societal stakeholders and improved consumer relations. Bhattacharya &

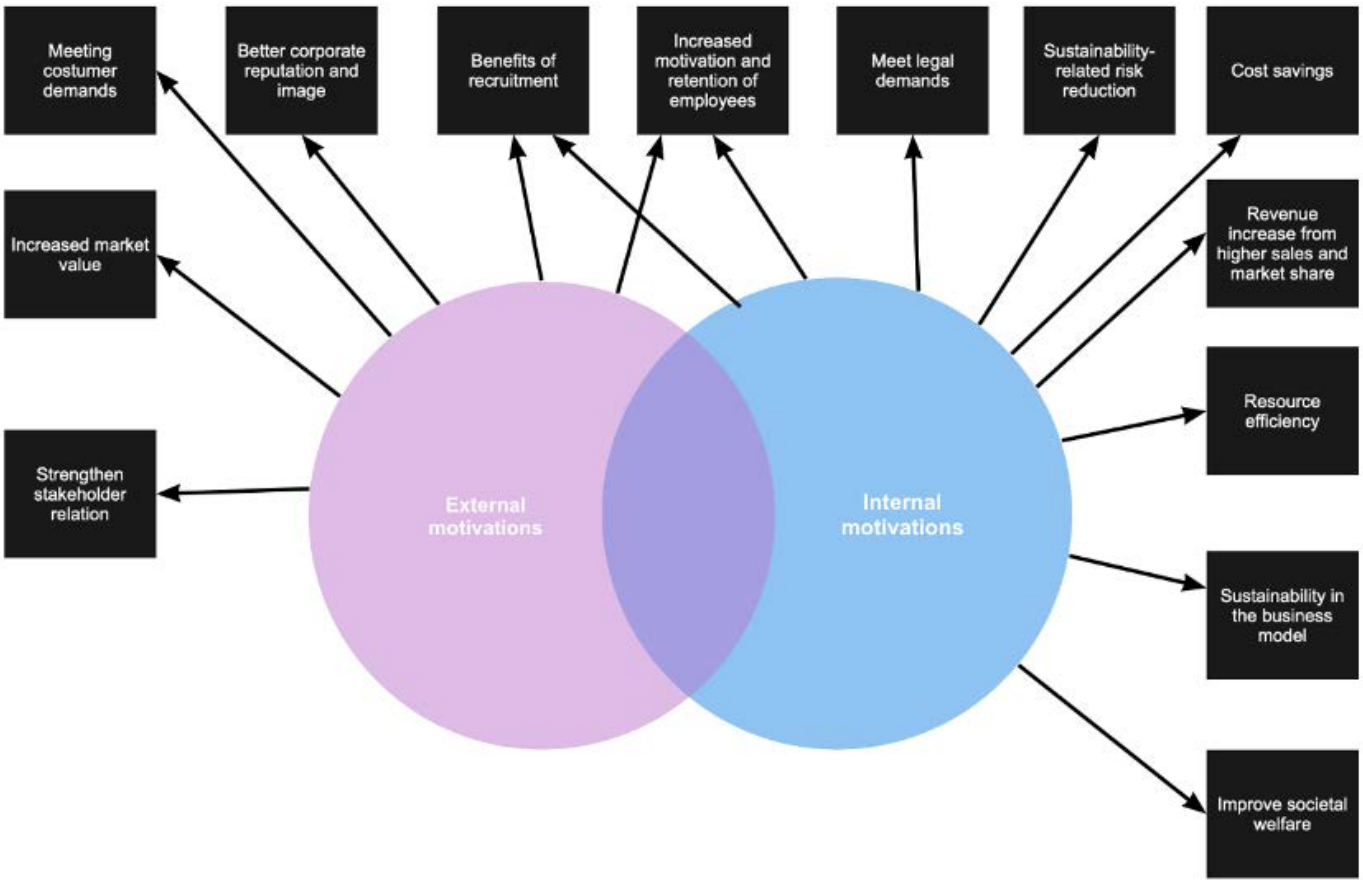


Figure 2: *The main drivers of corporate sustainability categorised by the main motivations 1. to improve sustainability performance and internal efficiency or 2. to meet external demands and communicate to external stakeholders*

Sen (2004) note how CSR activities generate more immediate outcomes such as word-of-mouth resilience to negative company information, as well as consumers' awareness and attitudes towards companies' CSR policies (Šontaitė-Petkevičienė, 2015). These findings highlight the current prominence of external motivation in these matters.

2.2.2 Underlying systemic issues hindering the motivation of business to improve

It is not straightforward for businesses The best way for businesses to engage with sustainability is not straightforward. The current system does neither provide sufficient external drivers, not does it equip enterprises with the right tools for a successful transition. Today, sustainable frontrunners and do-gooders are often outrivaled by their more ruthless counterparts. In a system where financial stakeholders' prime concern still is financial return and competitors externalize costs of social and environmental impact, it is hard to stay afloat. Underneath these structural challenges we find a short-term profit mindset and a lack of awareness around sustainability and non-financial risks.

The continuous focus on short-term returns is related to the lack of regulative norms, hereunder incentives, constraints and sanctions from governments and financial stakeholders, that could externally motivate a more sustainable direction. That lack of incentive structures is visible within the business community as well, where short-termism remains undisputed in many circles. Taken together, insufficient external and internal incentives to adopt a more long-term and sustainable approach have led to inadequate action. There are cases however, where these incentives do exist, but companies still find it difficult to commit to a sustainable transition. This points to another challenge, namely the lack of internal resources and capacity to implement a sustainability strategy. This issue is further addressed in section "Insufficient internal capacity".

The following three subsections will address underlying systemic issues that hinder businesses to improve their sustainability performance, each subsection addressing a key challenge.

2.2.2.1 Problematic mindsets

As previously mentioned, problematic mindsets constitute a major part of the challenge. Both external stakeholders and business leadership show a predisposition towards short-term profit mindsets (EY, 2014, p. 9) where economic actors individually serve a 'system goal' of business revenue growth while collectively contributing to national GDP growth. These features belong to the neoliberal narrative, in which economic growth is seen as key to alter life quality (Wrenn, 2019) rather than perceiving life quality as being served by the economy (Raworth, 2017).

"Sustainability creates an environment of accountability, and he argues the standards themselves are not the issue, but rather the thinking by the board and investors. ... part of the challenge is the investor mindset — time-investment horizons (a focus on short-term capital return)" (EY, 2014, p. 9)

"Neoliberalism is an ideology that prioritises the health of the economy over the health and wellbeing of the state's constituents... the people essentially. The idea is that if the economy is healthy, that if the economy is prosperous and growing, then all other social ills will be remedied through that market activity" (Wrenn, 2019).

2.2.2.2 Lack of awareness about non-financial considerations and risks

Few businesses today perceive environmental, social, technological and governance factors as related to their financial performance. Within the field, these indicators are often referred to as Environmental Social Governance (ESG)-, or non-financial factors/risks, as concluded in the 2020 Report "Non-Financial Risks" by the Chartered Accountants Association for Australia and New Zealand (CAANZ, 2020).

"For so long these [ESG risks] have been viewed as non-financial risks, although they have very real financial impacts" (CAANZ, 2020).

As indicated by the term 'non-financial', businesses have largely seen these risks as a matter of CSR branding rather than having an actual impact on financial performance (CAANZ, 2020). Despite there being some awareness around sustainability issues and their impact on profits, this awareness tends to be limited to certain sections of the organization, often excluding decision-makers. Part of the problem, therefore, is that sustainability matters are confined to a silo of the organization.

"Entities can no longer treat climate-related risks as merely a matter of corporate social responsibility and may need to consider them also in the context of their financial statements" (CAANZ, 2020).

"Risk management is integral to your organisation's strategy and, as such, should be embedded within your broader strategy. Or as IFAC puts it: risk strategy should be built-in, not bolted-on." (CAANZ, 2020)

2.2.2.3 A lack of rules to preference sustainability performance

While there definitely is an increased tendency to preference sustainability frontrunners, up until now, structural incentive mechanisms have not succeeded in drastically accelerating businesses' sustainability performance. As previously mentioned, this goes for internal (leadership) and external (regulators, financial stakeholders, end-users) incentives alike.

"Insufficient external drivers and incentives, both from governmental ministries and from the marketplace, are seen as major hindrances for SMEs to engage in sustainability management practices" (Matthew P Johnson and Schaltegger, 2016)

2.2.3 Climate governance – a very brief introduction

The lack of regulation is connected to how sustainability is governed. To further understand the complex challenge faced, we here look into a key sustainability component, namely climate change, and outline the governance of such. The following sub-sections present main findings of NSRS research, introducing the global climate governance of today and in the years to come.

In brief, climate governance can be defined as diplomacy, mechanisms and response measures "aimed at steering social systems towards preventing, mitigating or adapting to the risks posed by climate change" (Jagers and Stripple, 2003). Climate governance is a multi-scale and multi-actor field which is deeply embedded in our social and physical infrastructure (Bulkeley and Newell, 2015).

Multiple scale: Climate governance occurs at multiple levels – or scales – of society, including local, regional, national and supranational governance.

Multi actor: Multiple actors are involved in climate governance. The fragmented and sometimes blurred roles of state, interstate and non-state actors continuously raise ambiguities concerning their respective mandates in the realm. Non-state actors, hereunder NGOs, businesses, financial institutions, scientific communities, think tanks, interest organizations and lobbyist, have historically proven to play a critical role in shaping positions later adopted by governments and reflected global climate agreements, for example the UNFCCC and the Kyoto Protocol. .

Embedded: The involvement of non-state actors in climate governance is partly a reflection of the deeply embedded social and economic nature of emission-generating processes.

2.2.3.1 An emerging polycentric landscape

Recent developments in the field point to an increased occurrence of polycentric (bottom-up/multi-stakeholder) rather than monocratic (top-down) approach to governance. This trend should be seen as a recognition of the issue's inherent complexity: governing a changing climate requires effective collaboration, not only on multiple governance levels but by also aligning the various stakeholders involved. The 2015 Paris Agreement is an example of this trend. It is based on Nationally Determined Contributions (NDCs) to be revised in an ongoing process of assessment and review (Keohane and Oppenheimer, 2016).

Crucially, the Paris Agreement also offered strong encouragement to existing and new climate actions by non-state and subnational actors (Hale, 2016), thus, underlining the importance of the general trend towards greater polycentricity. "Polycentric climate governance is crucial as involving stakeholders across society is of vital importance to improve the quality of decision-making and strengthen compliance. It helps build social consent, empowers citizens to actively contribute to climate action and adds legitimacy to climate plans and policies" (Carbon Market Watch, 2020).

Thus, while the interstate process of treaty making continues to play a key part in the attempt to mitigate anthropogenic climate change, it now exists as part of a wider tapestry of private and public climate governance initiatives that operate at multiple scales (Bernstein et al., 2010). A consequence of the so-called tapestry of climate governance initiatives is the cumulative impact observed over time, although the initiatives initially seems small in size and few in number (Ostrom, 2010a: 551, 555). On the other hand, however, a polycentric landscape is criticized for creating a jungle of information. This jungle can for instance be seen in the climate risk landscape where the multiple streams of norm entrepreneurs as well as a changing regulatory landscape from global, regional and national level creates a patchwork of risks which is rather resource demanding to navigate in. Specifically, small and medium sized enterprises (SMEs) in most cases don't have the internal capacity to stay up to date and integrate the external risks in their current operations and strategies.

2.2.3.2 Marked-based climate governance

Another pattern in climate governance Another pattern in climate governance for the past decades, relevant to this context, has been the rise of marketbased climate governance. The history of climate governance has seen increasing emphasis placed on market-based solutions, or "flexibility mechanisms" (Bulkeley and Newell, 2015). This is a development that complements, rather than replaces traditional 'command and control' regulation. The decision to favor market

mechanisms has been identified as inevitable given the growth in popularity of neoliberalism over the past two decades (Bulkeley and Newell, 2015). Thus, targets set at international climate governance conventions have been achieved through the application of markets (for example the EU-ETS), public-private partnerships (for example "type II partnerships") and the self-regulation of industry (for example the Global Gas Flaring Reduction Partnership).
One of the largest working example of carbon market governance to date is the EUETS. It is a multinational emissions trading scheme. Advocates of this mechanism cite its focus on improving efficiency, reducing carbon where it is most cost efficient to do so. Its critics identify that it has so far allowed participating industries to profit from excess carbon credits while having little or no effect on their carbon emissions (Pearson and Worthington, 2009). From a SME-perspective this tend to lead to a "winner takes all" situation where the competitive advantage is in favor of larger companies due to their access to resources.

2.2.3.3 Mission-oriented innovation policy
Governments are increasingly seeking economic growth that is 'smart' (innovationled), inclusive and sustainable. Contrary to the historically more common narrow sectorbased industrial policy, mission-oriented innovation policy (MOP) (Mazzucato, 2017) focuses on concrete problems that require system-wide transformation across different types of sectors, and involves partnerships between different actors (private, public, third sector, civil society). MOP's has gained a growing attention from multiple regulatory bodies, such as EU through the Green Deal that sets out a mission '...for a just transition towards a carbon-neutral region'. MOPs sets out to identify and articulate concrete problems that can galvanize production, distribution, and consumption patterns across various sectors. In doing so it recognizes that:
• economic growth has not only a rate but also a direction
• innovation requires investments and risk taking by both private and public actors
• the state has a role in not only fixing markets but also in cocreating and shaping them
• successful innovation policy combines the need to set directions from above with the ability to enable bottom-up experimentation and learning
• missions may require consensus building in civil society (Mazzucato, 2017).
MOPs approach to policy is challenging the orthodox view of directionless policy that tend to hold a market-fixing mentality often leading to bypassing the role of the state in creating and shaping markets (Mazzucato, 2017).

2.2.3.4 Information regulation
Regulators and legal scholars have long recognized the potential of information regulation to further environmental policy goals (Kleindorfer and Orts, 1998; Sunstein, 1998; Karkkainen, 2000; Tietenberg and Wheeler, 2001; Case, 2005). The elegance of such a regulatory strategy lies in its harnessing of private actors to incentivize improved corporate environmental performance (Esty, 2001; Wishnie, 2008; Light, 2012). According to the established theory, environmental information regulation deploys mandatory disclosure requirements to generate new, publicly accessible data that allow investors, consumers, and civic society to compare and rank companies across an array of environmental measures or "metrics" (Esty, 2004). One example in this context is EUs Taxonomy which we have chosen to dedicate a separate section in order

to explore potential implications, risks and opportunities opposed to Nordic SMEs. Thus, no further elaboration on this topic will be given at this point.

2.2.3.5 Summing up climate governance

The jungle of soft and hard regulations, mission-oriented policies and targets, norm entrepreneurs setting standards in a given sector and national directives aimed at geographical challenges to mention a few activities, creates a regulatory landscape in flux – and thus, unavailable to SMEs due to the cumbersome and resource demanding nature of the multi-actor, multiscale and embedded regulatory reality. It is simply to challenging for SMEs to navigate in this polycentric landscape as it is resource demanding and cumbersome to carve out a path and find a position and a competitive advantage. Thus, standards seem to be welcomed, they tend to ease the administrative burden, and level the playing field when actors in a given setting are obliged (mandatory or voluntary) to comply to the demands.

On the other hand, polycentric governance thinking is much more tolerant of overlap, redundancy and duplication in governance. The fact that multiple governing units take initiatives at the same time is seen not as inefficient and fragmented, but as an opportunity for learning about what works best in different domains. This is from the perspective of sustainability transitions. From a SME-perspective we find that learning and sharing is the way forward in order to set the agenda and not end up as a passive respondent in the cross hairs of a polycentric landscape.

2.2.4 Conclusion

We have briefly introduced the concept sustainability, and the issues corresponding to how to make business embrace this concept to take part in the transition towards a global sustainable society. Reviewing the literature paints a systemic context that is complex, where there indeed are several pressing barriers to overcome, all interconnected, to push the acceleration of the needed transition for the world´s businesses. From the section above, one can in fact argue that enabling businesses to take part in the transition in an effective and functional way, unfolds as a conundrum. However, within this problematic complex contex, there are leverage points, that if targeted with the right interventions can dramatically improve the business landscape such that it enables sustainability leaders and constrains the laggards. Such a landscape for business could contribute significantly to the acceleration of the sustainability transition that is required if we are to maintain earth's living systems, upon which we depend. For the next section we will dive deep into sustainability reporting and see how sustainability reporting can be a potential key to incrementally start untying of this conundrum and accelerate the transition. First, we will present why the sustainability report practice of today is not serving its potential function.

2.2.5 Main findings

From this section in the report, we find the following main findings relevant to highlight; There are insufficient motivations for businesses to improve their sustainability performance is lacking due to a number of underlying issues. This is due to a lack of awareness on sustainability issues and nonfinancial risk, but also due to businesses or stakeholders being dominated by mindsets focused on short-term capital returns. But it is also linked to external factors such as system rules.

o There are insufficient sticks: constraints and punishments for businesses who are lagging or going backwards with their sustainability performance.

o There is also lack of carrots: rules that incentivize, reward or equip businesses who work to improve their sustainability performance.

Mission oriented innovation policy argues that we need to go beyond just having the system goal of our economy 's quantitative growth, but that we should have some growth in the quality, the things that actually improve our planet and our society. It therefore advocates that our economy should be mission oriented.

Sustainability related governance, or as it is referred to in this section, "climate governance" is a complex and fragmented jungle of various mandates and guidelines for operationalizing actions to improve sustainability performance. That is both challenging and expensive for businesses, especially SMEs to navigate and conform to.
For businesses who are mentally motivated to improve due to a positive mindset and having sufficient awareness, a lack of internal capacity to move forward in this jungle is often the major impediment that makes it difficult for businesses to improve (this is covered in more detail in section 3.3).

Chapter 2.3

Sustainability Reporting

Topic:
The practice of sustainability reporting and improving sustainability performance.

Keywords:
Sustainability reporting, leaders and laggards, operationalisation, integration, business operations and strategy, internal capacity.

Objective:
What is sustainability reporting, how do it come to be, what is the siutation today and what are the future trends? What are the important quality and sufficiency characteristics of sustainability reports for stakeholders to incentivise the sustainability leaders and punish the laggards? What is the current state of those quality and sufficiency characteristics? How much does sustainability reporting get integrated into the operations and strategy of business? What are the underlying causes of the poor sufficiency and quality of the sustainability performance information that is reported.

"The scope and depth of these disclosures differ considerably as a result of the subjective choices companies make about their approaches to sustainability reporting: which frameworks and standards to follow, which stakeholders to address, and which information to make public"

(Bernow et. al, 2019, p. 3)

PURPOSE

To understand what quality and sufficiency characteristics are necessary for stakeholders to be able to preference leaders and punish laggards in sustainability. To understand what the standard needs to incorporate to ensure stakeholders and business recieve material and useful information.

METHOD & APPROACH

Literature and report review.

Main findings – Sustainability Reporting

1. Most businesses use sustainability reporting as a communication tool, rather than a tool to improve sustainability performance

2. The sustainability report is rarely integrated into the strategy and operations of a business due to the report containing information that is insufficient and often of low quality, which again reflects in a lack of motivation and internal capacity.

3. There is a growing jungle of various sustainability reporting instruments of mandatory and voluntary requirements and guidelines. The increasing complexity is harnessing the difficulty and expense for businesses wanting to satisfy requirements.

4. Insufficient standardisation and harmonisation of sustainability reporting instruments has led to *this* increasing jungle that is expensive for businesses to navigate in.

5. The insufficient amount of governmental regulations is a key reason for the inadequate standardisation and proliferation of the current jungle of sustainability reporting instruments that is directly impacting quality and sufficiency characteristics.

6. Literature makes a compelling argument that a mandatory sustainability reporting regime must be established if there is to be any hope to preference sustainability leaders and punish laggards.

7. Businesses motivated to improve their sustainability performance face significant challenges.

8. The current governance and market landscape is not sufficiently punishing the laggards nor incentivising leaders for operationalising action for sustainability.

9 Most businesses lack the internal capacity to operationalise action for sustainability

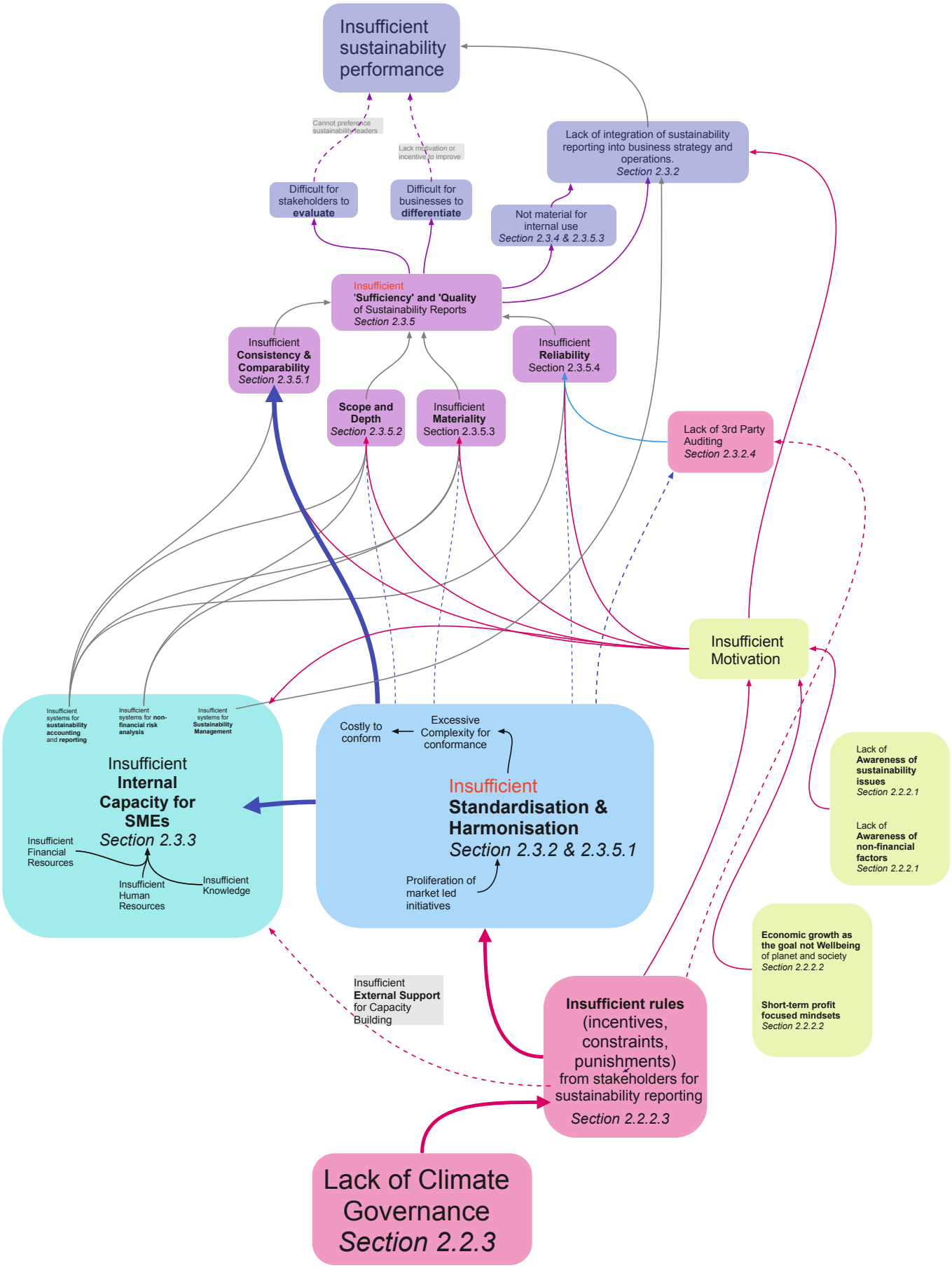
10 There is a large variation in the sufficiency and quality of the information as follows, it is difficult to compare across businesses, the scope and depth, materiality and the reliability

11 These large variations makes it extremely difficult for stakeholders to use these sustainability reports to identify leaders and laggards and incentivise and punish accordingly

Chapter 2.3

Sustainability Reporting

Figure 3 is showing a so called system map portraying todays susainability reporting practice. This serves as an overview of this chapter, and how all the different concepts introduced are connected and interlinked. We invite you to read this chapter by jumping back and forth between this system map and the different sub-sections in this chapter.


Insufficient sustainability performance
Cannot preference sustainability leaders
Lack motivation or incentive to improve
Difficult for stakeholders to evaluate
Difficult for businesses to differentiate
Lack of integration of sustainability reporting into business strategy and operations. Section 2.3.2
Not material for internal use Section 2.3.4 & 2.3.5.3
Insufficient 'Sufficiency' and 'Quality of Sustainability Reports Section 2.3.5
Insufficient Consistency & Comparability Section 2.3.5.1
Insufficient Reliability Section 2.3.5.4
Scope and Depth Section 2.3.5.2
Insufficient Materiality Section 2.3.5.3
Lack of 3rd Party Auditing Section 2.3.2.4
Insufficient Motivation
Insufficient systems for sustainability accounting and reporting
Insufficient systems for non-financial risk analysis
Insufficient systems for Sustainability Management
Insufficient Internal Capacity for SMEs Section 2.3.3
Insufficient Financial Resources
Insufficient Human Resources
Insufficient Knowledge
Costly to conform
Excessive Complexity for conformance
Insufficient Standardisation & Harmonisation Section 2.3.2 & 2.3.5.1
Proliferation of market led initiatives
Lack of Awareness of sustainability issues Section 2.2.2.1
Lack of Awareness of non-financial factors Section 2.2.2.1
Economic growth as the goal not Wellbeing of planet and society Section 2.2.2.2
Short-term profit focused mindsets Section 2.2.2.2
Insufficient External Support for Capacity Building
Insufficient rules (incentives, constraints, punishments) from stakeholders for sustainability reporting Section 2.2.2.3
Lack of Climate Governance Section 2.2.3

There are many ways for organisations and businesses to record and report their engagement with sustainability. These may include specific sustainability reports, press releases, website, advertising, informing at the point of purchase, or through PR channels (Nylund, 2017; Du et al., 2010). Annual sustainability reporting is one of the most common tools for communicating sustainability (Nylund, 2017). For most organisations and businesses, sustainability reporting is primarily an exercise in communicating to external stakeholders. Sustainability reporting originated in the 1980s according to Thaslim & Antony (2018), due to significant public pressure over concerns for the environment. Companies with significant negative externalities responded by developing reports to communicate their 'environmental performance'. Their stakeholder audience back then was comprised of "civil-society groups, governments, and other constituencies" who had "called on companies to account for their impact on nature and on the communities where they operate" (Bernow et al., 2019). Sustainability reporting became a tool for communicating with stakeholders and managing business reputation (Thaslim & Antony, 2018), rather than the sustainability report also serving the function of improving the internal performance of the organisation that was reporting.

The process of sustainability reporting and what a sustainability report should contain is not universally defined but is instead guided by a large variety of recommendations and frameworks. Researchers, Thaslim and Antony, describe "sustainability reporting" as the process of "gathering of sustainability information in a systematic and presentable way such that an easy comparison with the past and progress concerning the target is possible, for the improvement in environmental, social and economic aspects of the company" (Thaslim and Antony, 2016). The Global Reporting Initiative (GRI), an administrator of one of the major sustainability reporting frameworks at a global level (see Chapter 4 on frameworks) defines a sustainability report as follows:
"a report published by a company or organization about the economic, environmental and social impacts caused by its everyday activities... [that] also presents the organization's values and governance model, and demonstrates the link between its strategy and its commitment to a sustainable global economy" (GRI, 2019).

Chapter 4 reviews the frameworks, and section 3.5.1. of this chapter elaborates on the issues with the huge variety of standards and frameworks.

2.3.1
The acceleration of sustainability reporting

Since the 90s and especially in the last decade, there has been an acceleration of the prevalence of sustainability reporting. Back in 2014 Ernst and Young released a report, "Sustainability Reporting – the time is now," which was an assessment of the current situation of sustainability reporting globally, considering 95% of the world's largest companies. They started their report with a bold conclusion, namely that "sustainability reporting is becoming a mainstream business practice" (EY, 2014, p. 4). This is further reinforced by a KPMG study in 2017 of the top 100 companies (by revenue) from 49 countries, found that 75% of the companies have a sustainability reporting practice (KPMG, 2017).

2.3.2
A jungle of sustainability reporting instruments

As mentioned previously, the process of

sustainability reporting and what a sustainability report should contain is not universally defined. Instead the industry is a jungle of what KPMG refers to as sustainability reporting instruments. This umbrella term includes regulation and policy instruments from regulators that sets mandatory requirements or guidelines for reporting (process and content), self-regulation which refers to mandatory requirements or guidelines set by non-government organisations, such as industry associations or potentially customers of businesses. It also refers to standards and voluntary guidelines, which are also referred to as frameworks by others (KPMG, 2016), see inset box for details on sustainability reporting terminology.

When it comes to investors, customers or regulators mandating requirements on businesses for what they report and how they do sustainability reporting there is a large variance around the world. The literature indicates that the number of instruments has been accelerating as a result of a vacuum of governing regulation mandating requirements for both the content and process of sustainability reporting. This is creating a complex and fragmented jungle of varying instruments, requirements and guidelines, and is ultimately an extremely problematic phenonmen (Eccles et al., 2012; KPMG, 2016; Bernow et al., 2019)

KMPG, UNEP and GRI stated that their review - "Global trends in Sustainability Reporting Instruments – Carrots and Sticks"- "...paints a picture of a rapidly growing, increasingly complex and fragmented landscape of reporting instruments. Some duplication and overlap is inevitable" (KPMG, 2016)

Scholars, (Esty and Karpilow, 2019) were even more stark. Their research - presented in the Yale journal on Regulation - investigated whether sustainable investing would be possible without the regulators enforcing a mandatory sustainability reporting regime. They concluded that the existing voluntary sustainability reporting instruments are not sufficient— nor will they become sufficient.

Multiple sources emphasise the need for and call for the harmonisation of sustainability reporting instruments (KPMG, 2016) to improve the quality and sufficiency of the information. Some go further calling for mandated instruments (Bernow et al., 2019, Eccles et al., 2012) with Esty and Karpilow conclude that it is essential for regulators to step in and mandate a suitable "sustainability reporting regime" on businesses (Esty and Karpilow, 2019). Essential to enable both, customers (public and private) and investors to identify the "sustainability leaders and laggards" such that stakeholders can preference the 'leaders.'
However what is positive is that there is a strong desire for increased standardisation/ harmonisation from investors and executives(Ernst Young, 2014; Bernow et al., 2019; Esty and Karpilow, 2019). McKinsey and Co conducted a survey of investors in 2019 and concluded that there was a clear majority (82%) of investors who "support legal mandates requiring companies to issue sustainability reports" (Bernow et al., 2019).

2.3.3
Lack of internal capacity

Sufficient and quality internal capacity is required for businesses to operationalise sustainability actions effectively. This internal capacity is crucial for developing 1) systems for data collection, processing and reporting (sustainability accounting) 2) systems for non-financial risk

analysis and 3) systems for integrating action for sustainability into their management systems. Internal capacity refers to the relevant knowledge, enabling infrastructure, financial and human resources that is within the business that they devote to action for sustainability. An adequate sustainability accounting system is require to give a full picture of the sustainability performance status which is no easy task and can involve large transactional costs. Larger businesses are more likely to have some level of internal capacity to collect, process and report (Esty and Karpilow). Even so most larger businesses are still not reporting on all the relevant indicators that will give a full picture. A study of CEOs by Hayward et al. (2013), found that 93% of CEOs worldwide view sustainability as crucial to the future success of their business. However, only 38% believe they can accurately quantify the value of their sustainability initiatives (Maas et al., 2016; Hayward et al., 2013). This is due to a number of factors, but insufficient internal capacity is certainly a major component
"SMEs are not only faced with financial and time constraints to implement sustainability management tools, but they lack the human resources as well" (Matthew P. Johnson and Schaltegger, 2016).

2.3.4 Integration of non-financial performance into business strategy and operation

A SHORT GLOSSARY OF TERMS

Sustainability disclosure:
An item of quantitative or qualitative information regarding the sustainability performance on a topic not required by typical financial and operational reporting. They relate to non-financial or environmental, social governmental matters (ESG) (Bernow et al., 2019).

Sustainability report:
Either a standalone document or a section of an organisation's annual report that contains a set of sustainability disclosures for certain time period (Bernow et al., 2019).

Sustainability reporting requirement:
Requirements on what a sustainability report should contain which are mandated by an organization's stakeholder(s) (investor, customer, or regulator) (Bernow et al., 2019).

Sustainability-reporting framework: *A set of guidelines for organisations regarding what to report and how to report. It is similar to a standard, but merely guides rather than requiring.*

Sustainability-reporting standard:
A set of requirements/specifications for collecting, processing and reporting sustainability disclosures (Bernow et al., 2019). Unlike a framework a standard exists in more formal documentation to ensure, that the reporting organization discloses information according to a commonly accepted rule (Siew, 2015).

Sustainability reporting instruments: *An umbrella term used by KPMG to refer to "any instrument, mandatory or voluntary, that requires or encourages organizations to report on their sustainability performance" (KPMG, 2016).*

For sustainability reporting to truly have an impact on the sustainability performance of the business it must be integrated into day-to-day corporate operations, and decision making (Epstein & Buhovac, 2014; Hart and Milstein, 2003; Husted and Salazar, 2006; Porter and Kramer, 2006). Even where businesses are engaging in sustainability reporting it does not necessarily convert into action for addressing the sustainability challenges.

According to literature there is major disconnect between the sustainability targets and goals of businesses and the actual information that is reported. A 2020 study by Deloitte investigated the state of sustainability reporting from the 50 largest companies listed on Norway's stock exchange reveals a trend among Norwegian companies to neglect including strategic targets in the reporting at all, revealing a feeble connection between a company's strategy and its sustainability report. Deloitte further states that in most cases, a sustainability report does not serve as a tool to guide and influence the strategy and operations of a business for a sustainability transition (Deloitte, 2020).

The potential insights from the sustainability report are not being integrated into decision making (Esty and Karpilow). This is affected both by the motivation of the business to do sustainability reporting and the internal capacity of the business to produce a useful and relevant report for providing insights into improving sustainability performance.
As mentioned previously, for many businesses, their motivation/perception is to use the sustainability report as a communication tool to external stakeholders, rather than as something relevant for providing insight into decision-making for business strategy and operations), that can ultimately result in the improvement in sustainability performance. So, sustainability reporting can become an activity that is siloed from the measurement, management, accounting and control (Esty and Karpilow). This motivation/perception dramatically affects completeness, specificness, scope and depth, materiality of the information, that ultimately affects the usefulness and relevance of the report for integration into the strategy and operations (Esty and Karpilow). These factors are also affected by the external and internal rules, the internal capacity of the business, and not simply the motivation and perception of the business for doing the report.

EY phrase the issues with sustainability reporting being suitable for integration in a 2014 report as follows "Today a gap remains between the information provided by a sustainability report and the effective analysis of its business impact" (EY, 2014, p. 9). A report by CICERO regarding businesses assessing sustainability issues relevant to businesses mentions that formal processes to incorporate risk are emerging in some organisation, but " ...few have made substantial changes in the organization of their business" (Torvanger, Alnes, Berg, & Marginean, 2019).

If managers believe that using the sustainability report data just for communication is the only profitable way of handling the data, then the reporting process is unlikely to result in improvements in sustainability performance (Maas et al., 2016; Stacchezzini et al., 2016). Their internal motivation relies heavily on the degree of integration. The integration can also be observed in the internal rules of a business, for example, where do the responsibilities lie for sustainability reporting, is it in a dusty corner of the corporate structure or located with the strategic or executive function, are there any salary incentives for

decision makers for improving sustainability performance, are there punishments for falling behind on targets.

As mentioned, the varying motivations and capacity of businesses affect the sufficiency and quality of the report, affecting the degree to which a business can or will integrate sustainability reporting. However, it is important to recognise that the degree of integration is not simply dependent on the motivations, willingness and mindsets of the business decision makers and the carrot and sticks of external stakeholders and internal rules (see section 2.1.3 for more). The complex jungle of frameworks, the lack of a universal standard, and external capacity support are all significant impediments the sustainability reporting process and ultimately impediments to integration of the sustainability report and its non-financial information. In summary, the sustainability reports often have a potential of being utilized internally, which is being used to a limited degree with today´s system. We will address this issue further in chapter 2.6 – Sustainability reporting as a sustainability performance improver.

2.3.5 Quality and sufficiency of sustainability reporting information

While the prevalence of sustainability reporting is becoming mainstream, the prevalence of sustainability reporting producing sustainability performance information that is comparable, relevant and reliable with sufficient scope and depth, such that it is useful for businesses and their stakeholders has not yet reached the mainstream realm. This is because: the sustainability performance information being reported is difficult to compare across business, there is a lack of sufficient scope and depth to give a full picture, there is a lack of information that is relevant (materiality) to the business operations, and there are significant concerns around the reliability of the information that is reported. Finally, there is a lack of transparency of the methods for data collection, processing the data and what information ultimately being disclosed. These are the main elements uncovered by the report that impact the sufficiency and quality of sustainability reporting. The following sections expand on the relevant issues raised in this paragraph.

2.3.5.1 Compare: Consistency, comparability and standardisation

Literature from the accounting world highlight one of the major issues with sustainability reporting as following; being extremely difficult for businesses, customers, investors, and regulators to comparatively evaluate the sustainability performance of businesses (Bernow et al., 2019). The literature highlights that comparative evaluation is extremely difficult because there are so many different frameworks for conducting sustainability disclosures, and no regulation or enforcement that the sustainability report should conform to a universal standard. But what also makes the reports difficult to compare is that there is a vast variation of what indicators and information being disclosed, what methodology used to collect data, what mix of methodologies utilized to collect data and a varying scope and depth of what is disclosed and reported on by businesses (refer to section 2.2.2).
Companies rarely make sustainability disclosures that can be compared as neatly as their financial disclosures can. This circumstance makes the job of investors more difficult, as they indicated in response to our survey

"We have positions in over 4,500 companies. Unless [sustainability information] is comparable,

hard data, it is of little use to us" [head of sustainable investing at a major asset manager] (Bernow et. al, 2019, p. 6).
"investors say they cannot readily use companies' sustainability disclosures to inform investment decisions and advice accurately" (Bernow et. al, 2019, p. 2).
Investors surveyed have become increasingly dissatisfied with the information they received on ESG risks (EY, 2020).
McKinsey and Co reported in 2019 on the root causes of the poor comparability of sustainability reports, putting the blame squarely at the feet at the fact that sustainability reports do not have to conform to universal standards the way that financial reporting do. Businesses are free to report what they want and how they want.
"Companies' sustainability disclosures needn't conform to shared standards in the way their financial disclosures must... businesses have discretion to apply as they see fit" (Bernow et. al, 2019, p. 2).

"One of the greatest challenges facing both investors and companies in using ESG performance information is the absence of standards" (Eccles et al., 2012)

McKinsey´s study also dove into researched information and stakeholder perspectives on how to refine the practice of sustainability reporting. They uncovered that both company executives and investors rated the lack of comparability as THE most significant challenge when it comes to seeing useful and sufficient sustainability reporting for external utilization of the sustainability report. A significant majority of respondents in the stakeholder survey, 67%, believed that there should only be ONE standard (Bernow et al., 2019). They also found that 63% believed that greater standardisation would attract more capital to sustainable investment (Bernow et al., 2019). "Inconsistency, incomparability, or lack of alignment in standards" as the most significant challenge (Bernow et. al, 2019, p. 7).

Also connected to the standardisation is the reality that the jungle of different standards and frameworks is adding significant "transactional cost" for businesses. There are different frameworks depending on what is being reported on, with overlapping requests on the business for information. The study highlighted qualitative responses from respondents that a rationalisation of the rules and reduction in the number of frameworks and standards to one or two would greatly reduce the burden on businesses to produce quality sustainability reports.

Executives made clear, in our conversations, that they devote excessive effort and expense to answering numerous specialized requests for what is essentially the same information, such as greenhouse-gas emissions data that must be tabulated in different ways to conform to different standards. (Bernow et. al, 2019, p. 7).

A study by Esty and Karpilow in the Yale journal on Regulation argued that a uniform set of methodologies/frameworks is needed to achieve sufficient comparability. They also argue that implementing that through a mandatory sustainability reporting regime was necessary to address comparability issues. The authors do state that creating a mandatory reporting regime will undoubtedly be challenging, sluggish and time consuming. However, a mandatory reporting regime (Esty and Karpilow, 2019) and mandated sustainable disclosures (Bernow et al., 2019) through regulation has wide support amongst investors and executives. Additionally (Eccles et al., 2012) in their paper "The Need for Sector-

Specific Materiality and Sustainability Reporting Standards" argue that it is important that there is not one-size fits all approach to standardisation of requirements for sustainability reporting, that the various materiality considerations be taken into account by having a sector-based approach to developing standards:

"...materiality and reporting standards must be developed on a sector-by-sector basis, and that failure to do so will result in inconsistent and even misleading disclosures" (Eccles et al., 2012).

2.3.5.2 Scope and depth: Scope and depth of sustainability performance information

There is a large variance in the scope and depth of the information that is reported. It can range from a single paragraph in an annual report to detailed reports with measured numbers on many indicators (Maas et. Al, 2016).

The scope and depth of these disclosures differ considerably as a result of the subjective choices companies make about their approaches to sustainability reporting: which frameworks and standards to follow, which stakeholders to address, and which information to make public (Bernow et. al, 2019, p. 3).

The literature reveals that there is a large range in the usefulness of the information from sustainability reports for stakeholders. There are a range of reasons for this:
- Businesses adjust the scope and depth to suit their interests and how they want to frame themselves to the stakeholders.
- Businesses have a lack of awareness of what to report on (refer to section 3.2)
- Businesses have a lack of internal capacity to collect, process and report on all sustainability indicators that will give a full picture (covered in section 3.3)

2.3.5.3 Relevant: Materiality of sustainability performance information

Materiality refers to what non-financial information being relevant to disclose for a business in order to paint an accurate picture of their sustainability situation regards to the kind of business they are and the industry they operate within. Currently there is a large variation in the relance or the so called 'materiality' of the sustainability information that is reported by businesses (Eccles et al., 2012). A commonly used example in this context is the oil drilling company reporting on how much paper they used in the office printer, and thus highlighted the fact that the paper use had decreased after introducing double-sided printing (Delmas and Burbano, 2011).

Research in the field reveals that many corporations are cherry picking indicators, and thus only reporting on the indicators that makes their business look green. Another evident trend is the cherry picking of indicators easy to measure and report on (have a low transaction cost) such as energy consumption or waste generation (Plugge and Weimer, 2008). Researchers further call attention to the trend in the sustainability reporting landscape that corporations in many cases seems to leave out relevant indicators and thus fail at painting the full picture of their sustainability situation. The effect is rather diminishing, whether it being intended or unintended.

This cherry picking of indicators is enabled by the fact that organisations are free to choose methods and frameworks, and in some cases even create the frameworks themselves, due to the lack of mandatory standards and external rules and

legislations. Additionally, an indirect consequence emphasized by researchers is the lack of motivation. Current standards do not define what is relevant for each sector, nor is there anyone to enforce. The materiality is also affected not just by willingness or motivation of the businesses, but also their ability, or as we are calling it in this report, internal capacity, for both sustainability accounting and internal capacity for risk analysis. According to (Nelson, 2020)the insufficient materiality can be linked to businesses not having a sufficient approach to adequately analyse the non-financial/climate risks and opportunities to determine what is material and what is not.

2.3.5.4 Reliability and transparency of sustainability performance information

The reliability of the information is affected by the adequacy of the data collection process and the presence of 3rd party auditing to independently verify this data (Bernow et al., 2019). As it stands today companies do not have adequate collection systems to be able to collect quality data. A recent survey by McKinsey and Company showed that 97% of investors are of the opinion that sustainability reports should be audited and have perceptions that the information is not reliable. Additionally, only 38% of sustainability reports had 'some' level of auditing.

As the head of responsible investing for one of the world's five largest pension funds put it, "Many companies do not have the systems in place to collect quality data for [sustainability] reporting" (Bernow et. al, 2019, p. 3).

Investors harbor doubts about corporate sustainability disclosures because few of them undergo third-party audits. Nearly all the investors we surveyed—97 percent—said that sustainability disclosures should be audited in some way, and 67 percent said that sustainability audits should be as rigorous as financial audits (Bernow et. al, 2019, p. 3)

2.3.5.5 Sum up

We have now unpacked the main causes for the lack of quality and sufficiency in today´s sustainability reporting practice. This report also uncovers underlying elements that are affecting the comparability, scope and depth, materiality, and reliability. These underlying elements include, 1) insufficient standardisation and rationalisation of the frameworks, standards and guidelines for businesses , 2) insufficient internal capacity, and 3) insufficient motivation due to a) lack of awareness, b) lack of external incentives, constraints and punishments and c) problematic mindsets.

Comparability is directly impacted by the prevalence of insufficient standardisation and internal capacity for sustainability accounting and reporting. Materiality, scope and depth are directly affected by internal capacity [sustainability accounting and reporting systems, and risk analysis systems], and motivations to disclose or not. Materiality, scope and depth are indirectly affected by the insufficient standardisation which allows for a large variance. Reliability is directly affected by the adequacy of the internal data collection systems (affected by the internal capacity) in businesses, as well as the lack of 3rd party verification of the data they produce.

2.3.6 Main findings

Sustainability reporting is the main communication strategy for firms to publicize their sustainability status to their stakeholders, and existing literature calls for better quality reporting. Strands of literature also point to the value of integration of reporting with company

activities to embed the reporting process in such a way that it helps steer the company towards actual sustainability performance increase, in addition to communicating accurate, comparable and thus usable information. Today sustainability reporting does not work in an optimal way, and in the section above we have tried to flesh out the main root causes to enable sustainability reporting becoming a sustainability performance tool. The main findings of this chapter are outlined as follows;

Most businesses are using sustainability reporting as a communicating/branding tool rather as an internal tool to improve their sustainability performance

The sustainability report is rarely being integrated into the strategy and operations of businesses, but this is due to a number of factors; 1. The quality and sufficiency of the report to be used as an internal tool for performance improvement 2. The motivation of the business and finally 3. Their internal capacity for being able to implement action.

Sustainability reporting instruments: There is a growing jungle of various requirements and guidelines that business either mandated or are free to follow. This jungle of mandatory and voluntary instruments has emerged due to a vacuum of government regulation on what to report and how to report.

Insufficient standardization and harmonization: as mentioned multiple times, the lack of requirements has led to huge variance on the quality and sufficiency of information being reported, as well as leaving the door open to business to "cook the books" on the data being reported. There is a large variance on requirements for what suffices as adequate internal systems for sustainability accounting or 3rd party verification or auditing.
Businesses motivated to become sustainable face significant challenges, as they exist within a system structure that does not preference sustainable businesses. The existing rules do not sufficiently incentivize businesses to transition, nor sufficiently punish or constrain those lagging or going backwards. However. besides rules, one of the root causes of the lack of businesses improving their sustainability performance is the reality that many businesses, and arguably the majority of SMEs have insufficient internal capacity to operationalize actions to improve their sustainability performance. Internal capacity was referring to the availability and quality of the financial, human and knowledge resources to develop internal systems for sustainability accounting, non-financial risk analysis and sustainability management. Additionally, there is often minimal or no external support for businesses to build their internal capacity, to be able to transition and become a sustainable business.

There is a large variance in the quality and sufficiency of information coming from sustainability reports. Making it difficult for investors, customers or regulators to incentivize or punish sustainability leaders or laggards. It is also making difficult for businesses "playing their part" to differentiate from their more ruthless competitors. The current state of quality and sufficiency was found to be as follows:

Reliability: Opaque and inadequate sustainability accounting systems, and a lack of 3rd party verification/auditing of the information and processes makes it difficult for stakeholders to trust authenticity of the information being provided in sustainability reports.

Scope and depth: There is a large variance on the scope and depth of information in sustainability reporting, with reports varying from dedicated reports to a paragraph in an annual report

Materiality: Most businesses are reporting on sustainability performance indicators that are easy and cheap to report on, but often not the indicators that are most relevant 'material' to the sustainability impact of the business.

Comparability: Due to the lack of standardized practices for the process and content of sustainability reporting across businesses, it is very difficult for stakeholders to comparatively evaluate sustainability performance across businesses. Businesses are mostly free to pick and choose what they want to report on and also the process to gather that data.

Sections 2.3.2, 2.3.3, 2.3.4 together with the main findings from chapter 2.2 paint a system context around why the quality and sufficiency of sustainability reports, and sustainability reporting practices today are largely insufficient to contribute towards business improving their sustainability performance.

Recommendations for improvement were discovered alongside looking at the current state of sustainability reporting and its systemic context, these included suggestions for:

Harmonising and standardizing the requirements and guidelines for what to report and how to report.

That a mandated sustainability reporting regime was considered the most effective and according to some, the only way to implement standardization and harmonization that would enable stakeholders to reward sustainability leaders and punish and constrain sustainability laggards.

External capacity and transition support is required for businesses to either be able to develop their internal capacity and implement robust systems for sustainability accounting and reporting, non-financial risk analysis and integrating those insights into their business strategy and operations.

Planetary Concerns

NSRS recognises that planetary health encompasses more than massively reducing GHG emissions, as detailed in (Steffen et al., 2015). Therefore, NSRS requires reporting organisations to go beyond just measuring and reporting on GHG emissions and incorporate additioonal KPIs that are considered critical to ensure a sufficiently comprehensive evaluation of impacts relevant to all aspects of Planetary Health. The Planetary Boundaries (PB) approach provides a framework for assessing a more holistic set of quantitative metrics on the global level, the NSRS has selected metrics and disclosure topics inspired by the planetary boundary topics that are particularly relevant to the Nordic Region.

The NSRS Framework is not picking disclosure topics that explicitly cover air pollution, which we believe is adequately covered by the chosen disclosure topic on compliance with Environmental laws and regulations, which for air and chemical pollution are quite strong in the Nordics. Over application of P and N fertilisers (Bio-geochemical flows) are having a large impact both on the long term productive capacity of agriculture systems for provisioning but largely on the blue water systems, rivers, lakes estuaries and coastlines. This is especially noticeable in the

eutrophic Baltic sea (Shaw & Lampen, 2020). However, for this iteration of the NSRS framework a Biogeochemical Flows disclosure topic was not included as we did not determine a suitable metric by the date of publication. Novel entities pollution we believe is sufficiently covered by the disclosure topics on waste.

The NSRS believe that disclosure topics aligned with the Land System Change and Biosphere Integrity PBs can add great value to evaluating the sustainability of organisations in the Nordics. The Boreal biome is an important global biome for climate stability (Dinerstein et al., 2020) and biodiversity. A large part of it resides in the Nordic countries, and currently the management of land in the Nordics is not particularly aligned with ensuring climate stability and biodiversity.
"In the boreal biome, natural configuration of forest landscapes are seriously trans-formed by rotation forestry systems that, amongst other impacts, interrupt spatial connectivity and temporal continuity of forest cover"
(Svensson et al., 2020)

The demand on the boreal biome will increase with the gathering momentum for forestry to substitute non-renewable inputs with renewable inputs for the 'bioeconomy.' Currently in the Nordic's the forestry industry's practices are resulting in massive net carbon emissions both from encroaching on virgin forest and poorly managing production forest areas (Felton et al., 2019). The biome is already under severe pressure and faces increasing degradation, which will correspond to a degradation in its provisioning of ecosystem services, in particular carbon sequestration, carbon storage and water cycling (Svensson et al., 2020). It is critical for planetary health that Nordic Boreal production forests are managed sustainably to continue to ensure carbon storage and continued sequestration. The NSRS has chosen to specifically address biosphere integrity and land system change. However biosphere integrity is difficult to feasibly evaluate at large scales and typically requires expensive on the ground studies. Additionally, the metrics used by the PB framework to evaluate the status of biosphere integrity focus on genetic diversity and abundance of biodiversity.

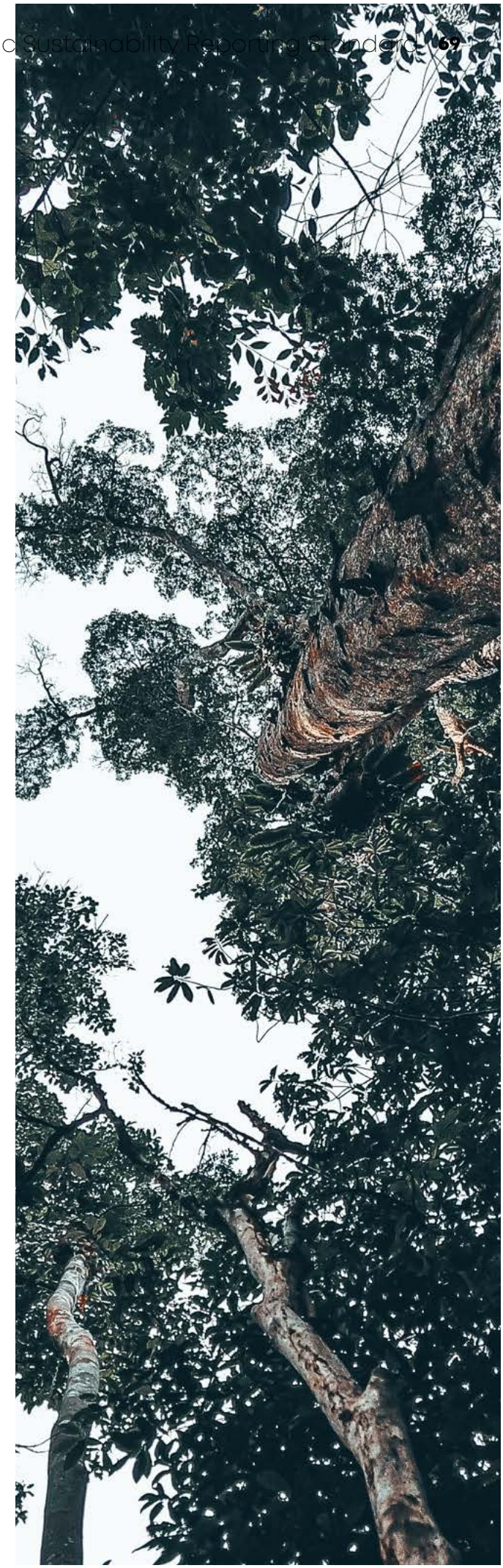
The methods for measuring abundance grossly overestimates abundance, as some peer reviews have argued (Martin et al., 2019; Rouget et al., 2006). They also fail to include the functional diversity and biome integrity which area critical for evaluating the health of the ecosystem. This due to the reality that methods for measuring functional diversity and biome integrity have been difficult and expensive. The NSRS approach focuses on evaluating the land-system change as an underlying driver of changes to functional diversity biome integrity (Mace et al., 2014; Vargas et al., 2018).

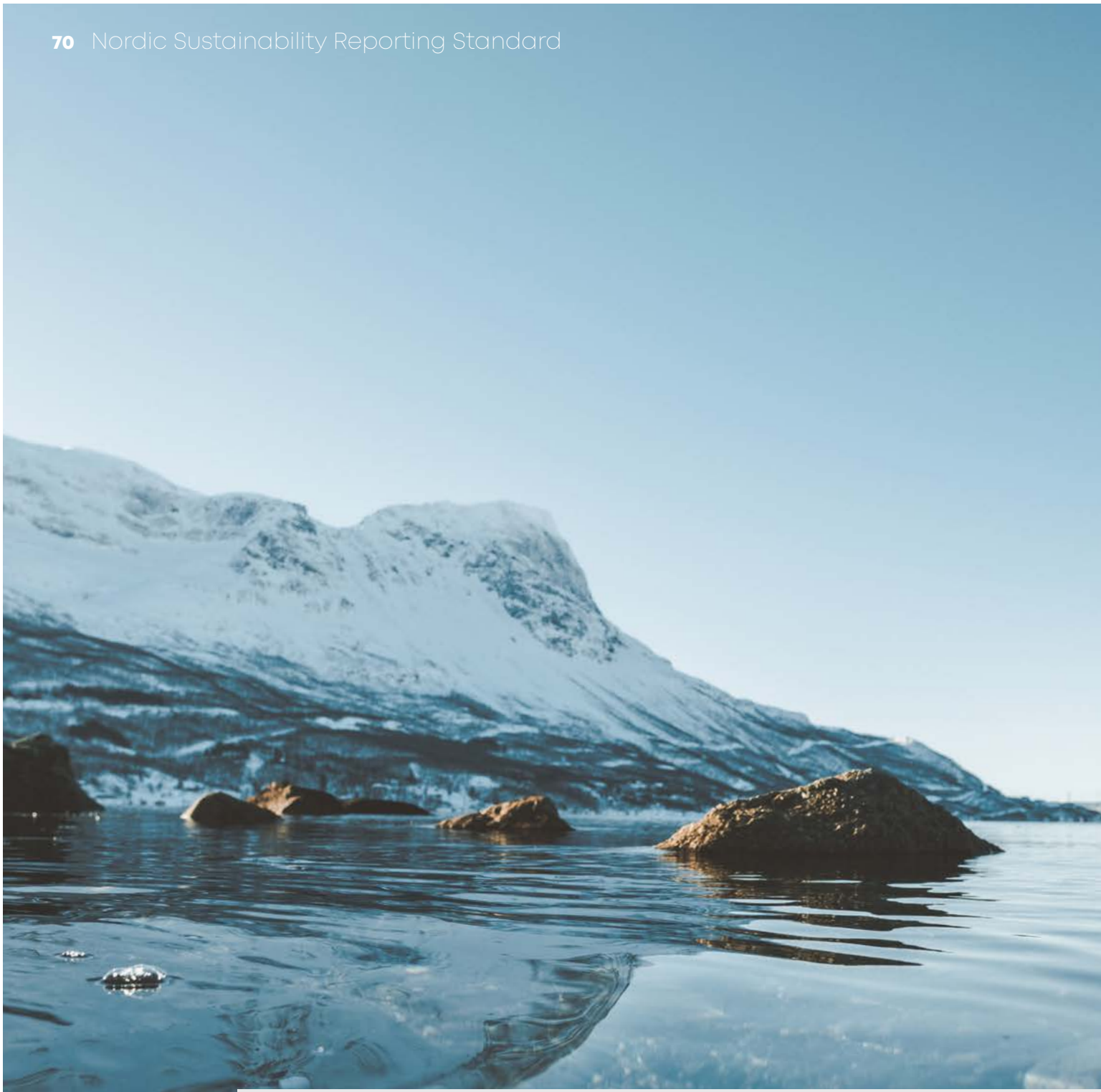
NSRS have picked GRI 304 "Biodiversity" from GRI and the "Land use and ecological sensititivity" expanded metric from the "Managing Stakeholder Capitalism" report (Myers, 2015) (WEF, 2020) as a basis for disclosing on the topic of land system change. The GRI disclosure 304-1 directs organisations to report their site operations within or adjacent to protected areas and areas of high biodiversity (Stacey & Griffin, 2005). NSRS argue that it is important to also consider the areas important for climate stability, not just protected areas and biodiversity areas, as land system change affects the ability of biomes to store and sequester carbon. The Global Safety Net provides a GIS database of the entire globe which clearly defines areas that are critical for biodiversity, and climate stability, as well as existing areas of high

ecological intactness that should be restored and/or protected, in addition to the existing protected areas (Dinerstein et al., 2020). The Global Safety Net project is a comprehensive source for organisations to viably reference to report for disclosure 304-1 which also includes the important area categories of climate stability and high ecological intactness. While NSRS has chosen to utilise GRI 304-1, it is also utilising the metric from WEF's "Managing Stakeholder Capitalism" which has producing organisations (mining, construction, farming and forestry etc) report on the land area used to produce outputs such as products or built environment. It also has organisations report their area efficiency, looking at area used per unit output. Additionally it requests organisations to disclose the proportion of area used for material outputs, or proportion of material inputs that are covered either by a documented long term sustainability management plan, or sustainable certification (WEF, 2020). This enables the preferencing of organisations who reduce land-use per unit output, as well as those who sustainably manage the land.
One could be forgiven for thinking that land system change is not the topic to focus on. According to the last impact assessment by Steffen et al 2015, the Planetary Boundary for land system change was within the safe operating space both globally and sub-globally (at a biome scale (Steffen et al., 2015). However, the metric used based purely on the aggregated area of fragmented forest patches required in each biome type (boreal, temperate, tropical. It does not evaluate the degradation of the status of biome integrity, due to fragmentation (lack of connectivity), or degradation in the quality, only if it is forest or not.

Additionally recent advances in technology have made it possible to feasibly measure the extent, quality and connectivity (the opposite of fragmentation) of all types of biomes. The 'Ecoregion Intactness Index' (EII) is a new peer-reviewed metric (Beyer et al., 2020), which uses GIS datasets to assess all of earths ecoregions (biomes) and down to the scale of large properties with a 1km2 resolution (Lieberman, 2020). The quality component of the EII metric utilises data on the Human Footprint Index (HFP) (Beyer et al., 2020). The data is publicly available for all 836 ecoregions in the world in GIS shape files and will be updated annually starting in 2020 (Lieberman, 2020). This database will make it possible to determine and independently verify baseline and trends of the condition, integrity of the land that is managed/used by reporting organisations. This index could be used to reliably and comprehensively evaluate the long-term trends of land use by primary producers in the "land use and ecological sensitivity" metric (WEF, 2020).

When evaluating the status of important areas to restore/protect defined by the Global Safety Net, the Ecoregion intactness index will be a critical tool to monitor and measure the effectiveness of restoration and the value of the land areas that are protected. It is perhaps the most comprehensive, low-cost measure to evaluate the long-term trends in the functionality of key areas that are critical for providing ecosystem services.





PURPOSE

The purpose of this chapter is to give insight into the most commonly referenced sustainability reporting instruments and compare the advantages and disadvantages of each instrument to each other. The longer purpose of this chapter is to create a base of understanding for developing a standard similar to the most commonly referenced instruments.

Chapter 2.4

Existing Sustainability Reporting Frameworks

Keywords:
Sustainability reporting, frameworks, standards, GRI, ecolabels.

Topic:
The most commonly referenced sustainability instruments and
their benefits and disadvantages.

Objective:
The objective of this study is to understand what are the most commonly referenced sustainability instruments in academic papers, NGO reports and expert reports. With sustainability instruments we refer to guidelines, rules and standards which assist companies to report on their sustainability.

“If you can’t measure it, you can’t manage it.”

METHOD & APPROACH

We approach the subject through literature study on the most commonly referenced frameworks
and collect information on the intrument regarding its use (framework, standard, rule etc.), its age
(year of establishment), its focus area (environmental, social, governmental, economic), its benefits
and critic. After collection, we will compare the instruments to each other to form an understanding of the influence of the most commonly referenced instruments.

Main findings – Existing Sustainability Reporting Frameworks

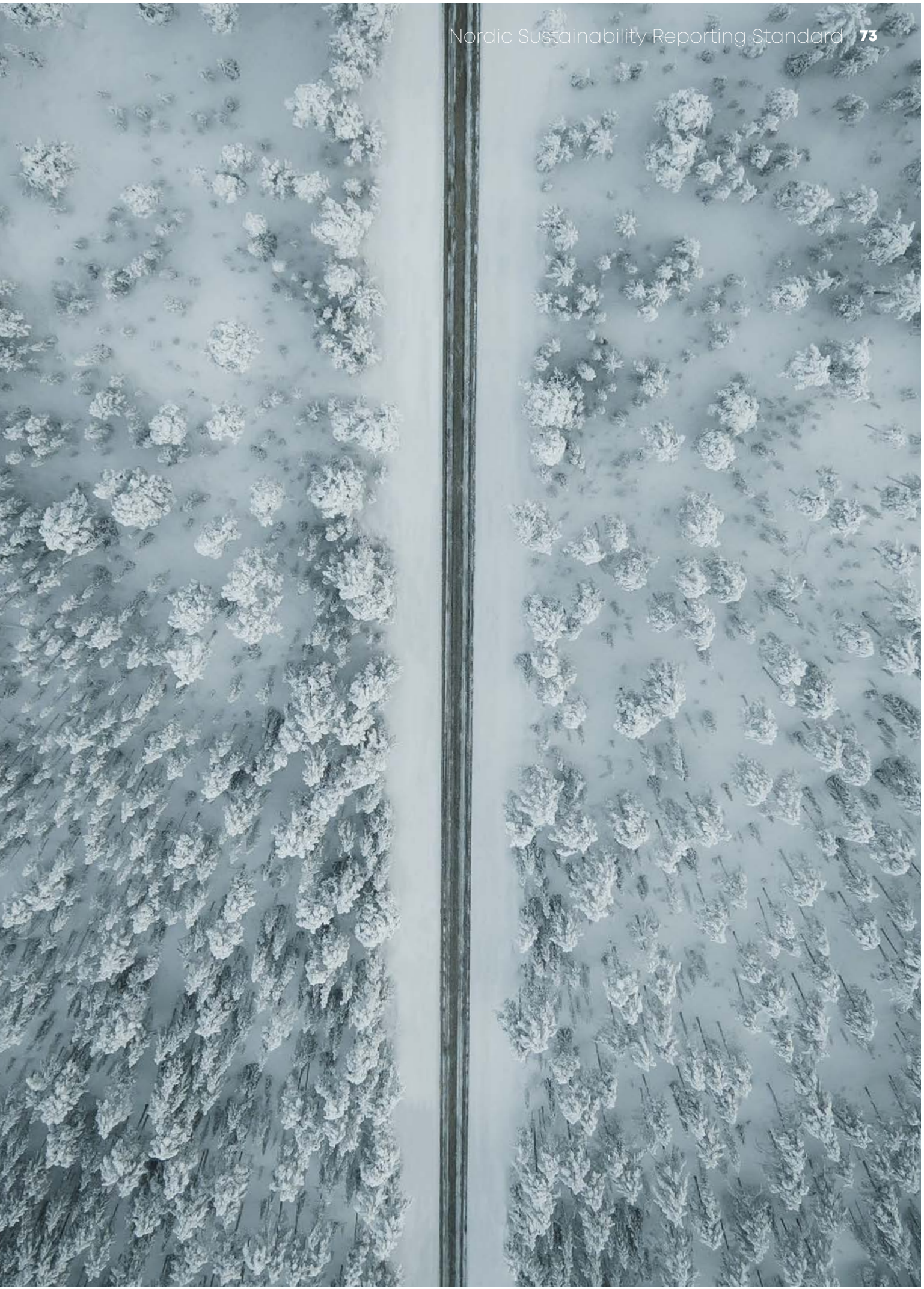
1. Even if there are hundreds of sustainability frameworks and standards, only a few frameworks and standards dominate the field.

2. The most referenced and the most popular framework is the Global Reporting Initiative.

3. Several frameworks pose materiality issues, which are difficult to respond to with limited resources or self-assessment systems provided by the framework.

4. Motivation is the key. The balance between "too strict information requirements" and "too broad information requirements" is a difficult task which some of the most common frameworks pursues to handle with sector-specific guidelines. Unfortunately, sector-specific guidelines are not always sufficient enough to respond to the needs of an organization because prior knowledge of the management affects how the guidelines of a framework or a standard are implemented. The standard or the framework needs to motivate the user or the performance of the standard/framework becomes poor.

5. Sometimes the incentive to implement a standard or a framework comes externally from stakeholders, which can result in a more symbolic action to stakeholder pressure rather than the organization pushing sustainable development as an internal motivator.



Chapter 2.4

Existing Sustainability Reporting Frameworks

Chapter 3 revealed how the jungle of different frameworks and the lack of standardisation is a significant underlying root cause for the large variation in the quality of sustainability performance information from sustainability reporting, when considering comparability, scope and depth, materiality, and reliability.

This Chapter reviews the most common sustainability reporting instruments in particular standards and frameworks. The purpose of this review is to ensure that this project does not reinvent the wheel in designing a new standard, but harvests from the existing work, taking the good and leaving the bad, to develop a prototype that incorporates "best practice" as well as being relevant. The chapter presents the most commonly referenced sustainability reporting standards and frameworks, their focus areas, their pros and cons. Additionally, the chapter investigates how the prototype sustainability reporting standard for SMEs could respond to these pros and cons. The chapter summarizes its findings at the end and highlight the main findings.

2.4.1
Most common global frameworks and standards

This chapter reviews some of the most referenced frameworks and standards from academic papers, consulting reports, NGOs research disclosures and online libraries. The Oxford dictionary defines standard as an official rule used when producing something (Oxford Dictionary). A framework is typically a principle, initiative or guideline to produce something and similar to a standard. However, a standard exists in a more formal documentation to ensure, in our case, that the reporting organization discloses information according to a commonly accepted rule (Siew, 2015).

We define "the most commonly" as the most often referenced sustainability reporting tool, instrument, rule or guideline in a sustainability report, academic paper, NGO report or in any other document which handles sustainability reporting in informative and critical matter.
We recognize that the number of standards and frameworks is substantially larger than presented during our report, but to understand the landscape of reporting and what benefits and disadvantages frameworks and standards can offer, we need to study the most commonly referenced frameworks and standards we have come across during our review.

2.4.2
Methodology

The introduced frameworks and standards can be considered the most widely referenced or the most commonly used for sustainability reporting. However, we are excluding data from frameworks and standards outside the region of the European Union (for example standard AS/NZS 4801 for Australia and New Zealand). This is because our focus is to provide instructions to report on sustainable development for SMEs in the Nordics, which limits our scope primarily to the Nordic countries and countries in the European Union. The next two tables present the most commonly referenced frameworks and standards, their abbreviations, the year the standard or framework was established and the focus area in which the standard or framework operates.

To narrow our focus down to the globally most important frameworks and standards, we rely on academic, NGO and expert literature. Our objective is to find the most important and often referenced standards and frameworks inside the 'sustainability reporting' theme.

The 2017 KPMG survey on Corporate Responsibility reporting states that the most often referenced framework to report on corporate responsibility is the Global Reporting Initiative or GRI:

"GRI remains the most popular framework for CR (Corporate Responsibility) Reporting. Around two thirds of reports analysed in this survey apply the GRI G4 Guidelines or Standards" - KPMG Survey of Corporate Responsibility Reporting 2017
This is also validated by Thaslim and Anthony (2016), Rashidfarokhi, Toivonen and Viitanen (2017), Deloitte (2019), the ACCA CDSB 2016 report and by the WBCSD Reporting Matters 2019 report.
"The clear majority (87%) of reports reviewed reference the GRI..." - Reporting Matters, WBCSD 2019 Report (survey population ~200)

"Only 41% of the studied investment companies... published sustainability reports annually. Among those,

Table 2: *Most utsed sustainability reporting frameworks (Siew 2015, Thaslim and Anthony 2016, Irish funds report 2020, PwC 2018, Governance Group 2020, WEF 2020).*

Framework	Abbreviation	Year est.	Focus area (Enviro., social, econ., gov., all)
Global Reporting Initiative	GRI	1997	All
SIGMA Project		2003	All
Drivers, pressures, state, impact and response Framework	DPSIR	1993	Environmental
UN Global Compact		2000	All
Carbon disclosure Project	CDP	2002	Environmental
World Business Council for Sustainable development	WBCSD	1995	All
GHG Protocol		2001	Environmental
Natural Step		1989	All
Ecological footprint		1996	Environmental
CERES Roadmap 2030		1989	All
Sustainable Process Index		1995	Environmental
2001 Environmental Sustainability Index		2001	Environmental
United Nations Conference on Trade and Development	UNCTAD	1964	Economic
The Sustainability Consortium		2009	Environmental
International Integrated Reporting Council	IIRC	2010	Governmental
United Nations Environment Programme Finance Initiative	UNEP FI	1992	Economic
Global Real Estate Sustainability Benchmark	GRESB	2009	All
Sustainability Accounting Standards Board	SASB	2011	All
United Nations Principles for Responsible Investment	UNPRI	2006	Economic
Climate disclosure standards board	CDSB	2007	Environmental
Task Force on Climate-Related Financial Disclosures	TCFD	2015	Environmental
UN Sustainable Development Goals	SDGs	2012	All
OECD Guidelines for Multinational Enterprises		1976	All
International Labour Organization	ILO	1919	Social
World Economic Forum Integrated Corporate Governance		2020	Governmental
World Resources Institute Aqueduct tool		2011	Environmental
Natural Capital Coalition Natural Capital Protocol		2016	Environmental
Value Valancing Alliance		2019	Economic

Table 3: *Most utsed sustainability reporting frameworks (Thaslim and Anthony 2016, sfs.fi, PwC 2018, Governance Group 2020).*

Standards	Year Established	Focus area
AA1000	2008	Governmental
SA8000	1997	Social
ISO 14000	2004	Environmental
ISO 9000	1987	Quality
EMAS	1993	Environmental
ISO 45000	2018	Social
ISO 26000	2010	Social
UN Guiding Principles on Business and Human Rights	2011	Social

GRI framework was the most widely used framework..." - Rashidfarokhi, Toivonen and Viitanen (2017)

These reports also commonly refer to IIRC, SASB, CDP, UN SDGs and GHG Protocol.
"95% of reports reviewed acknowledge the SDGs in some way." - Reporting Matters, WBCSD 2019 Report

"Examples of some of the most influential requirement developers include: International Integrated Reporting Council (IIRC), Sustainability Accounting Standards Board (SASB), Global Reporting Initiative (GRI) and CDP." - ACCA CDSB 2016
"CDP's content requirements...relies largely on the standards for compliance set by others, such as the WRI/WBCSD Greenhouse Gas (GHG) Protocol." - ACCA CDSB 2016.

In addition, commonly mentioned frameworks and standards are the OECD Guidelines for Multinational Enterprises, United Nations Global Compact, TCFD, ISO 26000 and ISO 14000 (for example Habek and Wolniak 2016, Rasche, Waddock et al. 2013, Suerf 2020, Hahn 2013, WBCSD Reporting Matters 2019, Gupta, Racherla 2016, WEF 2020 and ACCA CDSB 2016).
"The TCFD provides the necessary foundation for the financial sector's role in the transition to net zero that our planet needs and our citizens demand." - Mark Carney, the Governor of the Bank of England. Suerf 2020

"ISO 14000 certification is the most commonly adopted Environment Management System (EMS) by business enterprises..." - Gupta, Racherla 2016

"The UN Global Compact has grown into the largest voluntary corporate responsibility initiative in the world. Currently, more than 10,000 business and nonbusiness participants are part of the initiative (as of April 2012)" - Rasche, Waddock et al. 2013

By scanning the qr-code below with the camera on your phone, you will access the table that presents information on these frameworks and standards, including their focus area, description, strengths and weaknesses based on experts' critic.

2.4.3 Dis[illegible]

Ou[illegible] porting
frar[illegible] have been
wid[illegible] orting
rela[illegible] ten used
rep[illegible] r example
Rep[illegible] le-bottom
line[illegible] ch is well
res[illegible] n shown
to p[illegible] bility
compared to companies who do not report using GRI (Deloitte 2019). Additionally, the framework seems to improve the management

overview of companies, similarly to environmental management systems like ISO 14001. However, the GRI framework has been criticized for being too demanding (Fonzeca 2010) and missing consideration of customers, leading to disregard of customers as stakeholders (Isaksson, Steimle 2009).

Another major framework, which is similar in scope to GRI, is the SASB. This is the only framework in the list aligned with US financial reporting (EcoAct 2019) and SEC (US Securities and Exchange Commission) (SASB 2017). SASB is also sector-specific, which means that the framework considers the needs of different industries in terms of reporting materiality. This is one of the drawbacks with GRI –framework, which to date does not consider sector-specific reporting (Balachandran et al. 2011, globalreporting.org/sector-program). However, some companies have complaint that sector-specific reporting by SASB is too broad on company-level (Sustainable profile 2016). Additionally, SASB creates a disclosure burden for companies who already report ESG information due to the standard's alignment with US financial reporting (Sustainable profile 2016). The third often-referenced framework on sustainability reporting is the OECD Guidelines for Multinational Enterprises (OECD Guidelines). The OECD Guidelines is a principle-based framework, which does not certify or accredit businesses but offers guidance on acceptable and unacceptable practices (Waddock 2008). This is the only guideline formally adopted by governments and requires governments to promote its use (Cernic 2008). However, this government-based system does not require companies to report on sustainable development (oecdwatch.org) and causes critic over unclear implementation guidelines, unequal treatment of companies, lack of monitoring capacity and failure to separate government interests from companies' interest when solving sustainable-development related issues (Christian Aid et al. 2006).

One of the most widely used principle-based standards is the UN Global Compact (Rasche 2011). The UN Global Compact includes 10 principles on human rights, labour, environment and anti-corruption (EcoAct 2019) and with the exception of a few industries and sanctioned subjects (unglobalcompact.opg/who should join) all organization are free to participate (EcoAct 2019). The Compact offers significant geographic reach (Ruggie 2002) and reputational benefits (EcoAct 2019). However, concerns over exploitation of UN legitimacy on businesses, which continue to operate unsustainable (Rache 2009). The Compact's assessment process is based on yearly self-assessment (EcoAct 2019), which poses similar issues with OECD Guidelines on the UN's resources to monitor and assess all its 12 000+ signatories.

The UN Global Compact's program includes the UN Sustainable Development Goals (unglobalcompact.org/sdgs), which are 17 global goals with 169 associated targets (EcoAct 2019) for businesses to reach the UN Agenda 2030 (unglobalcompact.org/sdgs/about). The 17 global goals link to the Un Global Compact's 10 principles and companies can choose which goals they would like to contribute to (EcoAct 2019). This provides an opportunity for companies to connect business actions to global sustainability goals and show how they view environmental and social development related to financial factors

(Deloitte 2019). However, a study in Norway shows that just a few companies actually integrate SDGs into business strategy (Deloitte 2019).

The IIRC or the International Integrated Reporting Council pursues to integrate sustainability to traditional business operations and reporting (irish funds 2020). The IIRC framework is another principle-based framework (accaglobal.com), which is based on capital thinking: organizations have different stores of value, which are the basis for an organization's value creation (Capital Background paper 2013). The six different capitals recognized by the IIRC are financial, manufactured, intellectual, human, social and relationship, and natural (Capital Background paper 2013).

However, an organization implementing an integrated reporting framework does not have to follow capital categorization (IIRC Framework 2013). The content of the capitals and of the framework is clear (ACCA CDSB 2016), it improves corporate reputation, stakeholder relationships and employee engagement, and offers more efficient reporting for its users and preparers (ACCA 2017). However, the integrated reporting framework does not have standards for compliance with content requirements (ACCA CDSB 2016) and has issues with reliability, completeness and materiality (Oll and Rommerskirchen 2018). Additional difficulties come from data collection and data connectivity between data sources, difficulties in defining performance measures and distinguishing between value created for the organization and for the stakeholders (ACCA 2017). However, even with its difficulties, the use of integrated thinking when compiling sustainability reports is on the rise and the combination of financial and sustainability information seem to produce better sustainability performance (Reporting Matters 2019).

Another similar framework for combining financial and sustainability information is the TCFD recommendations. The recommendations focus on identifying climate-change related risks and opportunities in companies, and divides these risks and opportunities into four categories: governance, strategy, risk management, and metrics and targets (irish funds 2020). The TCFD recommendations are regarded as the best practice in climate-related financial disclosure and help to integrate investors' expectations on climate-change to business strategy (EcoAct 2019). The recommendations are a combination of several non-financial disclosure frameworks from different countries (TCFD Phase 1 report), which helps integration regardless of geographic location. However, even if the recommendations are well-regarded to integrate financial and environmental performance, reporting organizations and investors have currently little understanding on climate-change scenario-planning, risk integration, materiality determination or on aligning TCFD reporting with other reporting frameworks (O'Dwyer and Unerman 2020). This can make integration of the TCFD recommendations into an organization difficult and cumbersome. However, if successful, it can be argued that the recommendations provide similar advantages as IIRC's integrated reporting guidelines on e.g., stakeholder engagement as stakeholder concerns over climate-change are integrated with risk management and business strategy.

The TCFD recommendations provide a guide for businesses to recognize climate-change related risks and opportunities, and

align these risks and opportunities with the CDP framework. Climate Disclosure Project or the CDP is a global benchmark or peer-to-peer performance measurement system on companies' climate-change, water and forest impact (Thaslim and Anthony 2016). The reporting companies send their recognized risks, opportunities, measurements and actions through questionnaires (ideasonpurpose.com), which are then rated by the CDP on a 100-point scale (Thaslim and Anthony 2016).

The global system gives an easy access to firm reported Scope 1, 2 and 3 emissions (Blanco et al. 2016), it gives a high reputational value to high score organizations (EcoAct 2019) and transparency, comparability, and coordination between participants (Matisoff et al. 2013). In addition, besides aligned with the TCFD recommendations, the CDP aligns itself with SDGs as well (EcoAct 2019). However, even with wide use, reputation, rating system and alignment with other reporting frameworks, the CDP reports disparity between reported GHG emissions in terms of fiscal year, units used and the nature of disclosed information (Siew 2015). The CDP reports also display mixed results in improved transparency (Matisoff et al. 2013) and more of a standardized response to investors' pressure to report on the organization's environment related actions (Depoers et al. 2016). However, the rating system and publicly accessible library of organizations' environmental information make the CDP unique compared to other commonly referenced reporting frameworks.

The rating system provides security into material issues through third party assessment which, can be argued, improves reliability of information compared to other major frameworks like GRI and SASB. However, the validity of information provided relies entirely on the organization's answers in the questionnaires, which can result in asymmetrical information in the benchmark system.

The last reporting framework in our list provides a methodology to calculate GHG emissions (EcoAct 2019) and requirements to quantify GHG inventories of products (WRI, WBCSD 2011). This framework is the GHG Protocol, which bases on a life cycle approach (Garcia, Freire 2013) and provides cross-sector, country, sector and city-specific tools to quantify GHG inventories (ghgprotocol.org). The GHG Protocol gives full guidance on Scopes 1, 2 and 3 emissions and it improves reporting transparency and enables comparability (EcoAct 2019). In addition, the GHG Protocol is a simple tool, which reduces costs on compiling GHG inventories, stresses alignment with business goals and supports internal and external disclosure of emissions information (Joint Research Centre 2010). The GHG Protocol is also widely referenced in other frameworks, like GRI and SASB. One of its major competitors in GHG emissions calculation methodologies is the ISO 14064 standard, part of the ISO 14001 standard family. The difference between the GHG Protocol framework and the ISO 14064 standard is related to the terminology between a framework and a standard: the GHG Protocol identifies, explains and provides compliance with best emissions calculation practices, while ISO 14064 establishes minimum standard to comply with the best practices (Wintergreen 2007).
The ISO 14001 is the most widely implemented environmental management standard (Gupta, Racherla 2016), which includes e.g., a management system (iso.org/ISO 14001), GHG emissions calculation methodologies (EcoAct 2019) and guidance for accounting material flow

costs in the supply chain (Urbaniak 2017). The standard has several key benefits:

- Displays compliance with statutory and regulatory compliance (ISO 14001 Key benefits 2015).

- Increases leadership involvement and employee engagement (ISO 14001 Key benefits 2015).

- Improves reputation and confidence to stakeholders through communication (Poksinska, Jens Jorn Dahlgaard et al. 2003).

- Incorporates environmental issues with business management (ISO 14001 Key benefits 2015).

- Improves business efficiency and reduce costs (ISO 14001 Key benefits 2015).

- Improves suppliers' environmental performance (ISO 14001 Key benefits 2015).

- The environmental management system has a significant influence on corporate environmental strategy and top management commitment (Latan et al. 2018).

- The standard requires and external audit as a condition for certification (Todea, Stanciu et al. 2011).

However, companies' motivation to implement the ISO 14001 standard seems to be based on the demonstration of environmental commitment (Poksinska, Jens Jorn Dahlgaard et al. 2003) rather than actual efforts for environmental improvements. There is also a limited focus on continuous improvement and the benefits from an environmental management system may not offset the costs of registering the company with ISO (Curkovic, Sroufe 2011). There is also no legal compliance and the maintenance of the system creates more burden on the team responsible for sustainability reporting (Rondinelli, Vastag 2000).

The last standard on our list is the ISO 26000, which provides guidance to implement social responsibility and a starting point to implement sustainability strategies in organizations (Hahn 2013). However, compared to the ISO 14001 standard and other ISO standards, the ISO 26000 is not certifiable (iso26000.info). It also does not make a formal approach to managing corporate social responsibility (iied.org) and it may not bring extra value to current social responsibility related processes (Toppinen et al. 2015). In addition, similarly to GRI, the ISO 26000 seems to lack sufficient guidance for sector-specific reporting (Toppinen et al. 2015).

2.4.4 Conclusion

A few major players in the substantial sustainability reporting frameworks and standards field dominate the reporting methods and guidelines game. GRI, CDP, TCFD, SASB, IIRC, OECD Guidelines for Multinational Enterprises, UN Global Compact, UN SDGs, GHG Protocol, ISO 26000 and ISO 14001 are few but often referenced frameworks and standards in organizations' sustainability reports. Each of the above-mentioned frameworks and standards specializes in its own area and tries to fill a gap where others fail.

This overview of the reporting frameworks and standards discusses what benefits and disadvantages our standard can learn from the presented frameworks and standards. Next, we will list standards and frameworks, which apply to information we collected previously on Table

33, to highlight their features based on collected advantages and disadvantages. We have chosen the categories based on the required information we would need to build our own standard and improve the field of sustainability reporting.
Frameworks and standards that are considered demanding:
- GRI
- SASB
- ISO 14001
Frameworks and standards, which are considered costly:
- ISO 14001
Frameworks and standards with materiality scope and depth issues:
- CDP
- IIRC
- UN Global Compact
- UN SDGs
Frameworks and standards, which are sector-specific:
- SASB
- OECD Guidelines for Multinational Enterprises
- ISO 26000
- GHG Protocol
Frameworks and standards, which include a rating system:
- CDP
Frameworks and standards, which are considered unclear or difficult to understand:
- TCFD
- OECD Guidelines for Multinational Enterprises
Frameworks and standards, which are primarily driven by other than actual sustainability performance:
- CDP
- ISO 14001
Frameworks and standards, which have third-party assurance on disclosed data or on systems:
- ISO 14001

Three of our 11 focus standards and frameworks are considered demanding. We have established the legitimacy of GRI framework but demanding reporting can frighten the organization from using the framework or standard. This would be a concern for our standard as discussed in the previous chapters, one of the main drivers for insufficient sustainability performance is insufficient motivation to report on sustainability. Our standard cannot fall into the category of being too difficult to understand or too demanding. This chapter also discussed how companies' knowledge on sustainability and sustainability-related issues affect the effectiveness of the framework or standard (as with TCFD). And even with simple and clear principle-based frameworks like the IIRC or the UN Global Compact, the lack of knowledge on sustainability and lack of sufficient guidelines on the materiality on sustainability, can lead to too comprehensive disclosure on sustainable development. It is clear that our standard needs to take action and improve the materiality and the scope of disclosed information, while at the same time avoid overburdening the users of our standard.

2.4.5
Main findings

This chapter investigates the benefits and the disadvantages of the most commonly referenced sustainability reporting frameworks and standards. The main findings from this study are:

Even if there are hundreds of sustainability frameworks and standards, only a few dominate frameworks and standards dominate the field.

The most referenced and the most popular framework is the Global Reporting Initiative.

Several frameworks pose materiality issues, which are difficult to respond to with limited resources or self-assessment systems provided by the framework.

Motivation is the key. The balance between "too strict information requirements" and "too broad information requirements" is a difficult task which some of the most common frameworks pursues to handle with sector-specific guidelines. Unfortunately, sector-specific guidelines are not always sufficient enough to respond to the needs of an organization because prior knowledge of the management affects how the guidelines of a framework or a standard are implemented. The standard or the framework needs to motivate the user or the performance of the standard/ framework becomes poor.

Sometimes the incentive to implement a standard or a framework comes externally from stakeholders, which can result in a more symbolic action to stakeholder pressure rather than the organization pushing sustainable development as an internal motivator.

One additional main finding discovered in this section is that going even deeper, harvesting more insights on existing frameworks, are specifically valuable for the development of this standard. As we have mentioned, we aim at developing a standard merging existing framework. This approach allows us not to try inventing the wheel, but rather utilize and build upon already existing knowledge, frameworks, KPIs and standards. As this is our approach, we need to dig deeper for more insights, unpacking the topic of this section is, thus, evident. We will therefore seek to unpack this section even further when going into ideation phase. When we will start seeking for more insights we will seek to understand and discover more findings in the areas of eco-labels, as well as unpacking existing frameworks specifically developed for our chosen industry and segment of enterprise-size. The reader can therefore expect to find more insights presented in this chapter in the next iteration of this report.

PURPOSE

The aim of this chapter is to harvest insights in regards of SMEs as a segment and their impact-potential in the context of sustainability transitions in the Nordic region. Further, we

Chapter 2.5

Size matters: SMEs, Sustainability and The Road Blocks

Keywords:
SMEs definition, SMEs characteristics, sustainability and SMEs, barriers for engaging with sustainability activities, SMEs and sustainability reporting.

Topic:
We aim at understanding SMEs impact-potential in EU and the Nordic region. Furthermore, we aim at unpacking barriers for SMEs to become leaders in the sustainability transition.

Objective:
This chapter presents a review of the literature on the small and medium sized enterprises (SMEs). In order to develop a standard tailor made for SMEs, we aim at gaining a deeper understanding of them as a segment, and harvest insights to bring forth in the development of NSRS.

"Understanding SMEs environmental impact and engagement, both generally and with respect to climate change, seems highly important."

(Gadenne et al., 2009; Revell and Blackburn, 2007; Purvis et al., 2000)

attempt to unfold the potential impact the standard could have, by unpacking the impact SMEs aggregated has on our society.

METHOD & APPROACH

To investigate this topic, we have conducted a literature study exploring existing literature in the field. This methodology was chosen due to the large amount of existing literature on the topic, but a lack of synthesised information on the topics this chapoter sets out to explore.

Main findings – Size Matters: SMEs, Sustainability and The Road Blocks

1. Studies show that SME-managers tend to have more freedom in decision-making processes compared to managers in large organizations carrying out a sense of responsibility and increased motivation which in many cases generates higher social and environmental engagement on a personal level (Williams & Schaefer 2012; Hamann et al., 2009).

2. The centralized power structure and low level of hierarchy commonly find in SMEs enables easy integration of market needs and technological changes (Pierre & Fernandez, 2018; Rothwell, 1989).

3. However, the simple, informal and flexible structure of SMEs can on the other hand limit innovation performance as formalities such as processes or methods to properly assess the costs of the innovation projects is not integrated (Pierre & Fernandez, 2018; Hadjimanolis, 1999, 2000).

4. Yet it is dangerous to accept homogeneity of SMEs, as their characteristics vary essentially in size and history, and across regions, sectors, cultures and ownership structures (Džupina & Mišún, 2014; Williams & Schaefer 2012).

5. While it is said that elephants cannot dance, SMEs by contrast are nimble and flexible by nature which is an important characteristic for change. Nonetheless, they are the laggards in taking action towards sustainability oriented activities (OECD, 2015).

6. Research shows that the characteristics that make out the biggest difference in SMEs compared to larger companies ability to enable a sustainable transition (Loucks et al., 2010), emerge largely from effects caused by differences of resource availability such as capital, time, knowledge and skilled personnel, and differences in scale of operations (Walt, 208; Hörisch et al. 2014).

7 Over 70% of European SMEs report access to talent as obstacle to new investment across the EU (Bellitto et al, 2018).

8 Few tools designed and simplified to support SMEs in their transition (Džupina & Mišún, 2014), Available instruments are not fitting for SMEs due to their complexity, limited flexibility and formal procedure (Arena and Azzone, 2012).

9 SMEs have limited capacity to interpret and respond to relevant regulatory requirements and policy incentives, making the transition landscape challenging for SMEs to operate within (Walt, 2018; Williams & Schaefer 2012; Bos-Brouwers 2009).

10 Furthermore, the lack of resources is likely to lead to risk-averse behaviour among SMEs as the payback period when investing in sustainabiilty-oriented activities is uncertain in terms of time horizon (OECD, 2015).

11 The bundle of barriers, mainly related to lack of resources, can partly explain the lack of action in relation to sustainability transitions among SMEs (OECD, 2015).

12 1/3 of all reporting instruments apply exclusively to large listed companies. The remaining 2/3 either belong to all companies or to other types of companies such as state-owned. Only 9 instruments applied specifically to SMEs (KPMG, GRI, UNEP, 2016).

13 The large set of key sustainability indicators featured in the GRI framework make it hardly applicable for SMEs (Arena et al., 2012).

14 As a result, sustainability reporting practices among SMEs are not very common (Plugge, L. & Wiemer, 2008; KPMG, GRI, UNEP, 2016).

15 When a SMEs do have a sustainability report practice running, they tend to find it easist to disclouse on indicators already being measured such as energy consumption and waste management (Plugge, L. & Wiemer, 2008; KPMG, GRI, UNEP, 2016).

Chapter 2.5

Size Matters: SMEs, Sustainability and The Road Blocks

The aim of this chapter is to gain greater insights of SMEs as a segment, and thus argue for SMEs impact potential from an environmental, social and economical perspective.

First, we will present a definition of a SME. Secondly, we will briefly introduce the impact of this sector on society, following up with SMEs role in the sustainability landscape. Following, we will call attention to the importance of leveraging SMEs in order for the Nordic region to achieve the 2030- and 2050-agenda of becoming carbon-neutral.

Subsequently, we will introduce common SME characteristics. Thereafter, we will cover barriers and opportunities relating to sustainability reporting from a SME perspective.

Conclusively, we will end off by summarising the main findings of this chapter.

2.5.1
What is a SME – a definition

There are several criteria's that can be utilized when defining a SME. The most used criteria to define a SME is by its size in the context of number of employees and turnover. The discourse in regards of a common European definition has been ongoing the past decades as there are national differences when it comes to weighting employees or turnover as the primary criteria for defining a SME (European Commission, 2016). The long process of achieving a common definition is related to the fact that a SME gain access to a wide variety of finance in addition to national rules that might be favourable for SMEs such as tax deductions and grants. In this report we use EU Commission's current classification of SMEs, presented in the table below (European Commission, 2016).

The main factors determining whether an enterprise is a SME are:
1. Staff headcount,
2. Either turnover or balance sheet total

Company category	Staff headcount	Turnover	or	Balance sheet total
Medium-sized	< 250	≤ € 50 m		≤ € 43 m
Small	< 50	≤ € 10 m		≤ € 10 m
Micro	< 10	≤ € 2 m		≤ € 2 m

In context as they in many cases differ little from the Nordic context. The reason we have chosen to understand SMEs in a European context is a) to gain insights from the larger perspective in which Nordic SMEs operates within, and b) on some areas such as environmental perspective, there is limited literature on the topic from a Nordic perspective, making the European context the natural second choice to harvest the insights needed.

2.5.2
SMEs impact in European context

Financial and social

The financial impact of SMEs is of a significant matter. According to the European Commission (2020), Europe holds about 25 million SMEs which all together employs around 100 million people, as well as being accountable for more than half of Europe's GDP, and as much as 99% of all corporations in the region (European Commission, 2020). Statistics thus tells us what indisputable value-adding power SMEs make up in a European context. SMEs are highly embedded into Europe's social construction. It is estimated that SMEs provide between 55 per cent and 80 per cent of total employment in Western Europe, Japan and USA (Katua, 2014, page 466), and according to European Commission SMEs provide two out of three jobs (Eurepean Commission, 2020, page 1).

Environmental

A recent study shows that SMEs accumulated accounts for a substantial part of energy consumption and waste streams in Europe, in addition approximately 64% of the industrial pollution in the EU is attributed to SMEs (European Commission, 2014). Furthermore, the study indicates that only a minority of SMEs in the European context take actions to reduce their environmental impact; 3-4% of micro-businesses, 7-8% of small companies and 6-7% of medium-sized companies. The key sectors where SMEs have a significant environmental impact include livestock farming, construction, metal finishing, waste treatment, food and drink industry, transport, textile and leather manufacturing (Miller, 2011). However, there is high uncertainty related to these numbers as the complex and

burdensome nature of quantifying environmental impacts is the reality hidden behind every number (European Commission, 2014).

2.5.3 SMEs vs. large companies

A small firm is not a scaled-down version of larger firms. Larger and smaller firms differ from each other in terms of their organizational structures, responses to the environment, managerial styles and, more importantly, the ways in which they gain competitive advantage.

In this paragraph we will investigate what already existing literature in the field are saying about how the characteristics of SMEs impact their ability to undergo a sustainable transition (Loucks et al., 2010). There are usually certain characteristics associated to an enterprises size, making size an important matter when evaluating an enterprises ability to enable a sustainable innovation process leading to a sustainable transition within the given firm. These differences are summarized in the table below (Bos-Brouwers 2009, p.419). Some characteristics of the ones outlined in the table below, work in favour of SMEs probability and ability to enable a sustainable transition, and some characteristics, on the other hand, has a disavowable impact (Walt, 2018).

2.5.3.1 Disfavourable characteristics

Research shows that the characteristics that make out the biggest difference in SMEs compared to larger companies ability to enable a sustainable transition (Loucks et al., 2010), emerge largely from effects caused by differences of resource availability such as capital, time, knowledge and skilled personnel, and differences in scale of operations (Walt, 208; Hörisch et al. 2014). These very characteristics often outnumber the other advantages and seems to be a main driver for SMEs falling behind in the transition regime (Loucks et al., 2010). The lack of ability and willingness to engage with social and environmental issues due to lack of resources is supported by a wide variety of studies (Walt, 2018; Hamann et al., 2009; Spence, 2007; Biondi et al., 2000; Gerrans and Hutchinson, 2000; Hillary, 2000).

Take for instance the lack of skilled personnel and know-how among SMEs employees, which is highlighted as a key obstacle for innovation in SMEs in the European context, in the perspective

SME	Large company
Dominant role of the entrepreneur/owner	Delegated management control between board of directors and shareholders
Resource poverty (capital, time, knowledge and skilled personnel)	Economy of scale, resource abundance
Flexible organization capacities	Bureaucratic rigidity
Focus on short term	Focus on mid to long term
Strong local/regional focus and customer needs' orientation	Strong (intern)national focus and looser ties with customers
Low degree of formalization	High degree of formalization

Table 4: Characteristics – SMEs vs. Large companies, (Bos-brouwers, 2015).

of innovating towards a sustainability transition. Whereas large organizations are likely to accept the initial costs and dedicate the needed resources to enable their employees to start governing the environmental and social performance of the organization (Hörisch et al. 2014), SMEs on the other hand lack the skilled personnel and lack the capital and time to be able to provide the needed skilled personnel. Correspondingly, over 70% of SMEs report access to talent as obstacle to new investment across the EU (Bellitto et al, 2018). Availability of skilled staff or experienced managers remains the most important problem for a quarter of EUs SMEs (Muller et al., 2019).

Furthermore, the lack of resources is likely to lead to risk-averse behaviour among SMEs as the payback period is uncertain in terms of time horizon (OECD, 2015). The risk-averse behaviour gives SMEs an additional lagging effect on SMEs ability to innovate towards a sustainable transition.

2.5.3.2 Favourable characteristics

Of the characteristics that works in SMEs favour is their innovation abilities that often outperform large companies. The table below summarizes innovation capacities often associated with respectively SMEs and large companies. The table identify how the common structure of a SME and a large company affect their ability to innovate.

Innovation capacity is defined as a firm's continuous improvement of capabilities and resources in order to explore and exploit the opportunities of new product development to meet market expectations (Pierre & Fernandez, 2018; Boly, 2014; Forsman, 2011; Szetto, 2000). Innovation capacities has proven to be the enabling factors that allow SMEs to orchestrate innovation processes and ensure value adding innovation outputs (Pierre & Fernandez, 2018; Adams et al., 2006; Boly et al., 2014; Yam et al., 2004). Thus, innovation capacities seem to be a crucial concept in understanding a SMEs innovation potential and performance in general, but also in particular in the context of innovating towards a sustainable transition (Pierre & Fernandez, 2018)

As shown in table 3 above, one of SMEs advantages is that they often are led by owner-managers which tend to enable a dynamic and entrepreneurial organization with a horizontal leadership style where the manager often plays a direct role in the innovation-processes. Large companies on the other hand, face a disadvantage with a top-heavy management often disconnected from both customers and work floor. Furthermore, the management in large organizations are often measured on quarterly financial performance leading to short term cost-cutting rather than long term infrastructural enhancement. Moreover, studies show that SME-managers tend to have more freedom in decision-making processes compared to managers in large organizations carrying out a sense of responsibility and increased motivation which in many cases generates higher social and environmental engagement (Williams & Schaefer 2012; Hamann et al., 2009). These findings are in line with Solymossy and Masters (2002) finding that the entrepreneur, as a specific type of the SME-manager, is associated with personality traits that increase the likelihood of responsible behaviour (Solymossy & Masters, 2002). For those reasons, it is often stated that due to their very nature, SMEs are socially responsible and have a strong innovative responsiveness compared to larger companies. This gives them the possibility of bringing new responsible solutions to the market, helping to spread key sustainable innovations throughout Europe´s regions. As such, SMEs very

nature holds the potential of playing a core part of enabling the acceleration of the sustainability transition needed globally (Lepoutre & Heene, 2006).

However, in order to leverage this innovation capacity a heavy burden lies on the SME-manager itself. Studies shows that the SME-managers previous work experience and professional capacities developed over the years is crucial for the quality of the innovation out-put (Pierre & Fernandez, 2018; Romijn, Albaladejo, 2002) as it enable discoveries and define internal and environmental factors to design an appropriate innovation strategy for the firm (Pierre & Fernandez, 2018; Forsman, 2011; Hadjimanolis, 2000; Romijn, Albaladejo 2002). Additionally, the personality of the owner, her attitude towards risk and capacity for taking risks, seems to play an important role in detecting business opportunities and risks in changing environments (Pierre & Fernandez, 2018; Hadjimanolis, 2000; Kickul, Gundry, 2002). Contrarily, large organizations are less dependent on the professional and personal skills among their managers as the resources available to a larger extent ensure skilled personnel

SMEs

Advantages	Disadvantages
Flexibility of organization · Less bureaucratic · Responsiveness to changing circumstances (technology and market) · Internal communications faster and more efficient Owner-manager · Dynamic, entrepreneurial · Horizontal leadership style · Direct role in innovation as ideas generator	Owner-manager · Poor managerial skills (planning, inadequate delegation, lack of functional expertise or support) · Dependency on persons for survival · Lack of formalized planning Financial: · Difficulties attracting venture capital and bank investments · Failure of innovation projects may be financially disastrous · High fixed costs for technological investments and start-up Labour: · Difficulties attracting skilled personnel · Harder to update technological knowledge

Large companies

Advantages	Disadvantages
Financial · Less difficulties attracting venture capital and bank investments · Innovation risks averted by diversity in production, sales and innovation projects Labour: · Less difficulties in attracting skilled labour Knowledge: · Participation in networks and conference visits to update (technological knowledge) · Information management systems Management: · Decentralized management style with decision power on lower levels in the organisation · Long term strategic management capabilities	Management: · Top management isolated from customers and work floor · Emphasis on short term cost-cutting instead of long term infrastructural enhancements Labour: · No entrepreneurial fanatics tolerated Flexibility of organization: Bureaucratic, highly formalized organization structure

Table 5: Innovation capacities of SMEs, (Bos-brouwers, 2015).

and access to know-how in strategy and planning (Pierre & Fernandez, 2018) .

Besides, flexibility of the organization has shown to occur as a compensation for SMEs lack of resources (Pierre & Fernandez, 2018; Qian, Li, 2003; Wolff, Prett, 2006). SMEs usually have more flexible organization capacities and low degree of formalization, compared to the larger companies often having a more bureaucratic organization design giving them a higher degree of formalization. The centralized power structure and low level of hierarchy enables easy integration of market needs and technological changes (Pierre & Fernandez, 2018; Rothwell, 1989). However, the simple, informal and flexible structure of SMEs can on the other hand limit innovation performance as formalities such as processes or methods to properly assess the costs of the innovation projects is not integrated (Pierre & Fernandez, 2018; Hadjimanolis, 1999, 2000). Thus, innovation activities could also be less efficient in SMEs than in large organizations (Pierre & Fernandez, 2018). On the other side, larger organizations tend to have time-consuming and costly processes in order to implement organizational or strategic changes, (Pierre & Fernandez, 2018; Julien, Carrier, 2002; Lee, Chen, 2009; Qian, Li, 2003; Mazzarol, Reboud 2009; Tidd, 2001) making SMEs nimble and flexible in comparison.

2.5.4
SMEs and sustainability reporting

While it is said that elephants cannot dance, SMEs by contrast are nimble and flexible by nature which is an important characteristic for change. Nonetheless, they are the laggards in taking action towards sustainability oriented activities. The bundle of barriers, mainly related to lack of resources, can partly explain the lack of action in relation to sustainability transitions among SMEs (OECD, 2015). There also other barriers to overcome in order to push SMEs out of their role as sustainable laggards.

Džupina and Mišún (2014) finds that there are few tools designed and simplified to support SMEs in their transition (Džupina & Mišún, 2014). Arena and Azzone (2012) explained that available instruments are not fitting for SMEs due to their complexity, limited flexibility and formal procedure. They additionally add that the large set of key sustainability indicators featured in the GRI framework make it hardly applicable for SMEs (Arena et al., 2012). Therefore, the specificities from sustainability reporting frameworks make it difficult for SMEs to adopt large organization practices (Arena et al., 2012). 1/3 of all reporting instruments apply exclusively to large listed companies. The remaining 2/3 either belong to all companies or to other types of companies such as state-owned. Only 9 instruments applied specifically to SMEs (KPMG, GRI, UNEP, 2016). As a result, sustainability reporting practices among SMEs are not very common (Plugge, L. & Wiemer, 2008).

Earlier we pointed to skilled personnel and experienced manager as a main reason for SMEs falling behind in the sustainability transition, likewise Hörisch et al. (2014, p.774) points to knowledge to be a crucial factor in the application of sustainability tools and implementation of corporate sustainable strategies. Their analysis revealed that larger organizations apply significantly more sustainability management tools, due to rich resource availability However, in the analysis of the differences in application of sustainable tools between SMEs and large organizations, if a particular tool is known, suitable for both organizations, there appears to be no substantial differences that the tool would be applied. The main differences seem

to be that SMEs are usually unaware of the existing tool, or probably do not possess (or devote) the resources to become informed (Walt, 2018; Hörisch 2014).
The lack of knowledge also manifest itself financially, as most SMEs lack the understanding that higher environmental performance can be a competitive advantage. It 'pays to be green' is a concept supported by evidence, although many SMEs struggle to adopt such strategies as only organizations with sufficient resources can actively undertake sustainability strategies (Walt, 2018; Clarkson 2012).

William and Schaefar point to another reason for SMEs low participation in sustainable issues and behaviours. They point to SMEs scarce ability to codify social and environmental policies. Where large companies are mostly affiliated with sustainability strategies, policies, producers and results, SMEs has not (Walt, 2018; Williams & Schaefer 2012). Additionally, SMEs have limited capacity to interpret and respond to relevant regulatory requirements and policy incentives, making the transition landscape challenging for SMEs to operate within (Walt, 2018; Williams & Schaefer 2012; Bos-Brouwers 2009).
Considering the findings in this chapter there seem to still be limited supply of literature focusing on SMEs sustainable implementation. SMEs need more tools being developed specifically for their segment. This corresponds well with Stoknes (Stoknes, 2018), which made a call out to the Norwegian government, calling for a mandatory SME-specific sustainability reporting standard, in order to enable SMEs to take part in the sustainable transition.
However, there is a potential pitfall when generalizing SMEs. Generalized recommendations for SMEs to adopt appropriate sustainable strategies, which match their vision, missions and corporate values. Yet it is dangerous to accept homogeneity of SMEs, as their characteristics vary essentially in size and history, and across regions, sectors, cultures and ownership structures (Džupina & Mišún, 2014; Williams & Schaefer 2012).

As SMEs lack resources to enable a sustainable transition, and there seem to be a dominating understanding among SME-owners not knowing that sustainability can be competitivity advantage, the incentive for undergoing a sustainability transition comes around as scarce. Existing literature argue that the incentives of undergoing a sustainability transition is rather low, and it is resource demanding to undergo a sustainability transition today. Further, we find that SMEs should not be generalized. Altogether, the findings paint out another conundrum. Where the lack of resources, and that it today is resource demanding to undergo a sustainability transition, being the main barrier of SMEs to engage in a sustainability transition. Making SMEs the choice of segment, gives the developers of the standard a double conundrum to consider.

There are as many solutions as there are stars above us, weather its by equipping SMEs with a coherent artillery of sustainability tools and guidelines or by creating a mandatory regulation regime, the need to address the focus on SMEs to enable them to join a sustainable transition seem to be evident in existing literature, despite their lack of resources and other barriers to overcome.

Accessible data for SMEs
"Shit data in, shit data out"

The sustainability report is never better than the input data, but retrieving non-financial data is

not an easy task. This is in particular true when it comes to SMEs who commonly are short in resources (time, money, know-how and tools). One of the aspects which are found to have a major impact on the sustainability report is how the practice of collecting data often comes across as highly complex, and is presented as a cumbersome and resource demanding process according to leading researchers in the field. This is mainly due to the lack of tradition for collecting, structuring, documenting and measuring non-financial data, revealing the need for the development of new procedures, tools and systems for collecting non-financial data. With today´s practice at hand, when it comes to the case of SMEs, the administrative burden of collecting quality data often comes with a price tag way beyond reach. Consequently, the majority of SMEs never accomplish their very first sustainability report simply because it comes across as too complex and they don't know where to start.

Then why haven't the field put effort into trying to ease this process for the reporting firm? Well, if one tried to generalize and simplify the process and outcome, the quality of the report suffers. From this aspect a scale materializes; having quality on one end of the scale and simplicity on the other side. This scale represents a dilemma; to keep the quality, a complex and resource demanding process is demanded, however, to get more companies to report, the process of reporting needs to be simpler.

This might explain the findings of Arena and Azzone (2012) which stated that the large set of key sustainability indicators featured in the GRI framework make it hardly applicable for SMEs. They additionally explained that available instruments are not fitting for SMEs due to their complexity, limited flexibility and formal procedure. Therefore, they added that the specificities from sustainability reporting frameworks make it difficult for SMEs to adopt large organization practices. Accordingly, to quote Arena and Azzone (2012, p.670) further; "One key need, in this connection, is for a standard set of generally accepted, understandable and reliable key sustainability indicators (KSIs), that can help distinguish a proactive SME form its competitors".

Plugge and Wiemer (2008) distinguished in their research on SME sustainability reporting that material, water, energy and emissions aspects were easy for SMEs to report, as it was figures that was already measured prior to sustainability reporting. "Indicators related to the day-to-day business of factories, such as injury logs and financial data, were generally easy to come by" (Plugge & Wiemer 2008, p.26). They further described that certain aspects were specifically difficult to report and thus speculated, that it might be due to specific systems that needed to be set-up to measure indicators (Plugge & Wiemer 2008). Based on the findings of Plugge & Weimer NSRS has developed a strategy to cope with the dilemma of quality vs. Simplicity.

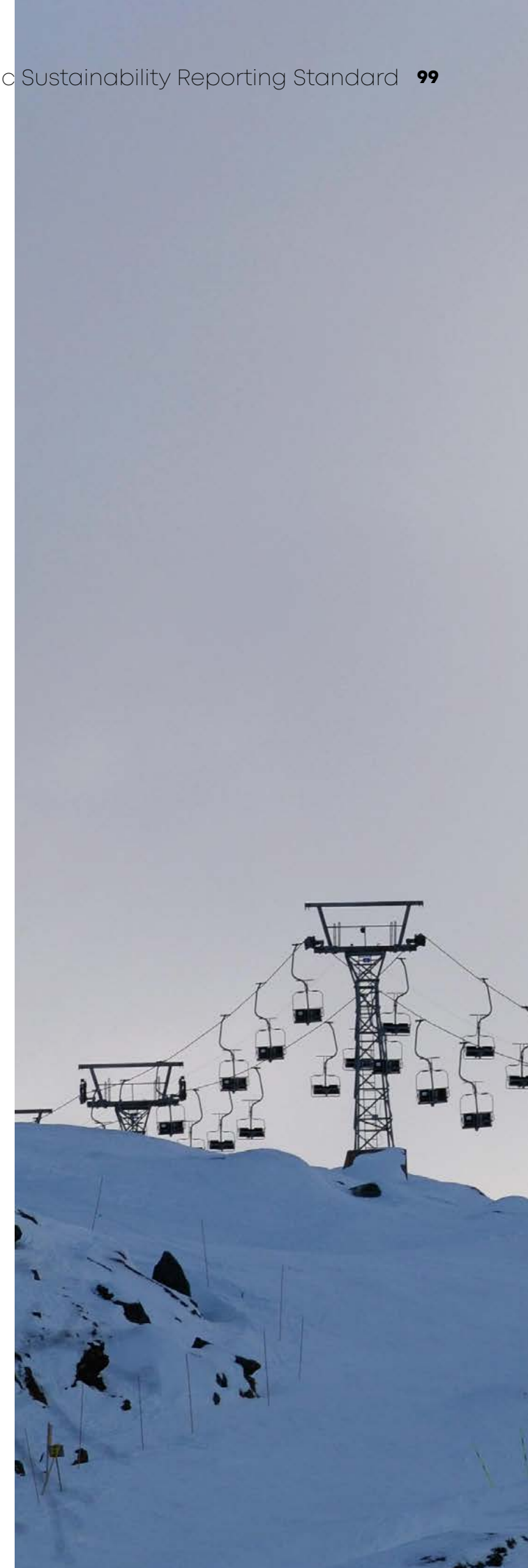
2.5.5
Summary

SMEs aggregated has huge impact on society. SMEs accounts for a substantial part of the environmental footprint (European Commission, 2014) and bring 2 out of 3 jobs, accounting for more than half of Europe's GDP. (Eurepean Commission, 2020).

Today, SMEs are laggards in the sustainability transition compared to large companies. SMEs also has a low participation in sustainability reporting. There are several barriers to overcome

in order to pave way for SMEs to become sustainability leaders. We found that resource availability work in SMEs disfavour (Walt, 208; Hörisch et al. 2014). The most important problem caused by resource scarcity is availability of skilled personnel or experienced managers.

However, SMEs also have some characteristics that could work in their favour in the path of becoming sustainable. SMEs are often socially responsible and have a strong innovative responsiveness compared to large companies. Where managers in large organizations are often measured on quartile financial performance leading to short term cost-cutting rather than long term infrastructural enhancement, SME-managers often have more freedom in decisions-making processes, which in many cases generates higher social environmental engagement Williams & Schaefer 2012; Hamann et al., 2009).
SMEs play a huge part of society and has huge impact on the environmental footprint. Taking this in consideration, as well as seeing how well they are rigged characteristically to undergo transitions due to their innovation capacities, would at first glance make them an evident target for regulators and tool-developers to push and help SMEs to ease their sustainability transition. However, as William and Schaefer (2012) accurately points out; generalizing SMEs is dangerous as the only thing that makes them similar are size (Džupina & Mišún, 2014; Williams & Schaefer 2012). With the evident manifolded barrier, the lack of resources on top, makes the SMEs sustainability transition journey into a conundrum. In that case, it is easier to understand that large companies are targeted.



Chapter 2.6

Sustainability Reporting as a Sustainability Performance Improver

Keywords:
Sustainability infrastructure, integration of the sustainability report, sustainability performance, SMEs

Topic:
Internal utilization and integration of the sustainability report in SMEs.

Objective:
The objective of this chapter is understanding how the gathered non-financial information is being integrated and operationalized in Norwegian SMEs today, and how their motivations shape how non-financial information is being utilized. In particular, we will examine how non-financial information has affected the sustainability performance in Norwegian SMEs.

"Making our first sustainability report made us identify some gaps which we didn't even know were related to sustainability."

Quality director, the Nordic SME Photocure

PURPOSE

Consequently, the purpose of this thesis is to address how non-financial information is being utilized and integrated in Norwegian SMEs towards increasing sustainability performance.

METHOD & APPROACH

To investigate this we have conducted a quanititiative multi-case study, studying five Norwegian SMEs that have a sustainability reporting practice running. We have investigated their use of the sustainability report as well as tried to understand their experienced barriers to make the reporting become a sustainability performance improvement tool.

Main findings – Sustainability Reporting as a Sustainability Performance Improver

1 **The prevailing mindset seemed to be that the company´s believe they have a sustainability responsibility.**

2 **Internally motivated:** Companies being internally motivated tend to use more resources on sustainability, which tend to lead to making the non-financial information gathered of higher quality and more useful. Internally motivated SMEs also tend to integrate the non-financial information into their day-to-day-activity and rig themselves to measure their actual sustainability performance better and more extensively, compared to SMEs largely being externally motivated. As a result, the non-financial information gathered in these processes tend to be for both internal and external eyes. Non-financial information which are made for both internal and external eyes seem to be of better value than non- financial information only made to impress external eyes.

3 **Externally motivated:** Existing literature finds that motivation to engage in the sustainability agenda largely stem from customer demand and branding today. Companies that are largely externally driven seem to centre their sustainability infrastructure around the sustainability report and shows limited insight in how to measure sustainability performance. They seem to be motivated largely to do sustainability activities as a response to customer demand and branding, and the handling of sustainability tend to be decoupled from business as usual. As a result, the non-financial information gathered in these processes tend to be mainly for external eyes.

4 **The more sustainable, the more pleased with internal sustainable investments:** Our findings reveals that a main barrier to overcome to enable SMEs in utilizing the non-financial information efficiently towards increased sustainability performance, is to engage SMEs to take part in the sustainability transition. However, I find that the more sustainability matter for the company, the happier the SME is with the sustainability investment, and the better the non-financial information is utilized towards sustainability performance increase.

5

How to retrieve non-financial information is cumbersome and resource demanding: There is high variation of the methods used to find relevant non-financial information to disclose (finding the materiality), and a high variation of methods used to retrieve non-financial information. All the cases we investigated, however, express that this is resource demanding and cumbersome. With already scarce resources, re-organizing, documenting and measuring sustainability with today´s technology and tools comes across as highly resource demanding. Quality non-financial information is resource demanding to retrieve and is outsourced if measured. Only the cases having sustainability built into their business model, retrieved high quality non-financial information. They all agree that the non-finical information is used for increasing sales, and all wish that the non-financial information could work to inform, enlighten and increase awareness among employees. We further find that all cases investigated agree that more trustworthy and more uniform ways of measuring and documenting sustainability is preferable. Easing the process of measuring and documenting sustainability seem to bear great potential to make SMEs overcome this barrier.

6

The frameworks shape the utilization of the non-financial information: How the non-financial information is integrated and utilized within a company depends highly upon the choice of sustainability framework the company utilizes to disclose itself. Thus, the sustainability framework utilized has massive impact on how sustainability is handled in the SMEs investigated.

7

Sustainability is perceived as incomprehensible and complex: All the cases investigated express that measuring sustainability in order to know how sustainable their company is, tend to be perceived as a vast, ungraspable and a massive operation. To create a direct link between the non-financial data and sustainability performance, the company needs to know how sustainability performance is measured. If the firm does not know when, how or what is increasing their sustainable performance, the firm does not know how to use the sustainability reporting to increase sustainability performance.

Sustainability externalities: Hauzer and Kreuzer states that “you are what

Main findings – Sustainability Reporting as a Sustainability Performance Improver

you measure" and highlights the necessity to know what and how you can improve performance in order for it to materialize. The SMEs investigated undertake sustainability activities which are not labelled as sustainability. A significant degree of non-financial data is thus never gathered, measured or documented.

8

Stakeholder trust-issues: The inside-out perspective in the five Norwegian SMEs investigated, are more developed then the outside-in perspective. The first perspective gets more attention and seem to be given more importance. We have also uncovered that some of the cases show trust-issues relating to if their stakeholder could in fact serve valuable information that ultimately could potentially improve the company´s sustainability performance. This could be a possible explanation for the underdeveloped outside-in perspective.

9

Start-kit tip: They expressed that "the sustainability monster" could be slowly defeated by increasing awareness about the general ungraspable feeling, as fumbling in the dark together is better than fumbling in the dark alone. Thereafter, starting very small – that is, by finding some indicators and thereafter extend their individual measure-accounting-library could be a good springboard to trigger non-sustainable SMEs to join the transition.

10

Chapter 2.6

Sustainability Reporting as a Sustainability Performance Improver

This chapter is devoted to investigate how Nordic SMEs are utilizing and integrating their sustainability report to increase the company´s sustainability performance. We have chosen to harvest insights on this area to understand how we can structure our standard to help Nordic SMEs use the sustainability report to help increase the company´s sustainability performance. This is done by 1) studying five Norwegian SMEs that have a sustainability reporting practice running, 2) investigating their use of the sustainability report, and 3) identifying barriers towards utilizing the report as a sustainability performance improvement tool.

Hence, the aim of this chapter is to understand how we can develop a standard that enables a sustainability reporting practice like the figure displayed below.

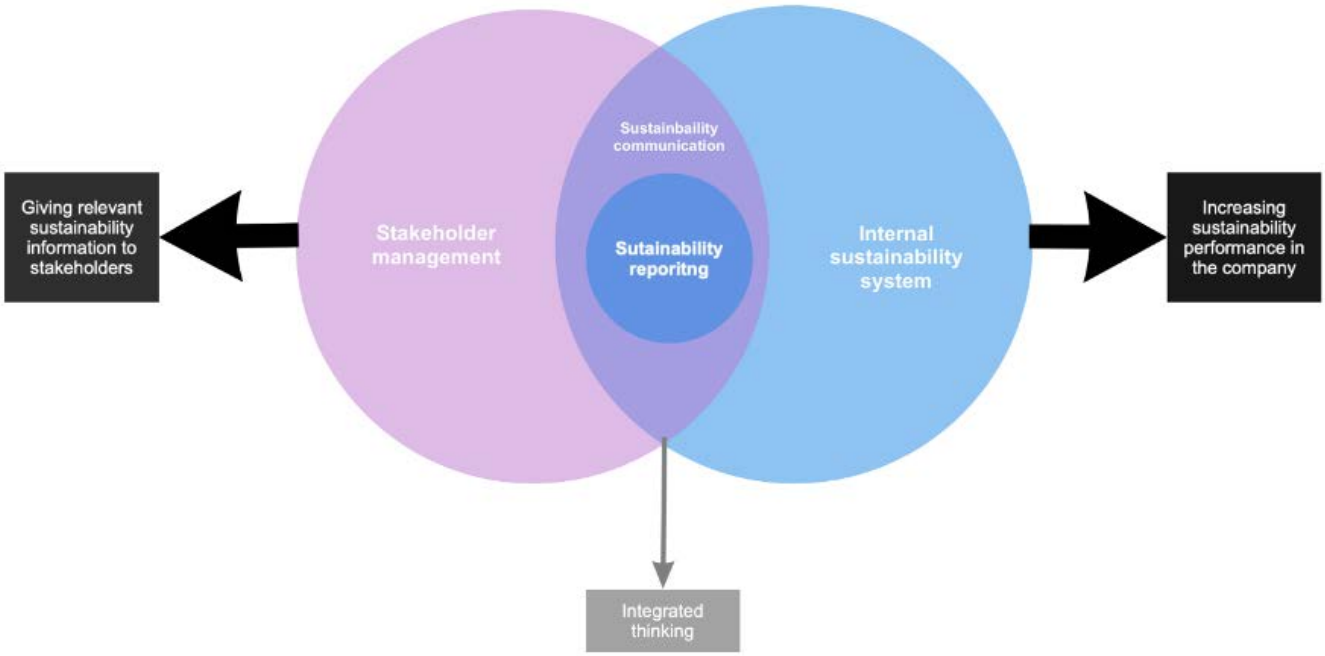


Figure 4: Utopia or next-topia of sustainability reporting?

Chapter structure
This chapter is divided into three subsections. We will first give a brief introduction to the investigation objective before presenting a relevant theory used to investigate the identified focus area. The findings of our investigation will then be presented in the final subsection.

2.6.1
Problem introduction

Existing literature portrays sustainability reporting as embodying the potential to transform corporate structures towards increased sustainability performance. Particularly, researchers envision the integration of sustainability reporting in organizational processes as key to accelerating an organization's sustainability performance. While many scholars address why the integration of sustainability reporting can play a role in this transition, the how is seldom addressed (Maas et. Al, 2016). There is, for example, limited research on the link between sustainability reporting, organizational change and internal performance improvement (Adams & Frost, 2008; Adams and McNicholas, 2007; Adams and Whelan, 2009). Even less research is done on actual company practices, including the interplay and integration of sustainability strategy, accounting, control and reporting (Maas et. Al, 2016). There is a need, therefore, to understand the role that sustainability report integration can play in accelerating sustainability performance. This knowledge is of great importance if one is seeking to understand how a reporting standard as our own can improve a company's sustainability performance.

The purpose of this WP is consequently to address how the sustainability report is being systemized in Nordic SMEs, and how motivations and incentives shape its realization. We examine how reporting practices can affect the sustainability performance of Nordic SMEs and identify key success factors on how they can improve performance by means of integration. In order to investigate this objective, we formulated four supporting questions that will allow us to unpack, investigate and harvest insights relating to the internal usage of the report towards increased sustainability performance. The four supporting questions is presented below;

1) How do the motivations of SMEs affect the utilization of non-financial information towards improved sustainability performance?
2) How does Norwegian SMEs define and measure sustainability?
3) How is non-financial information integrated in Norwegian SMEs?
4) How does Norwegian SMEs ensure increased sustainability performance?

To unpack and investigate these four questions we have conducted a qualitative multi-case-study, using semi-structured interviews as our main data source. We've chosen five Norwegian SMEs working primarily in furniture production as the cases to be investigated. We have also used methodologies as content analysis to evaluate sustainability reports and conducted open interviews with relevant stakeholders.

2.6.2
Theory

Before presenting our findings, we will present the theoretical foundation upon to which we have built our empirical study. The theoretical framework has not only been guiding us in conducting the empirical research of this chapter, but also in the process of developing the standard.

Literature offers several frameworks suggesting how sustainability reporting can be successfully

integrated in an organization's internal systems and decision-making processes. The Integrated Reporting (IR) framework is perhaps the one that is most widely used today. A key component of the integrated reporting framework is the different kinds of capital that an organization can utilize: financial, manufactured, intellectual, human, social and relationship and natural capital (The IIRC, 2013, page. 10-12). The framework focuses on merging the different types of capital with the financial, resulting in an accounting practice that merges non-financial data and financial data.

IRRC claims that integrated reporting is not just about the report itself but requires the development of new accounting and management processes (Adams, 2015), which again leads to organisational change. The framework's main focus is on the report content however, and less on how the content is organized. We find that another framework, proposed by Maas et al. (2016), has greater potential to successfully integrate the sustainability report in an enterprise. While the IR framework focuses on integrating financial data with non-financial data in order to provide a cohesive overview of how the company creates value over time, Maas et al. (2016) focus on integrating the sustainability report into the decision-making processes of the organization.

Maas et. Al´s discuss the potentiality of linkages between concepts that make up a system to accelerate the sustainability of an enterprise. The concepts include strategy, accounting, management control and reporting. For our purpose we shall use a simplified version of the framework, presented in the figure below. This figure shows how sustainability strategy, sustainability accounting, sustainability management control and sustainability reporting can be linked together to create an ideal integrated system with the intention of systematically increasing a company's sustainability performance. To be clear, Maas et. Al (2016) does not state that this infrastructure ought to be an isolated infrastructure, but is rather to be implemented and merged with the already existing day-to-day activities and processes of the business. We call Maas et. Als framework an ideal integration of the sustainability reporting.

2.6.3 Explaining the framework

When following the full lines, we see how Maas et. Al suggests that reporting is the last step in a series of process-steps; from strategy to accounting to management control to reporting. The arrow from sustainability reporting to transparency perspective represent the external distribution of non-financial information. The choreography of the full lines represents what Maas et. Al describes as the inside-out perspective, representing the improvement perspective of the infrastructure itself.

From the transparency perspective one can observe the dotted lines going to the information evaluation, and from the information evaluation peering into all boxes. This process represents the feedback from stakeholders. The transparency perspective represents a suggested conversation starter between company and stakeholder where the report acts as the springboard from which the company and its stakeholder starts engaging, evaluating and harvesting improvement-suggestions to make the report contain more relevant information. The stakeholder feedback restarts the loop, providing input to the strategy, management control and accounting. Reporting practices thereby become relevant for the stakeholder as well as a tool used and rigged to increase the company's sustainability

performance.

We used the theory when investigating sustainability reporting practices in Nordic SMEs. By comparing the actual use of the sustainability report with Maas et. Al's ideal internal system we were able to spot similarities and barriers to be overcome in order to move forward according to the theoretical framework.

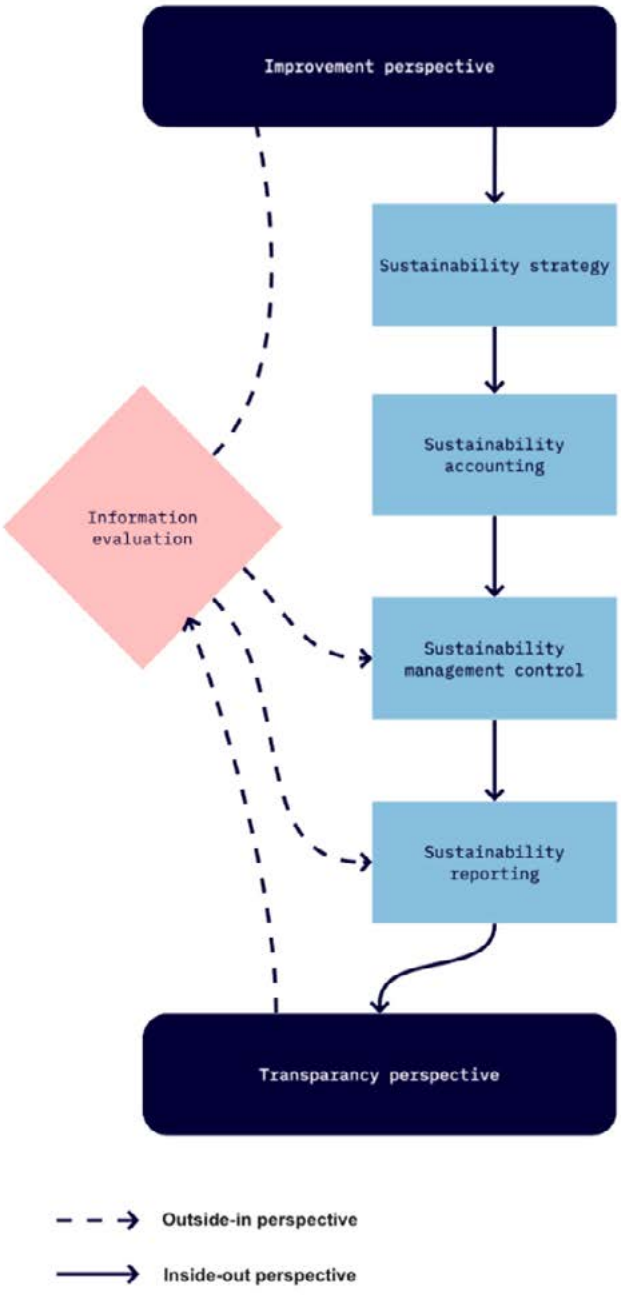


***Figure 5**: Ideal linkage of internal sustainability system (a simplified version of Maas et Als framework).*

2.6.4 Key findings

As has been made clear, the purpose of the study was to find insights to how Nordic SMEs utilize and integrate their sustainability report internally to improve the company´s sustainability performance. In order to investigate this objective, we formulated four supporting questions;

1) How do the motivations of SMEs affect the utilization of non-financial information towards improved sustainability performance?
2) How does Norwegian SMEs define and measure sustainability?
3) How is non-financial information integrated in Norwegian SMEs?
4) How does Norwegian SMEs ensure increased sustainability performance?

How do the motivations of SMEs affect the utilization of non-financial information towards improved sustainability performance?

Findings indicate that motivation affects SMEs organizational incorporation of the sustainability report towards improved sustainability performance. We find a potential linkage between internal and external motivation and the degree of integration of non-financial data towards sustainability performance. The research shows that it could be a potential link between the company´s internal or external motivation to implement sustainability, and the will to integrate operations towards improved sustainability performance. One barrier to overcome in order to get SMEs to start implementing sustainability is to change their internal motivations such as changing their business model and/or ethical position.

How does Norwegian SMEs define and measure sustainability?

Here, the findings indicate that Norwegian SMEs find it cumbersome and resource demanding to measure sustainability. All five cases, regardless of how developed their handling of sustainability was, called for improved practices, more uniform indicators and metrics to measure sustainability.

How is non-financial information integrated in Norwegian SMEs?

For the third question findings indicate that non-financial information is integrated in internal sustainability systems in a variety of ways. The figure below visualizes the tendencies and patterns unfolding in the study. Vertically you can observe the different aspects influencing the integration of the non-financial data. Five main themes where observed; 1) motivation, 2) utilization of resources, 3) quality of non-financial information, 4) how integrated the non-financial information is towards improved sustainability performance, 5) sustainability already happening in the company, but has not been labelled sustainability or captured in any documentation or measurements as sustainability. We can see how the different cases seem to steadily sway towards one side of the figure. Further, the study identifies a pattern where the integration of the non-financial information, being integrated in an internal sustainability system, is varying from a fully integrated system (right side of the figure above), to a system where the non-financial information is mostly gathered to create a report or get eco-label-certified (left side of the figure above). How the non-financial information is integrated and utilized therefore partly seem to depend on whether the motivation is internal or external. The figure below represents how the cases tend to integrate and construct their sustainability infrastructure, swaying to the left or the right of the figure presented above.

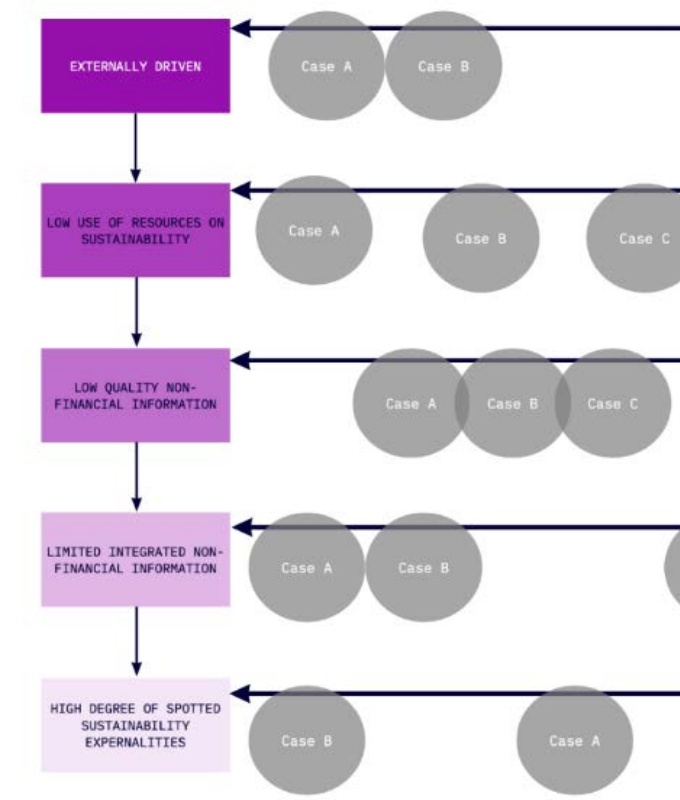
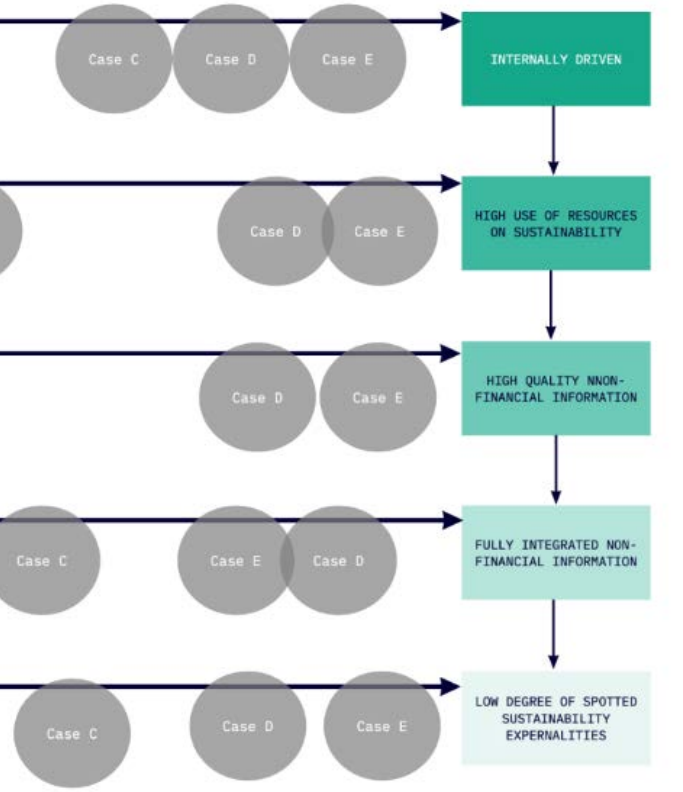


Figure 6: *Key findings from the empirical study*

Whatever the motivation, all the companies agree that the resources spent on working with sustainability are resources well spent. They all experienced getting much in return for what they had invested.

Three out of five companies started to incorporate sustainability in their operations by using a sustainability reporting framework or sustainability certification process. We can see from these cases that they base the implementation of sustainability solely on the criteria's and standard of the framework they use. Having limited knowledge and skilled personnel on the matter in-house, companies rely heavily on the guidelines of certificates and frameworks. What these framework and certificates demand, and how they guide the companies becomes the foundation upon which SME incorporates and



deals with sustainability. We further find that there are sustainability activities in SMEs that are not labelled as sustainability. A significant degree of the non-financial information is hence never gathered, measured or documented.

How does Norwegian SMEs ensure improved sustainability performance?

For the fourth supportive question we find that linking the internal system to improved sustainability performance is perceived as an incomprehensible task, as there is a lack of uniformity in how sustainability is defined and measured. All companies perceived sustainability to be a broad and ungraspable term, which made the effective handling of such challenging. Some companies had a measurable and documentable overview of indicators such as their carbon footprint, their energy consumption and the life cycle emission of their products. None of the cases felt they measured sustainability in a comprehensive and all-encompassing way however. Hence, the measurable and documentable link to improved sustainability performance is still vague.

2.6.5 Internal Sustainability System

While integrated reporting focuses on integrating financial information with non-financial information within the report itself, the internal sustainability system focuses on integrating the sustainability report into the decision-making processes of the organization. It thereby calls for the development of new accounting and management processes in what becomes an updated internal organizational system.

The internal sustainability system approach is reflected in the NSRS disclosure requirements, which are designed to improve SMEs' internal organization system over time and gradually riggs the company to better integrate and utilize non-financial information in all their undertakings. The system adopted is visualized in Figure 8. Drawing upon integrated thinking, it demonstrates how concepts can be linked together to form an internal system that is better suited to systematically increase a company's sustainability performance and revenue over time, and is highly inspired by Maas et als (2014) theory presented earlier in this chapter.

Please note that the system is not meant to replace already existing structures. The intention is rather to use it for inspiration and to merge and incorporate suitable elements of it gradually - the end product being an internal organizational structure tailored for each respective company.

The system consists of six components; sustainability reporting, impact assessment,

sustainability strategy, sustainability accounting, sustainability management control systems and stakeholder dialogue. These components are further explained below.

Sustainability Reporting: The process of gathering sustainability information in a systematic and presentable way such that an easy comparison with the past and progress concerning the target is possible, for the improvement in environmental, social and economic aspects of the reporting company. Thus, the sustainability report is the key platform for communicating sustainability performance and impacts.

Impact Assessment: A process for investigating the reporting companies' impact (positive or negative) in an environmental, social and financial perspective. In the context of NSRS, impact assessment encompasses both a materiality assessment and a climate risk assessment.

Sustainability strategy: A prioritized set of sustainability actions aiming at operationalizing goals and targets set by the reporting company.

Sustainability Accounting: The collection, analysis and communication processes of sustainability-related information. It includes any information that is needed for, or is related to, corporate sustainability management and decision-making. In the context of NSRS it is used for internal alignment and to improve the reporting companies performance from an environmental, social and financial perspective.

Sustainability management control systems: The design and use of controls to formally and informally ensure that the behavior and decisions of employees are consistent with the organization's sustainability objectives and sustainability strategy.

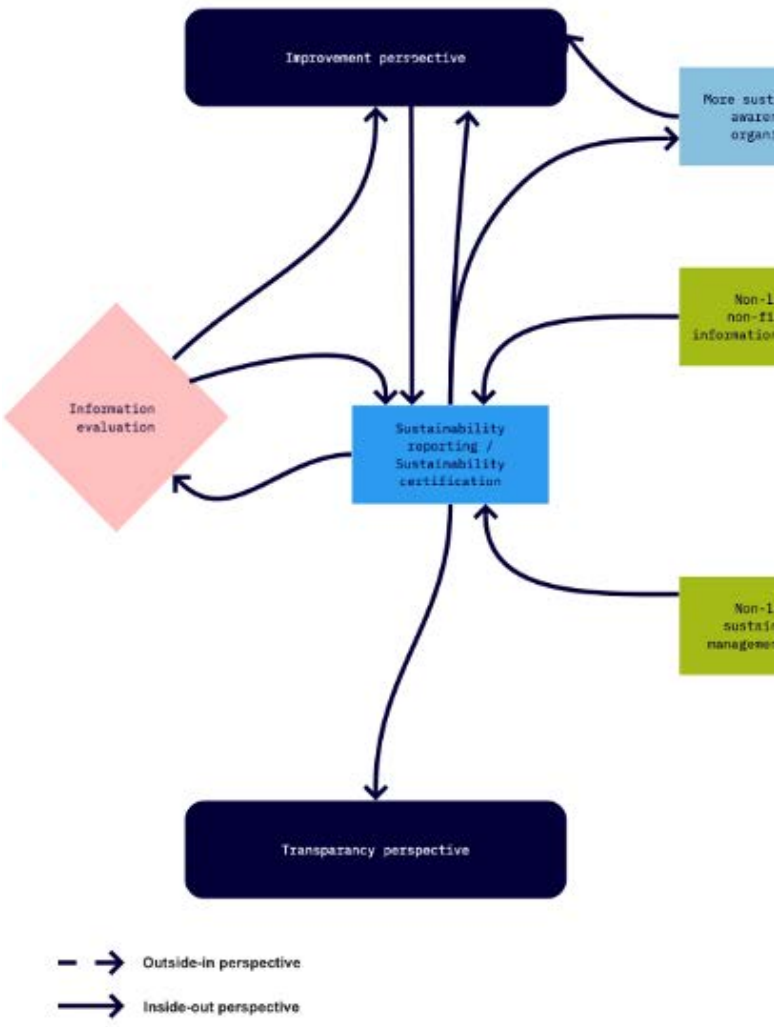
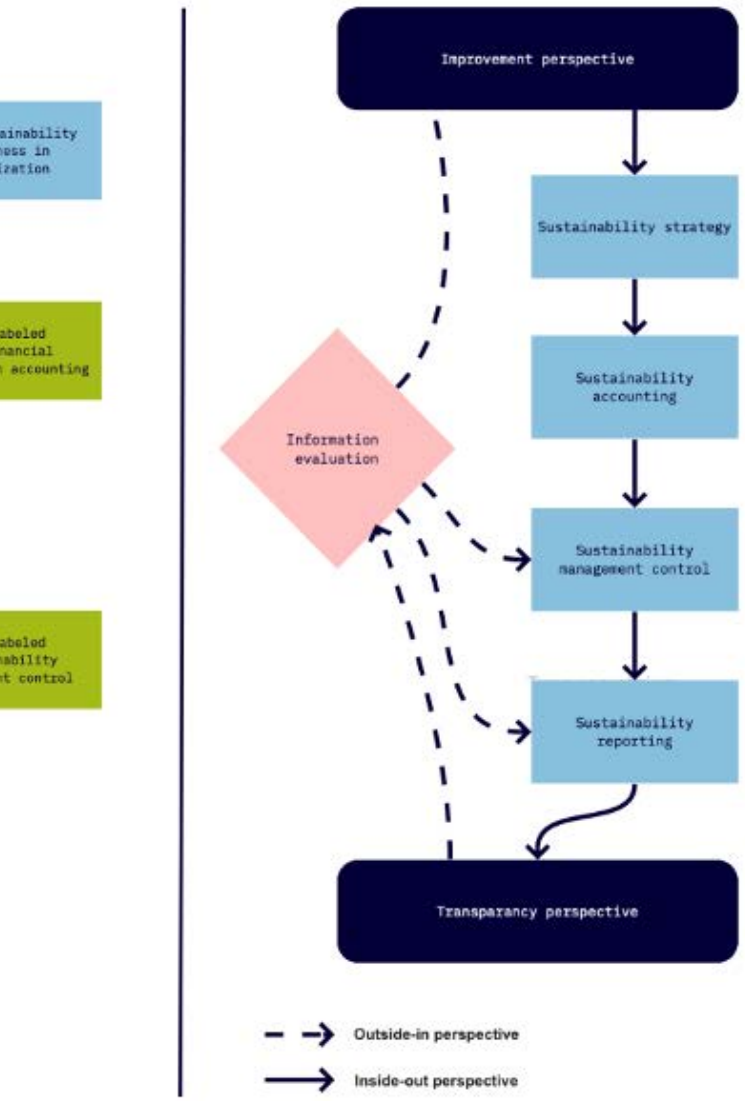


Figure 7: *Visualization of internal sus*

Stakeholder Dialogue: A process and an approach to let stakeholders directly influence the reporting company's management, decision-making process, performance and accountability. This is done by involving relevant direct- and indirect stakeholders of the company. Examples of stakeholders could be suppliers, customers, peers, distributors, banks, investors etc.



tainability system; left side & right side.

As seen in the figure, the internal sustainability system has primarily two channels of input; internal and external input. The choreography of the solid lines represents the internal input, representing the improvement focus of the internal sustainability system. The internal input ensures that an internal sustainability system is integrated in the organisation in order to make the strategy, the accounting, impact assessment, the management control systems and the reporting work towards increasing the sustainability performance and financial value of the company. In the figure the sustainability report is suggested to be the last bold-line step in a series of process-steps; from strategy to accounting to management control systems to reporting. The last step in this choreography is the report, which reports the achievements and gaps of the strategy and the risks and opportunities of the company. The arrow from sustainability reporting to stakeholder dialogue, represents the external distribution of non-financial information, making the report become the external communication gate, where it is presented to its stakeholders. The dashed lines linking the different boxes in Figure xx represent the external input. One can observe the dotted lines going to the impact assessment, and from the impact assessment peering into sustainability accounting. One can also observe how external input is feeding information into sustainability strategy. This process represents inclusion of stakeholders. NSRS supports and suggests making stakeholder-input, influence management and decision-making. Here, the report contains the potential of acting as the springboard from which the company and its stakeholder starts engaging, evaluating and harvest improvement-suggestions to make the report contain continuously more relevant information. With the internal sustainability system the company utilizes the non-financial information from some or all of the seven concepts, depending on the organization. Reporting practices thereby become relevant for the stakeholder as well as a tool used and rigged to influence decision-making and management.

2.6.6 Summarized findings

Below follows a summary of the findings of this chapter:

Sustainability management within a company is highly dependent upon the choice of sustainability framework one choses to work with: We have seen how the surge of regulation creates a jungle of standards/frameworks and how the call for one uniformed standard has the potential to lessen the information asymmetry. We find that the choice of framework is decisive for how the SME works with sustainability as a whole.

Internally motivated: Companies that are internally motivated tend to use more resources on sustainability, typically resulting in improving the quality of sustainability. Internally motivated SMEs moreover tend to integrate non-financial information in their day-to-day-activities and measure their sustainability performance to a larger extent than externally motivated SMEs.

Externally motivated: Externally motivated companies largely centre their sustainability infrastructure around the sustainability report and show limited insight in how to measure sustainability performance. None of the respondents had thought of the correlation between sustainability management and performance. Motivation to engage in the sustainability agenda generally stem from customer demand and branding, and sustainability management tend to be decoupled from business as usual.

Sustainability management is generally perceived as incomprehensible and resource-demanding task: All respondents expressed that measuring sustainability felt like an unmanageable huge conundrum so difficult to overcome that they didn´t know where to start. They expressed that "the sustainability monster" could be slowly defeated by starting very small – that is, by finding some indicators and thereafter extend their individual measure-accounting-library. Miljøfyrtårn was highlighted as a manageable starting point for companies overwhelmed by the task.

Sustainability reporting generate valuable internal information: The sustainability report needs to contain accurate, available and rich information in order to be used as an internal measurement tool. Generating trustworthy and relevant information is thus key if the report is to be successfully used as an internal strategy tool.

Sustainability performance measurement practices: The company needs to know how sustainability performance is measured in order to create a direct link between non-financial data and sustainability performance. If the firm does not know when, how, or what is increasing their sustainable performance, it will not be able to utilize reporting practices to improve their performance.

Sustainability externalities: We find that SMEs undertake sustainability activities which are not labelled as sustainability. A significant degree of non-financial data is thus never gathered, measured or documented. Sustainability performance might be improved therefore, without being measured. This does not mean that it does not happen. As argued in the literature review, motivations and external pressure might indirectly lead to improvements in sustainability performance even if not intended. According to Hauzer and Kreuzer, however, "you are what you measure", which highlights the necessity to know what and how you can improve performance in order for it to materialize.

The measurable and documentable link to increased sustainability performance is still vague.

***Figure 8:** Visualization of internal sustainability system*

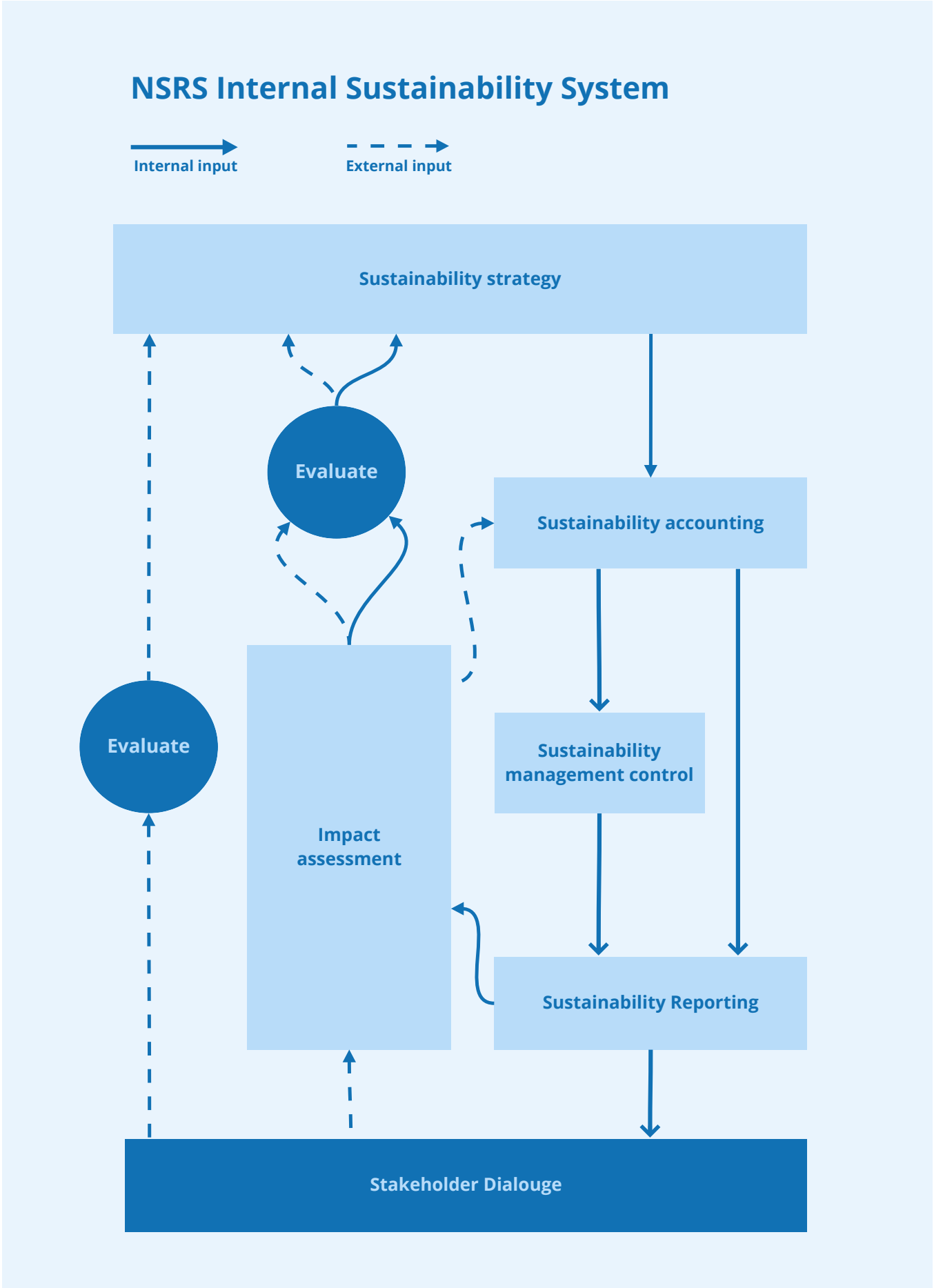


Figure 8:Internal Sustainability System.

Chapter 2.7

Climate Risk: Survive and Thrive in the Future Ahead

Keywords:
Climate Risk, EU Taxonomy, Sustainable Finance, Climate Governance, Physical Risk, Regulatory Risk

Topic:
Key climate risks for SMEs in the Nordic region.

Objective:
The objective of this chapter is to understand the climate risk landscape in the Nordic region. We moreover seek to identify key challenges and opportunities faced by SMEs in navigating climate risk - that is, how they can effectively manage operations in the increasingly unpredictable climate and stricter regulatory landscape ahead.

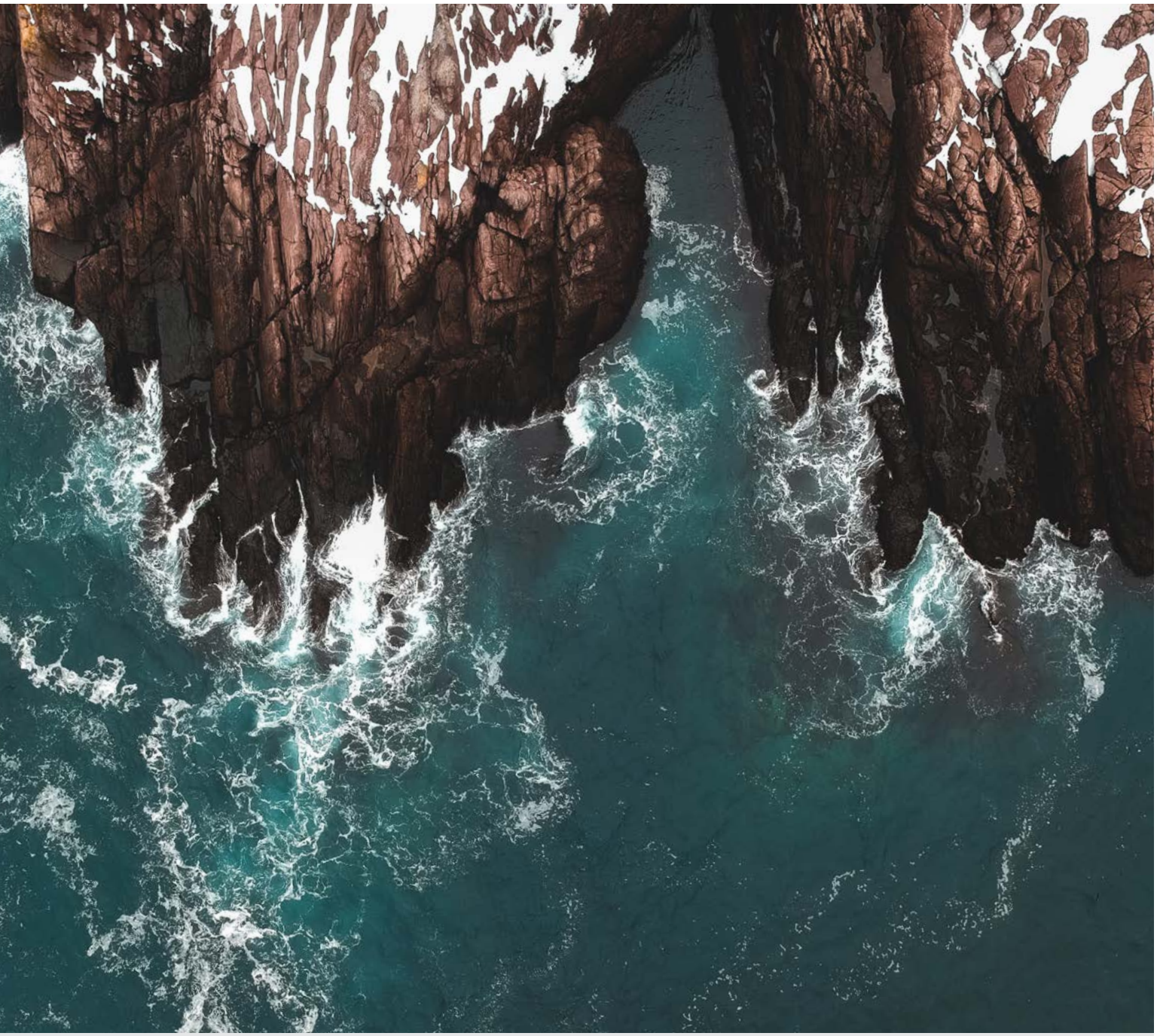
"The more we invest with foresight; the less we regret in hindsight"

Bank of England governor Mark Carney in his bespoken 2015 speech "The Tragedy of the Horizon"

This chapter urges the reader to look ahead. If one aims to survive and thrive in the future economy, one must effectively navigate the looming risks. By outlining key climate risks in the Nordics, this chapter provides a crucial knowledge base for SMEs who wish to stand better prepared for what lies ahead and build their strategies thereafter. We moreover investigate to what extent climate risk is embedded in curent management practices in Nordic SMEs.

METHOD & APPROACH

To investigate this topic, we have conducted a literature study supplied with qulitative semi-structured interviews with a wide range of stakeholders embedded in the SMEs climate risk-ecosystem. In particular we



have focused on interviewing SMEs financiers about potential indirect implications, risks and opportunities facing SMEs in their value chain when adapting EUs taxonomy. Note: The study on EUs taxonomy is not finalized, and the findings presented is thus preliminary. The study will be finalized and presented in the 2nd edition of this report in February 2021.

Main findings – Climate Risk: Survive and Thrive in the Future Ahead

1. Climate risk is financial risk. Climate changes themselves, but also the political and technological responses to them, pose an economic risk to private sector activities.

2. The Nordic countries are small open economies which are highly dependent on events in the rest of the world. Climate changes impact business either directly, by damaging physical assets, or indirectly, by causing disruption in value chains and global markets. Acknowledging the inherently volatile nature of the globalized system is key to understanding the risk picture one is up against.

3. **Physical risks:** The Nordic climate is expected to become warmer, wetter and wilder. Major physical risks in the region include temperature increase, rising sea levels, storm surges and extreme precipitation and floods. Critical infrastructure, hereunder energy, transport, and industry, is vulnerable for the extreme weather events ahead.

4. **Transition risks:** Heavy-emitting sectors, hereunder the energy sector, transport and shipping are the sectors currently facing the largest transition risks. These will not only be subject to new, ambitious EU climate regulations, but also face increasing levels of liability- and reputational risk as the sustainable transition starts to materialize.

5. The Nordics have a historical record of incorporating EU environmental regulations in their national jurisdictions. When the EU is taking progressive leaps towards recuding 50% of emmissions by 2030 and becoming carbon-neutral by 2050 (through the EU Green Deal and Taxonomy), it is therefore likely that these measures will be reflected in Nordic legislation in the short to medium term perspective.

6. There is little to no national guidelines pertaining to how SMEs as a business segment are expected to navigate the upcoming regulatory landscape. Even if various organizations and private sector actors are forerunners in terms of facilitating a smooth implementation of the Taxonomy, general political attention seems to be directed elsewhere.

7 **The EU Taxonomy** is a classification tool for sustainable private sector activities designed to steer capital in a sustainable direction. It directly targets large companies and financial actors. Knowledge about its ripple effects on non-targeted actors such as the SME segment however, is very limited at this point in time.

8 SME financiers, who are directly targeted by the taxonomy, express a need to receive data from their downstream stakeholders if they are to successfully report according to the Taxonomy.

9 Interviewed banks are currently in the process of developing incentivation systems for their SME-loan takers in order to accelerate the Taxonomy alignment of their portfolios. Carrots, in the form of improved interest rates and longer repayment times, are here combined with sticks, in the form of more expensive capital and stricter capital access criteria. Some are also incorporating stricter sustainability screening criteria of SMEs early in the credit rating process.

10 In 2020, the Taxonomy is still open for adjustment through dialogue with the Technical Expert Group (TEG). This window of opportunity is expected to close by the end of the year.

11 Several inteviewees expressed their concern about government's lack of attention to the matter. They pointed to a general lack of awareness and disinterest or inability to successfully advocate national interests. One Norwegian bank for example, came across a Taxonomy criteria that defined hydro power below a certain quantity as non-sustainable, which would have classified the vast majority of Norwegian hydro power thereafter. After raising the matter on EU-level, the bank managed to adjust the criteria, successfully avoiding a major crisis for the Norwegian energy sector.

12 There is a clear correlation between company size and the propensity to incorporate climate risk assessments in operations: the smaller the company the less focus on climate risk.

13 Consumer demand - and not climate risk - is highlighted as the primary driver to engage in corporate sustainability activities among Nordic SMEs.

14 Lack of resources - hereunder time, money and know-how - is highlighted as a main barrier for SMEs to effectively address and integrate climate risk in their operations. The TCFD framework for addressing corporate climate risk is similarly found to be too comprehensive for the vast majority of Nordic companies, and particularly so for SMEs.

15 There is little knowledge on SME-specific climate risks, which makes it difficult for SMEs to get started. The Nordic SME segment is moreover extremely heterogenous. To assess climate risk on the individual company level would demand a tailorized and sector-specific apporach, which is very resource-demanding. The difficulty to generalize accross company size and sectors is currently a key impediment for effective integration.

Chapter 2.7

Climate Risk: Survive and Thrive in the Future Ahead

The following section will give an introduction to the concept of climate risk. It will provide an overview of the climate risk landscape in the Nordics by 1) considering the region's position in the increasingly globalized world, 2) identifying the most pressing climate risks faced by the Nordic private sector, and 3) mapping out current climate risk management practices in the region.

A section on regulatory risk will follow. Regulatory risk is highlighted as a key risk in the Nordics from a short- and medium-term perspective. This section therefore aims to provide an overview of the regulatory landscape in the region, hereunder changes in law, regulations, directives and legislation. Given its obligatory nature, looming implementation and incorporation in the EEA agreement, a particular focus will be given to the EU Taxonomy. Empirical studies with targeted stakeholders will serve as a knowledge base for an analysis of how this new classification tool may come to affect the SME segment in the region. Our final objective is to outline key challenges and opportunities for SMEs to effectively manage climate risk in an increasingly unpredictable climate and institutionalized regulatory landscape.

As elaborated in the introduction, the NSRS project has limited its initial scope of study to environmental aspects of sustainability, and climate-related matters in particular. This chapter is consequently dedicated to climate risk rather than the broader and more all-encompassing concept of non-financial risk. With that, we fully acknowledge the limitations to the risk landscape hereby portrayed.

2.7.1 Overview

2.7.1.1 Climate Risk

Climate change is striking harder and more rapidly than many of us expected. The last five years are set to be warmest on record, severely increasing the intensity and frequency of natural disasters and extreme weather events around the world (WEF, 2020). With global temperatures predicted to reach +3°C by the end of the century, we are heading for a situation where the most severe economic, social and environmental consequences are unavoidable. With a planetary emergency on the horizon, we should not only expect negative economic consequences, but also disrupted ecosystems and increased social and geopolitical unrest. It does not come as a surprise therefore, that environmental concerns now dominate the top long-term risks by likelihood in World Economic Forum's Global Risk Perception Survey (WEF, 2020).

Risk is typically defined as "the potential realization of unwanted, adverse consequences to human life, health, property, or the environment" (SRA, 2003). It is associated with uncertainty about events that entail deviations from a planned or envisaged development. Risk management, therefore, aim to withstand negative deviations, but also to draw on opportunities created by positive deviations. Climate change can be termed a novel risk. These are characterized by high levels of uncertainty and complexity. Consequences will depend on the magnitude and speed of changes, as well as the adaptability of ecosystems and human societies. The exercise of mapping out a holistic climate risk landscape is further complicated by the issue's global nature, the complexity of causal relationships, and the long time-lag between emissions and warming. Conclusively therefore, the novel nature of climate change makes effective risk management particularly challenging.

"The more we invest with foresight, the less we regret in hindsight" was the key message in former Governor of the Bank of England – Mark Carney's – famous speech, "The Tragedy of the Horizon", back in 2015. His speech points to a rising trend in recent years, to recognize the adverse economic impacts of climate change. While the private sector's impact on the climate has been widely debated for decades, it is now becoming clear that climate changes themselves, but also the political and technological responses to them, pose a risk to a range of private sector activities either directly and indirectly. Climate risk can consequently be defined as "risk assessments based on formal analysis of the consequences, likelihoods and responses to the impacts of climate change and how societal constraints shape adaptation options" (Adger et al, 2018). The multitude of such risks can broadly be categorized into physical risks and transition risks.

Physical risk relates to "changes in the climate system that lead to increased frequency and intensity of extreme weather events" (CICERO, 2019). The Task Force on Climate-Related Disclosures (TCFD) distinguishes between acute physical risks such as floods or cyclones, and chronical, long-term risks such as rising sea levels and desertification (TCFD, 2020). These hazards create disruptions to businesses and physical assets by causing damage to infrastructure, real estate and production facilities, but also by changing the conditions for agricultural productivity.

The Intergovernmental Panel on Climate Change (IPCC) defines physical climate risk as dependent

on the likelihood of a specific climate change ('hazard'), the degree to which a company or sector is affected ('exposure'), and the company's or sector's capability to handle the climate change ('vulnerability'). The climate change hazard depends on the probability, frequency and intensity of the climate change impacts.

Transition risk, on the other hand, relates to "changes in climate policies, technology shifts and liability concerns, as we move towards a low-carbon future" (CICERO, 2019). Transition risk thereby stems from the societal and technological responses to physical climate risks. It may come in the form of climate regulations such as the EU Taxonomy (which we shall return to later in this chapter), where private sector actors need to adapt to a changing regulatory landscape. It may come in the form of rapid market transitions to low-carbon technologies or renewable energies that have a destabilizing effect on markets. Finally, it may come in the form of litigation claims or reputational risk, for failing to incorporate environmental concerns in business operations.

It is important to note, however, that physical risks and transition risks are actually closely interlinked. If climate policies are lax over the next few decades, future physical risks are doomed to be more severe. If, on the other hand, climate policies are strict, physical risk is reduced while transition risk becomes higher.

We have now seen that there are considerable financial risks related to climate changes themselves and the transition to a low-emission society. From a private sector perspective, however, it is just as important to remember the opportunities a sustainable transition will entail. The 2016 New Climate Economy report found that an estimated US$90 trillion is needed in infrastructure investments before 2030 should global development be aligned with climate objectives (The New Climate Economy, 2016). Successfully managing climate risk will not only involve withstanding negative deviations therefore, but also drawing on the vast economic opportunities ahead.

2.7.1.2 The Nordics in a Global Context

As made strikingly clear both by the Covid-19 pandemic and the 2008 financial crisis, the global risk landscape is highly interconnected and volatile. As small, open economies, the Nordic countries are highly dependent on the stability of global markets and supply chains. Nordic businesses benefit from well-functioning international trade as well as research and development of knowledge that is distributed globally. If key institutions and social structures of the world are weakened, Nordic businesses will be impacted (Skancke et al, 2018). In the assessment of climate risk, therefore, it is important to adopt a global perspective in addition to a national one.

Climate change has the potential to destabilize international politics. If faced with major negative impacts of climate change, vulnerable states are likely to see an increase of political instability, humanitarian disaster, and violent conflict. Since climate change is likely to cause shortages of important goods such as food and clean water, resource scarcity may fuel the level of conflict further. Challenges arising from climate risk are thus likely to manifest themselves nationally and regionally, but also globally. In terms of economic impact, key transnational risk sources include "increased migration flows, unstable food prices, supply disruption and changing production and trading patterns" (Skancke et al, 2018). Here it is important to note that also successful climate policies can disrupt the geopolitical landscape.

A successful renewable energy transition would for example change transborder production- and transportation patterns and create new linkages, dependencies, and power dynamics in between countries.

Broadly speaking, poor countries in the Southern Hemisphere are more vulnerable for the direct negative impacts of climate change than are rich countries in the North. The Nordic countries are small and relatively dynamic economies. Their well-functioning institutions, flexible labor markets and well-educated labor force means that they are amongst the best placed countries with regards to adaptability (Skancke et al, 2018).

2.7.1.3 Physical risk in the Nordics

The Nordic region is facing a changing climate. While there are some distinguished national traits, the region's climate is generally expected to become warmer, wetter, and wilder (CICERO, 2019; Holgersson, 2007; Danish Energy Agency, 2008). This brings wide-ranging economic impacts for both the public and private sector. In the following section, we outline a number of physical climate risks that are likely to increase in the region:

Temperature increase: Temperatures are expected to rise throughout the region. In Norway, intermediate projections suggest a temperature increase of some 4 - 5 °C 2100 compared to the reference period (1971-2000) (Skancke, 2018). Rising temperatures can lead to prolonged dry periods and heat waves (Krikken et al, 2018), with severe implications for the agricultural, forest and tourism sectors in the upcoming years (Stat Finnish, 2017).

Rising sea levels: With sea levels expected to rise between 15 to 75 cm, the Danish coastline is particularly vulnerable in the Nordic setting (Krikken et al, 2018). Such increases will have a significant impact on infrastructure such as sewage systems, but also for buildings and construction more generally. Rising sea levels worsen the impact of storm surges (Skancke, 2018).

Increased precipitation and floods: The entire region will become wetter. With increased precipitation, the risk of soil erosion, landslides and floods follow. While rockslides, landslides and mudslides are sudden and fast processes which can have disastrous consequences for buildings in particular, floods pose a greater risk to transport- and electricity infrastructure.

Storm surges: A combination of the increase in temperatures and rainfall, storm surges are expected to increase in frequency and intensity. Storms can be costly for society as a whole, causing major disruptions to infrastructure for electricity, electronic communications, roads and railways as well as vast indirect consequences (Holgersson, 2007).

Economically, the physical risk landscape outlined above is expected to impact sectors differently. While some might experience a slight positive economic impact in the short term (Stat Finnish, 2017), the overall picture is that societal costs of climate change impacts in Nordic countries are expected to increase relative to global greenhouse gas emissions (CICERO, 2019).

If we are to draw a conclusion on specific sectors according to the physical risk landscape outlined above, it seems that direct financial risk is most heavily concentrated in damage to assets and critical infrastructure, including the subsequent increase in insurance costs. This is confirmed

by Prytz et al. (2018), who identified the global physical risks that were expected to have the greatest impact on the Norwegian economy specifically. They found that direct investments in real estate is particularly vulnerable to physical climate risk (CICERO, 2019).

In terms of indirect impacts of physical climate risks, all sectors will be affected. As with the Covid-19 pandemic, physical climate risks are likely to cause disruptions to global markets and supply chains, which can have severe knock-on effects for specific sectors regionally. Nordic industries that are dependent on access to foreign raw materials, logistics routes and locations of production are especially vulnerable in this regard (Deloitte Oy, 2020). By impacting the availability of power, transportation and labour, physical climate risks can disrupt production and operations, and affect prices of important goods such as water, energy and food (CICERO, 2019). Given the uneven climate risk picture globally, the Nordic private sector should pay attention to their investments abroad, which is subject to a different risk landscape than the domestic one (CICERO, 2019).

2.7.1.4 Transition Risks in the Nordics

As outlined above, transition risk relates to "changes in climate policies, technology shifts and liability concerns, as we move towards a low-carbon future". This section will attempt to outline the most vulnerable sectors in terms of transition risk in the Nordics.

Besides regulatory risk, which is covered in detail in the next chapter, transition risk covers risks stemming from swift technology shifts, liability concerns and reputational risk. A 2019 CICERO study finds that transition risk is concentrated amongst heavy-emitting sectors, hereunder energy production, transport, and shipping (CICERO, 2019).

The energy sector: The electricity demand in the Nordics is expected to increase due to increased electrification of the industrial and transport sectors. Climate policies aiming to limit global warming to 2 °C or below would demand substantial changes in energy systems, including the power generation mix and structure, transmission and distribution grids, as well as market structures. Still heavily involved in oil and natural gas, Norway is particularly vulnerable in this regard.

Transport alone stands for "about 50 % of the expected increase of 70 TWh between 2018 and 2040 across the four Nordic countries". To cater

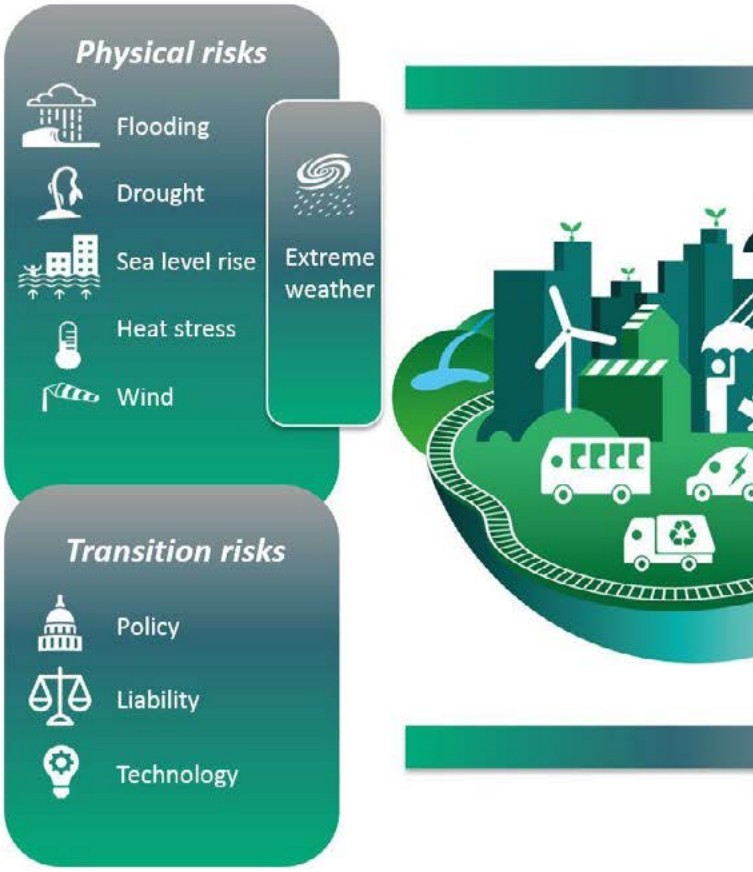
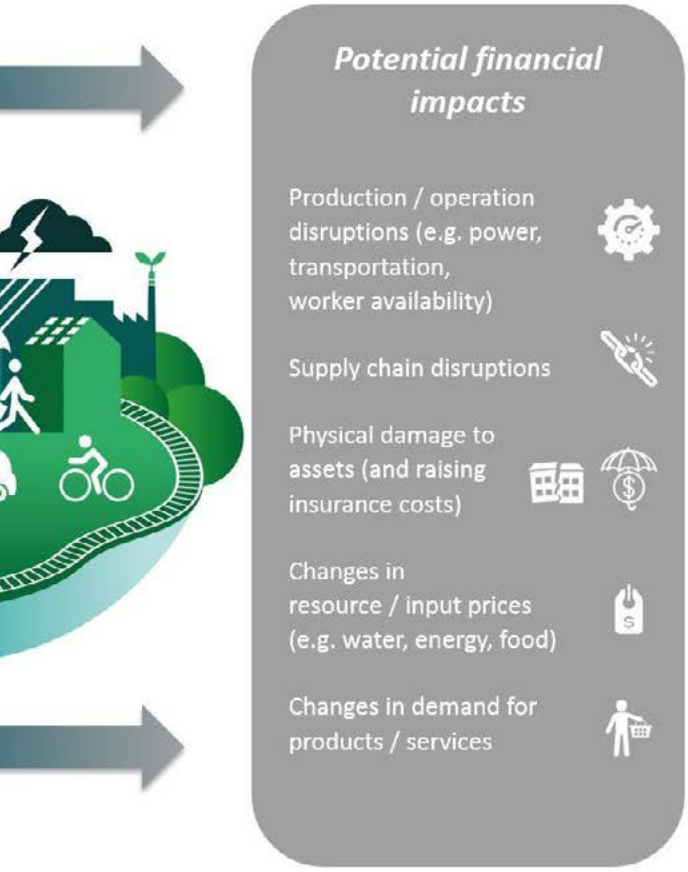


Figure 8: *CICERO's overvie*

for this demand, renewable energy production and wind power in particular, is expected to increase. Norway has the largest share of chargeable cars in the world, with Sweden ranking first in the EU. These changes are largely a result of regulations and tax incentives. Targets are in place to cut emissions from transport even further.

Shipping is also seeing signs of transformation. In Norway, battery-driven ferries have been operating since 2015 and the demand for electric ferries and hybrid supply ships are steadily increasing. One of the underlying reasons for this trend is Siemens, which is planning to build a battery factory in Trondheim with the purpose of accelerating the shift to electric boats in the aquaculture industry.

2.7.1.5 Watch out – how regulatory risk went from maybe to now in the EU



w of climate risk.

Conclusively and in the short-term perspective, however, one can fairly expect the new EU climate regulations to make up the crown jewel of transition risks in the region (CICERO, 2020). At the heart of this new regulatory landscape is the Taxonomy, set to 'clean up' the corporate sustainability conundrum by means of mandatory information disclosure. Starting from 2021 and onwards, targeted financial actors and large companies (<500 employees) are obliged to report on the Taxonomy alignment of their activities, potentially revolutionizing the comparability of current sustainability reporting practices across the continent.

The EU has furthermore announced that a new climate law will go into effect from 2021. It is part of the extensive policy mix under the EU Green Deal, the action plan designed to push the region towards a 50% reduction of GHG emissions by 2030 (European Commission, 2019) and carbon neutrality by 2050. The organization's progressive climate action policies have become particularly evident after Ursula von Der Leyen's took over the presidency in 2019. Her measures have gained attention globally and, for our interest, made regulatory risk a key climate risks in the region (WEF, 2020).

In the next sections you will find an overview of the current and changing regulatory landscape in the Nordics and in the EU.

2.7.2 Increase in the number of climate-related laws and litigation globally

A deepened understanding of the importance of climate change has caused a recent and rapid increase in the number of climate change or climate-related laws (Averchenkova et al,

2017). Additionally, climate change litigation is increasingly viewed as a tool to influence policy outcomes and corporate behaviour (Nachmany et al, 2019). All 197 Paris Agreement signatories or ratifiers have at least one law or policy on climate change (Nachmany, 2018). There are more than 1,500 climate laws and policies worldwide per 2018 (Nachmany, 2018) whereas 106 have been introduced since the Paris Agreement was signed in 2016 (see figure XX below). Framework laws and policies often include adaptation plans, information generation, regulation, and early warning systems. Additionally, there is a rise in climate-related human rights cases in the above-mentioned countries. Even though a significant majority of countries globally have enacted laws and policies to address climate change adaptation, there are gaps in the policy instruments to be concerned about. While many identify floods and droughts as major hazards, other impacts such as ocean acidification remain under-addressed (WEF, 2020). Additionally, apparent gaps are adaptation investment and economic incentives to encourage adaptation. The latter is rather concerning in the context of SMEs as resources is scarce in their context.

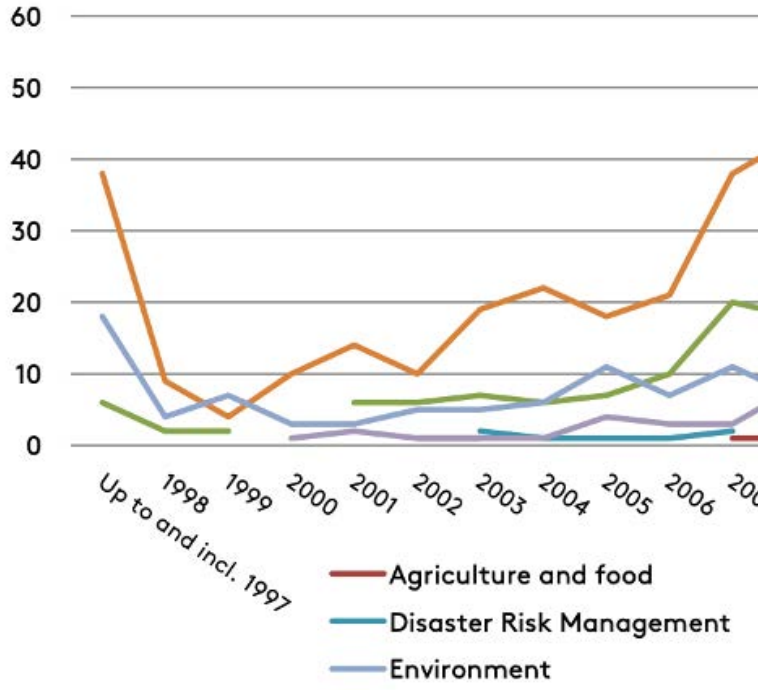


Figure 9: *New climate laws passed each year, to end of 2017. (Grantham*

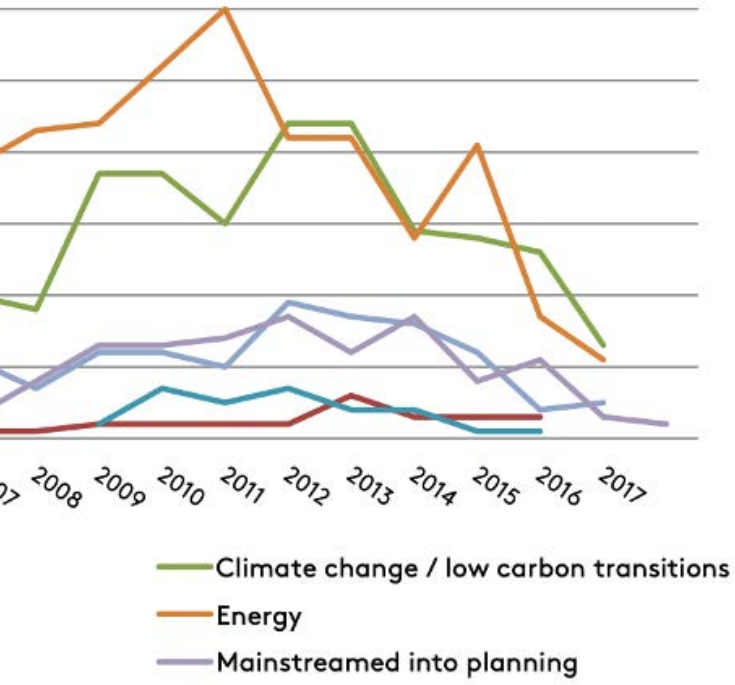
2.7.3 The regulatory landscape in the Nordics – a snapshot

We performed a study in the respective law databases in all the Nordic countries in order to investigate what might affect SMEs today or in the near future in the context of climate- or environmental related laws, regulations, policies and directives. In particular we have focused on regulatory risks that might increase the demand for measuring and reporting on non-financial matters.

The laws on national level concerning environmental and social sustainability in the Nordics are rather similar as they in most cases stem from European level. All Nordic countries has a climate act law which has past recently in all cases. The climate acts set out targets to become climate-neutral by the mid-century. However, Iceland's climate act law differs from the rest of the Nordics as it does not include concrete targets and goals.

2.7.3.1 Main findings

The sustainability-oriented laws focus mainly on GHG emissions and carbon footprint. There is little emphasize on other indicators for social and environmental sustainability as such. This tendency is likely to stem from global policy, in addition to the fact that existing tools have not



Institute, 2018).

find an easy way to measure it.

Social sustainability, such as occupational health, labour-related perspectives and equality are seldom addressed in the context of climate laws but are addressed separately by the national labour laws in all Nordic countries.

Large companies in all the Nordic countries are by the accounting law obliged to submit an annual sustainability report to the authorities. However, it is not specified what it should contain other than social and environmental sustainability. Methods, frameworks, standards, tools and guidelines for reporting on non-financial matters or reduce GHG emissions are nowhere to be find in any of the laws. This law stems from the Non-financial directive from EU-level in 2013.

There are no SME-specific laws in any of the Nordic countries that require reporting on non-financial matters.

Increase in banned chemicals in EU:
All producers in EU must compile to the REACH legislation on chemicals, and the REACH lists of banned chemicals is expected to keep growing in the near future as researchers increasingly gain new knowledge on how chemicals affect the environment and human health.

There are multiple standards for reporting on non-financial matters that build upon existing laws such as EUs Ecolabel and Green Swan to mention a few. However, these standards are not published by authorities, but as private initiatives.

GHG emissions on products and companies due to EU Climate Act and even stricter local EU Climate Acts as; the new Nordic Climate Declaration with the aim to be carbon neutral and to demonstrate leadership for enforcement of the Paris Agreement will in the years to come set new requirements on GHG footprint on products, materials and services (Center for Circular Economy Denmark, 2019).

Increasing consumer demands on a Sustainable Global Value Chain requires more transparency, traceability, and data on product footprint as, e.g., biodiversity and environmental & social aspects of production with the UN Sustainable Development Goals accelerating this in years to follow (Center for Circular Economy Denmark, 2019).

Increase in ecolabels which are based on policy, legislation or even law on European level.

Increase in policy proposals from EU level based on the commitments and long-term strategies development the recent years (examples: Green Deal, Action Plan on Sustainable Finance etc)

EU legislation on Circular Economy is already adopted and is implemented in member countries through the years 2020-2030 with new data requirements on products, materials and waste through the waste directive.

2.7.4 The regulatory landscape in the EU – a snapshot

EUs effort to become a climate leader:
The European Union (EU) has long pursued a leading role in policies to tackle climate change (Verschuur et al, 2020). We emphasize the importance of understanding EUs proactive approach as this historically has proven to trickle down on the Nordic laws.

1992: First climate change strategy adopted

1996: EU endorsed the goal of limiting global warming to 2 degrees Celsius above pre-industrial levels

2001: Kyoto Protocol

2005: Emissions Trading Scheme (ETS), the world's most important greenhouse gas emissions trading scheme and flagship of the EU's climate policy (the world's most important greenhouse gas emissions trading scheme and flagship of the EU's climate policy.)

2007: Comprehensive climate legislative package that included the 20-20-20 targets

2009: UN Climate Change Conference in Copenhagen
- The international community failed to secure a global agreement on limiting greenhouse gas emissions.

2015, December: The Paris Agreement
- Agreement: Keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

2018: EU Commission put forward an action plan on how to finance sustainable growth.

2019, December: European Green Deal

2.7.4.1 European Green Deal (2019)
The Green Deal can be conceptualized as a roadmap of key policies for the EU's climate agenda, based on which the Commission has started and will continue to develop legislative proposals and strategies from 2020 onwards. The green deal aims at achieving a 50% GHG reduction by 2030, and carbon neutrality in EU by 2050 (European Commission, 2019).

Policy areas:
Biodiversity:
Measures to protect our fragile ecosystem

From Farm to Fork:
Ways to ensure more sustainable food systems

Sustainable agriculture:
- Sustainability in EU agriculture and rural areas thanks to the common agricultural policy (CAP)
- Clean energy
- Sustainable industry

- Ways to ensure more sustainable, more environmentally respectful production cycles
Building and renovating:
The need for a cleaner construction sector

Sustainable mobility:
Promoting more sustainable means of transport

Eliminating pollution:
Measures to cut pollution rapidly and efficiently

Climate action:
Making the EU climate neutral by 2050

Since Ursula von der Leyen first announced the communication brief on the green deal in December 2019, a multitude of initiatives covering the policy areas has been released, including the investment plan allocating at least 1 trillion euro over the next decade, the circular economy action plan aiming at a circular region by 2050 and European climate law to mention a few of the initiatives that will be turning the European upside down (European Commission, 2019b).

2.7.4.2 EUs action plan on financing sustainable growth (2018)

"To meet our Paris targets, Europe needs between €175 to €290 billion in additional yearly investment in the next decades. We want a quarter of the EU budget to contribute to climate action as of 2021. Yet, public money will not be enough. This is why the EU has proposed hard law to incentivize private capital to flow to green projects. We hope that Europe's leadership will inspire others to walk next to us. We are at two minutes to midnight. It is our last chance to join forces." - VALDIS DOMBROVSKIS
Vice-President in charge of Financial Stability, Financial Services and Capital Markets Union.

EU is examining how to integrate sustainability considerations into its financial policy framework in order to mobilise finance for sustainable growth. Major private and public investments are needed to transform the EU economy to deliver on climate, environmental and social sustainability goals, including the Paris Agreement and the UN Sustainable Development Goals (SDGs). Sustainable finance makes sustainability considerations part of financial decision-making. This means more climate neutral, energy- and resource-efficient and circular projects. Sustainable finance is needed to implement the Commission's strategy towards achieving the SDGs. In EUs action plan on sustainable finance, 7 initiatives are defined whereas three of the initiatives are legislations currently in the pipeline (European Commission, 2017). The three initiatives were presented in May 2018.

A UNIFIED EU GREEN CLASSIFICATION SYSTEM - 'TAXONOMY' to determine if an economic activity is environmentally sustainable based on harmonised EU criteria. The European Parliament adopted its report in March 2019. In June 2019, the Technical Expert Group on Sustainable Finance published the first classification system – or taxonomy – for environmentally-sustainable economic activities. This aims to provide guidance for policy makers, industry and investors on how best to support and invest in economic activities that contribute to achieving a climate neutral economy (European Commission, 2020).

SUSTAINABILITY-RELATED DISCLOSURES Enhanced disclosures by manufacturers and distributors of financial products to end-investors. Financial market participants will have to disclose to their clients

the impact of sustainability on financial returns and the impact of their investment decision on sustainability. The European Parliament and the Council reached a political agreement in March 2019 (European Commission, 2020b).

CLIMATE BENCHMARKS AND BENCHMARKS' ESG DISCLOSURES

Two new categories of climate benchmarks to orient the choice of investors who wish to adopt a climate-conscious investment strategy. Political agreement reached by European Parliament and Council in February 2019. The TEG published an interim report on climate benchmarks and benchmark's environmental, social and governance (ESG) disclosures and launched call for feedback in June 2019 (European Commission, 2020c).

2.7.5
EUs Taxonomy

Academics, policymakers, regulators and legal scholars have long recognized the potential of information regulation to further environmental policy performance (Backer, 2012). The elegance of such a regulatory strategy lies in its harnessing of private actors to incentivize improved corporate environmental performance (Tompkins et al, 2008). According to the established theory, environmental information regulation deploys mandatory disclosure requirements to generate new, publicly accessible data that allow investors, consumers, and civic society to compare and rank companies across an array of environmental measures or "metrics" (Doughman et al, 2004).

EUs taxonomy is a so called information regulation, and is one of EUs instruments aiming at steering capital towards environmentally friendly investments by implementing a new classification system for sustainable investments.

The taxonomy is one of the cornerstones of the EU Sustainable Finance Action Plan presented by the European Commission on 8 March 2018 ("The EU Action Plan on Financing Sustainable Growth"). The action plan is central to achieving the climate goals of the Paris Agreement and the carbon-neutral target by 2050. Actors in the financial markets have an important role to play in contributing to this change. In addition to the taxonomy, the action plan includes the development of an EU standard for green bonds, benchmarking for low-carbon investment strategies and guidelines for sustainability-related reporting (European Commission, 2020b).

The European Commission has set up a technical expert group (TEG) to assist in the development of the measures under the action plan. TEG's final Taxonomy report came in March this year, and on the basis of this, the European Parliament adopted a regulation on EU Taxonomy on 18th June. TEG's reports will form the basis for the delegated legal acts to be prepared by the European Commission by 31 December 2020. The taxonomy regulations will entail major changes in the financial regulatory framework (European Commission, 2020).

The European Commission's Action Plan on Financing Sustainable Growth was released in 2017, and identified three objectives:

1. Reorient capital flows towards sustainable investment in order to achieve sustainable and inclusive growth.
2. Manage financial risks stemming from climate change, resource depletion, environmental degradation and social issues.
3. Foster transparency and long-termism in financial economy activity.

2.7.5.1 What is EU Taxonomy?

The taxonomy is a classification system that determines which economic activities within different sectors can be defined as sustainable for investment purposes. In order to be considered taxonomy-aligned, economic activity (eg. aluminum production, passenger transport or property development) must meet three main performance thresholds:
The activity must contribute significantly to the fulfilment of at least one of the EU's six environmental goals: i) limiting climate change; ii) climate adaptation; iii) sustainable use and protection of water and marine resources; iv) conversion to circular economy, etc .; v) pollution prevention and control; vi) protection of healthy ecosystems and biodiversity.

The activity must not do significant harm on any of the other five environmental objectives ("Do no significant harm" principle).
The activity must meet minimum standards for social conditions and governance (as set out in the OECD Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights and ILO conventions).

Each environmental objective will be further substantiated with very specific sector-specific technical screening criteria. Currently, only screening criteria for the first two environmental goals (limitation of climate change and climate adaptation) are set out in the TEG reports, but there will be screening criteria for the other environmental goals. For example, there is a requirement that a building must be 20% more energy efficient than the requirements for "near zero energy building" while for activities in electricity generation there will be a maximum emission requirement of 100 gCO2 / kWh (European Commission, 2020d)

The taxonomy is utilising macrosector NACE codes for the classification of so called green activities and not. For instance – oil, coal and gas, and related industries such as transport of any of the above mentioned industries, is clearly stated in the taxonomy that will never classify for the screening criterias.

The taxonomy regulations thus do not imply any "shades of green", and therefor classify as a so called dichotomic classification system in which it has been critiqued for as this red-green-light mandatory information regulation historically has been leading to punishing laggards, but not necessary incentivising pioneers to keep improving over time. This was seen through the implementation of the Toxics Release Inventory (TRI) Program in which also is a mandatory information regulation per se (Sarkis, 2020).

However, TEG has been meeting their critics by stating that the only the top 10% best in class will be classified, and that the screening criterias will become stricter for each year leading to a form of shading as actors needs to improve annually in order to maintain taxonomy alignment.

2.7.5.2 Targeted sectors

The initial focus areas for the Taxonomy is selected based on the sectors that have the greatest potential for positively influencing greenhouse gas emissions:
- Agriculture
- Industry
- Electricity, gas, steam and hot water supply
- Water supply, sewerage and waste management activities
- Transport and storage
- Information and communication
- Buildings
- Insurance services
- Engineering services

Other sectors will also gradually be covered by the taxonomy, such as shipping and fisheries/ aquaculture (European Commission, 2020d). Furthemore, the TEG are stating clearly in the final report that more sectors will be covered for each year.

2.7.5.3 Target groups

The taxonomy applies directly to:

- Financial market participants (eg investment firms, asset managers, investors, investment service providers, etc.)
- Large enterprises (all listed enterprises and enterprises with more than 500 employees).

Financial market participants in the EU are required to provide information on the proportion of a fund or portfolio that is considered to meet the requirements of the taxonomy of customers and investors. There are also a number of requirements for risk management, information in marketing and advice. These requirements for financial market participants in the EU will apply as early as the end of 2021.

The large enterprises will have a reporting obligation that is in addition to what currently follows from the NFRD of 2013. The accumulated level of the company's turnover and investments (capex and / or opex) that comes from sustainable activities shall be reported. The reporting obligation will apply to large companies in the EU during 2022.

2.7.5.4 Why a taxonomy?

- Translate the Paris Agreement and SDGs
- A common language for financiers, issuers, policymakers, regulators
- Put environmental data in economic context
- Save time and money for investors and issuers
- Support different investment styles and strategies
- Avoid reputational risk
- Deepen the conversation
- Reward companies

2.7.5.5 Ripple effects – potential implications, risks and opportunities opposed to Nordic SMEs

The taxonomy is likely to have ripple effects for companies not directly subject to the regulation. SMEs financiers and direct up-stream stakeholders are obliged to disclose on their value chains according to classification criterias in the taxonomy. We have conducted semi-structured interviews with some of these stakeholders, investigating how they are planning to implement the taxonomy, what requirements they will oppose to the SMEs in their value chains and what opportunities they see on behalf of SMEs. Banks, investors and large companies in the targeted sectors where aim for our questions. Note: This study is currently still ongoing, and the findings presented is thus preliminary. The study will be finalized and presented in the 2nd edition of this report in February 2021.

2.7.5.1 Preliminary findings

Multiple respondents stressed the need for data on taxonomy-relevant KPIs from SMEs as this will serve as building blocks in their taxonomy report. Respondents further added that they will not be able to assess their alignment with the taxonomy without input from SMEs in their value chains.

Some respondents had not yet heard of the taxonomy, but most of the respondents we talked with were already in internal processes of mapping

out how they can start the implementation.

We found that the tools for gathering, structuring and reporting on the non-financial data opposed by the Taxonomy differed greatly between the actors. Not one system was the same. One common pattern, however, was that most systems was rather manual and thus was perceived as an administrative burden on the employees.

Through our interviews we found actors in the capital markets, such as banks, and large companies in the targeted sectors, such as building and construction, more prepared compared to governmental officials who seemed to have less insight on this matter.

Respondents seemed to share a common appreciation of the taxonomy as it clearly defines what's in, and what's out.

From actors in the capital market, two main implications were highlighted in the context of SMEs in their value chain;

1. Access to capital
-Several banks we talked with are including the taxonomy in the early stages of a credit evaluation process, and low performance will lead to red flags.

2. Price on capital
-On the contrary side, we heard banks stating that they will incentivize SMEs through better interests, longer repayment time and other mechanicms in order to incentivise taxonomy aligned SMEs in their value chains through cost benefits

2.7.6 Current climate risk practice in Nordic SMEs

As far as our research goes, there is little knowledge to find about sustainability disclosures and Nordic SMEs. Consequently, there is even less information about climate risk and Nordic SMEs. These areas are not covered in existing academic literature. However, we have found some surveys and reports released recently covering some aspects of current practices in regards of climate risk assessments in the Nordics.

2.7.6.1 Framework for assessing climate risk

The most common framework for assessing climate risk in the Nordics is Task Force on Climate-related Disclosures (TCFD) (O'Dwyer et al, 2020). It stands out as it is not a traditional sustainability reporting framework per se, but rather a risk assessment framework. The framework has been increasingly adopted in sustainability reports in the Nordics, but mostly by larger companies. Below is a short introduction to the framework, as we will touch upon this framework later when we investigate to what extent SMEs have integrated climate risk assessments in their practices.

The recommendations of the TCFD are designed to be high-level and applicable to all organizations, with the stated goal of encouraging reporting that is consistent, useful for decisions, and forward-looking. The focus of the recommendations is on the material financial impacts of climate-related risks and opportunities for companies (O'Dwyer et al, 2020). This focus on financial materiality sets the TCFD apart from the majority of so-called non-financial disclosure reporting guidelines in that the TCFD explicitly creates a framework for climate risk to be disclosed as a

part of financial reporting. Support for TCFD is strong among financial sector actors (CICERO, 2019). The TCFD published a review of climate-related financial disclosures over three years for over 1000 companies. The review found that while disclosure has increased, the level of disclosure is still insufficient for investors, and the taskforce expressed concern about the lack of decision- useful information on climate. A key area where better information is needed is on the link between climate impacts and financial impact on business (CICERO, 2019).

"The government should endorse the principles on disclosure and reporting recommended by the Task Force on Climate-related Financial Disclosures (TCFD). Such reporting will enhance the understanding of climate risk – both within companies and at the investor level."

(Skancke et al, 2018)

2.7.6.2 Current climate risk practice in Nordic SMEs

Nordea aimed at mapping out what Nordic companies state on their own behalf when it comes to climate risk and sustainability efforts (Nordea, 2020). 530 respondents participated in the study across company size. All the Nordic countries where represented. On average Nordea found that companies claim that they have little knowledge on the climate risks they are facing as well as potential development areas in an environmental perspective (figure 1). Further findings revealed that the small sized companies reported the lowest knowledge when it comes to ESG related risks and development areas (figure 2). Nordea also find that the main driver for focusing on sustainability in the Nordic companies are meeting customer demand, whereas climate risk is listed at bottom five drivers (figure 3). Additionally, Nordea reveals that risk as a reason to focus on sustainability increases with size. Only 11% of small companies with 0-19 employees state risk as a driver for focusing on sustainability, compared to 18% of the companies with more than 100 employees' states risk as a reason for focusing on sustainability (figure 4).

2.7.6.3 Trending patterns in the Norwegian landscape

As research in this area is scarce, we chose to focus on the Norwegian landscape as we found some studies covering practices related to climate risk. However, interviews with experts in the other Nordic countries indicates that similar trends are present in the other Nordic countries as well. We therefore choose to pull insights and interpret the findings from the Norwegian landscape as indicators on trending practice in the Nordic region.

Deloitte points at a trend in increased awareness in Norwegian companies towards climate risk (Deloitte, 2020). Deloitte finds that 20% of Norwegian companies refer to climate risk assessments in their annual reporting based on the TCFD recommendations. Further, actors in the capital markets seems to be leading when it comes to climate risk assessment according to Deloitte's annual trend report on sustainability. However, they highlight that the quality is rather poor and, in most cases, not quantitative.

According to a survey from 2020 with 193 respondents from Norwegian companies of all sizes done by The Financial Supervisory Authority of Norway (Finanstilsynet), 80 reported on having included climate changes as part of their reporting (Finanstilsynet, 2020). However, while most of the companies had covered how they were affecting the environment, under 50% of the respondents had not developed measures for identifying, handle and monitor climate risks. Furthermore,

only half of the respondents reported on linking climate risk to time horizon.

The Governance Group (TGG), on the other hand, announced that they observed an increase in occurrence of the phrase 'climate risk' in Norwegian sustainability reports after TCFD was introduced to the Norwegian market in 2017 (The Governance Group, 2019). Only 25 out of the 100 largest companies on the Norwegian stock exchange mentioned the phrase 'climate risk' in 2017 in their sustainability disclosures compared to 37 companies in 2018. Adding to this, TGG finds that in most cases no further elaboration or information is given. Actually, TGG could only find five out of the 100 companies examined providing additional information relating to climate risk assessments which was 'understandable for the reader'.

The financial regulatory body in Norway released a report in 2020, highlighting the capital markets as the frontrunners when it comes to climate risk assessments. Contrarily, the same segment had seemingly to a large extent bypassed climate change disclosure. Out of the 47 capital actors responding, only 29 had assessed climate change in general in their disclosures.

2.7.6.4 Main findings

The smaller the company in the Nordics, the less climate risk is incorporated in their sustainability reporting.

Even among the large companies, lack of KPIs and integrated climate risk assessment seems evident (only 2-3 actors out of the 100 largest in Norway had a risk assessments in their annual sustainability reports).

TCFD framework too comprehensive for Nordic companies, and in particular SMEs.

Climate risk not driver for sustainability-related activities, consumer demand is the primary driver. Lack of resources seems to be one of the main barriers for SMEs to access insights and know-how on understanding, assessing and integrating climate risk in their decision making, including linking it to financial risk.

Generalization of climate risk and frameworks for assessing climate risk seems difficult as the variations between different company-size and industries differ greatly. Tailor-made solutions are key, but resource demanding.

There are little insights on current climate risks opposed to SMEs, making it resource-demanding for SMEs to get started as they in many cases must "invent the wheel". Again, resource demanding.

PURPOSE

The overall aim with this chapter is to unfold and investigate the potential of the accountant as the primary user of the NSRS.

Chapter 2.8

The Accountant:

The Helping Hand SMEs Need to Get Started With Sustainability Disclosures?

Keywords:
Sustainability infrastructure, integration of the susThe accountants role in regards to SMEs, sustainability transitions and the role of the accountant, existing financial frameworks, user studies.

Topic:
The accountants role in regards to SMEs, and how the accountant can play a role in enabling SMEs to get started with sustainability disclosures.

Objective:
The accountant are in many cases the closest external advisors for SMEs. As the accountant already are gathering, structuring and reporting on financial data, the objective of this chapter is to investigate the potential of including non-financial data in the accountants practice.

"The role of Chartered Accountants is changing as the need to do business sustainably becomes more central to how companies and consumers operate. ... It will take commitment and it will take action,
and we are pledging both."

Barry Dempsey, CEO, Chartered Accountants Ireland

METHOD & APPROACH

In the first section of this chapter, we have conducted a scoping review to investigate the accountant´s potential role in a sustainability transition. In the second part we conducted a user study based on demographic surveys, statistics and interview performed through the accountant´s member organizations in Sweden, Finland and Norway in order to gain insights regarding the accountants current practice and thus explore the potential for integrating non-financial data in their current practice.

Main findings – The Accountant

1. The advisory side of the accounting business in the Nordics is high on the agenda given that core services within bookkeeping to a higher degree will be automated through RPA (Robotic Process Automation) and AI (Artificial Intelligence).

2. We find that many Nordic accounting firms are preparing themselves for delivering new services into the marketplace in addition to their core services.

3. We find that the accounting firms prioritize industry knowledge, domain insights and the ability to understand their customer needs.

4. In order to adapt to a changing landscape, SMEs are looking to their finance teams to have the skills to identify and understand a wider set of data and provide additional insight for the sustainability transition required.

5. SME stakeholders, from business owners and management to finance providers, government agencies and employees, need the raw material of the finance function – information – distilled into actionable insights.

6. Common for all types of accountant-SME-collaborations is that the accountant has a high degree of insights into the business, commonly called 'financial intimacy'.

7. Cost-reduction is the main driver for SMEs to engage with their accountants in optimising their businesses.

8. We find that integrated reporting is more useful and less of a burden for SMEs as they in most cases have less complexity in their value chains, and thus also in their financial reporting, compared to larger companies.

9. At the international and national levels, it will be necessary to develop new metrics and measurements of progress that look beyond economic output to factor in non-traditional measures such as human well-being and natural capital.

10. The external accountants serve approximately one million customers in Norway, Sweden and Finland.

11 The Nordic accountant typically handles a portfolio of between 20-50 SMEs (depending on size), with a Nordic average of 35.

12 The accountant are versatile – they can develop performance metrics and monitoring/auditing systems, they can set budgets, produce strategic plans and manage risk.

13 The accountant is working on reporting standards, valuation techniques and materiality assessments on a daily basis. Quality assurance processes and high integrity will add confidence to a sustainability report.

14 The accountant's role has shifted over the past 20 years; many clients also now expect their accountants to be 'trusted business advisers', including on the issues of corporate sustainability, rather than just 'number-crunchers'.

15 The majority of accountants, open for trying new things and open to sustainability as a topic, are middle aged female accountants commonly employed in a smaller company.

16 One common personality trait acting as a barrier for the average accountant to meet the demand as an advisor, is lack of confidence.

17 Most SME-business owners in the Nordics are male, and indications reveals that confidence is higher in this group compared to the average accountant (Guillen, 2018).

18 Thus, one evident barrier for the average accountant to evolve into the role as a sustainability consultant is the so called confidence-asymmetri (Guillen, 2018; Börjesson, 2020).

19 Most common softwares used by accountants in the Nordics is FortNox and Visma including Tripletex and Poweroffice.

20 It might be valuable for NSRS to draw inspiration from the steps in the user journey to the financial framework IFRS as the implementation process of standards in many cases are familiar to the Nordic accountant.

21 Lack of time is for the 'average' majority of the Nordic accountants main barrier for investing in learning new skills.

22 Spring is the busiest period for client compliance, therefore all the internal activities in a common accounting firm in the Nordics are normally scheduled during the fall.

23 Without specialized competencies within sustainability matters, the accountant cannot be the best advisor for their clients.

24 Education and practical tools are keys in order to prepare the accountant for the job as a sustainability advisor.

25 Partnerships: Accountants should establish collaboration with local environmental sustainability experts in order to gain local access to credible knowledge and data.

Chapter 2.8

The Accountant:

The Helping Hand SMEs Need to Get Started With Sustainability Disclosures?

In this chapter we want to investigate if the accountant is, or could, play a leading part in regards to a standard; potentially being the primary user of the standard, being the potential carrier of implementing and accelerating the use of the standard. The chapter consists of two main sections; 1) a thorough introduction to the accountants role and the accountants market-landscape and 2) the accountant as the primary user. The first section is conducted through as scoping review, while the other section is based on the findings of an empirical study conducted for the purpose of the development of this standard.

2.8.1
Accountants – a definition

The term accountants have different interpretations and content in different countries based on i.e. traditions and legislation. Normally, accountants are either;
- A State Authorized Accountant or Certified Accountant (External or internal bookkeeper)
- A State Authorized Public Accountant or Chartered Accountant (External auditor)
- A business advisor on financial reporting and/or taxes (Inhouse or an external advisor)
- A non-qualified accountant (accounting staff with some experience, but without a formal authorization or certification)

Titles used in the Nordics for accountants and auditors is outlined in the table below.

Common for all these types of accountants is that they have competencies and experience within one or more areas such as:
- Financial and tax reporting
- Bookkeeping
- Financial analysis
- Direct and indirect taxes
- Salaries and HR-administration
- Advisory services
- Corporate and tax laws
- Operational processes and routines
- ERP-systems and other digital solutions

In NSRS, we will use the term "accountant" for all the above-mentioned roles if not stated otherwise. We will not distinguish between internal and external roles, qualified and non-qualified accountants. Since the target for this standard is SMEs with limited resources related to finance, the normal situation will be that the accountant is an external advisor for the company in one way or the other.

2.8.2
The accountant's primary role today

The accountant's primary role today is to ensure that their clients (or company if they are internal) are compliant with laws and regulations, including bookkeeping, financial reporting and miscellaneous reporting to the government. Furthermore, the client / company receives financial reports in order to govern their own business. To some extent the accountant delivers relevant advisory services, but this is typically 10 % +/- of the recorded revenue stream for the accounting industry in the Nordic region.

Oxbridge Academy gives a useful overview of the general duties of an accountant that may include some or all of the following (Oxbridge Academy, 2018):

- Compiling financial statements (such as the balance sheet, income statement, and statement of profit and loss)
- Performing financial calculations

	Norway	Sweden	Finland	Denmark	Iceland
Accountant	Autorisert regnskapsfører	Auktoriserad redovisningskonsult	Kirjanpitäjä, KLT-kirjanpitäjä / KLT	Freelance bogholdere	Bókhaldir
Auditor	Statsautorisert revisor	Auktoriserad revisor	Tilintarkastaja KHT / HT / JHT	Statsautoriseret revisor	Ríkis löggiltur endurskoðandi

Table 6: Titles used in the Nordics for accountants and auditors.

- Reporting on financial performance
- Analyzing financial data to provide organizations with information that will assist in future planning and decision-making
- Assisting with the preparation of budgets
- Ensuring compliance with relevant financial laws and regulations
- Developing and implementing financial recordkeeping systems
- Supervising bookkeepers and accounting assistants
- Giving financial advice

U.S. Bureau of Labour Statistics defines accounting work as (Accountants and Auditors, 2020):

- Examine financial statements to ensure that they are accurate and comply with laws and regulations
- Compute taxes owed, prepare tax returns, and ensure that taxes are paid properly and on time
- Inspect account books and accounting systems for efficiency and use of accepted accounting procedures
- Organize and maintain financial records
- Assess financial operations and make best-practices recommendations to management
- Suggest ways to reduce costs, enhance revenues, and improve profits
- In addition to examining and preparing financial documentation, accountants and auditors must explain their findings. This includes preparing written reports and meeting face-to-face with organization managers and individual clients.

Career Explorer lists some of the duties that an accountant may have (Career Explorer, 2019):

- Determines payroll requirements; maintains payroll data; prepares and processes monthly payrolls
- Interacts with internal and external auditors in completing audits
- Explains billing invoices and accounting policies to staff, vendors, and clients
- Prepares and reviews budgets, revenue, expenses, payroll entries, invoices, and other accounting documents
- Analyzes and reviews budgets and expenditures for local, state, federal, and private funding, reviews contracts and grants
- Prepares profit and loss statements and monthly closing and cost accounting reports
- Analyzes revenue and expenditure trends and recommends appropriate budget levels, and ensures expenditure control
- Compiles and analyzes financial information to prepare entries to accounts, such as general ledger accounts, and document business transactions
- Supervises the input and handling of financial data and reports for the company's automated financial systems
- Resolves accounting discrepancies
- Establishes, maintains, and coordinates the implementation of accounting and accounting control procedures
- Recommends, develops and maintains financial data bases, computer software systems, and manual filing systems

All three lists show a variety of tasks an accountant performs for their clients. However, the list does probably not encompass all tasks and has a more traditional view on the tasks performed. Amongst others, technology advice is not specifically mentioned, but this area has grown in size the last few years due to the rapid development of cloud-based technology.

Wilmer L. Green states in his book "History and Survey of Accountancy";

"An accountants' primary function is to ascertain

the facts in a given case. There is an inherent obligation resting upon public accountants to set forth facts and not fictions, thereby protecting the public and the minority interest".

This is an important statement in regard to the current problem with "greenwashing" the information in the sustainability reports. The accountants, with their ethical framework, will be able to ensure trust in the reports (Green, 2016).

A survey conducted by Regnskap Norge in 2019, with 633 accounting firms responding, shows the following distribution of delivered services to their clients:
- Bookkeeping and year end closing (75,0 %)
- Salaries and HR (10,8 %)
- Advisory services (7,5 %)
- IT and digital services (4,7 %)
- Other services (2,0 %)

A survey conducted among its member companies by Taloushallintoliitto in Finland with 551 accounting firms responding, shows the following distribution in provided services:

- Bookkeeping and year end closing (58,0 %)
- Salaries and HR (17 %)
- Advisory services (10 %)
- Purchase ledger services (10%)
- Invoicing and accounts receivable services (6%)

IT and digital services are average 5% of the total turnover

Since sustainability was not a focus in our industry in 2019, it is believed that services related to sustainability reporting are negligible.

Based on a member survey 2017 at Regnskap Norge, the following areas were identified as most relevant for the members of Regnskap Norge:

- Core services / insight into regulations - accounting, direct and indirect taxes
- Economics and business intelligence
- Advisory services
- Salaries
- Technology
- HR
- Business development

In the same survey, they identified possible future services:

- Financial management and related advisory services
- Controlling, monitoring, processes
- IT
- Budgets and prognosis
- Analysis and KPIs
- Advisory services within Salaries and HR

At this point, sustainability was not a common interest in the society or in our business, hence not on the radar for the accountant.

In regard to sought after competencies for the future, a recruiting survey conducted by Regnskap Norge in 2019, 551 accounting firms responded that they would recruit staff with the following competencies and experience (prioritized list):

1. Broad knowledge within accounting and taxes, including salaries and HR
2. Year-end closing of the accounts and tax returns
3. Advisors / consultants
4. Industry insights and understanding the customers' needs
5. Technology
6. Sales and marketing
7. Other skills

On Finnish survey conducted by Taloushallintoliitto in 2019, 551 authorized accounting firms responded that the most important areas of expertise / strengths to be emphasized in the recruitment situation in addition to accounting and / or payroll skills are
1. Customer-oriented customer service expertise (28%)
2. Systems, their use and interoperability expertise (22%)
3. Special tax expertise (18%)
4. Competence in internal accounting, financial management and / or business consulting (16%)
5. Process expertise, maintenance and development (7%)
6. Corporate law and transactions (yritysjärjestely) (4%)
7. Supervisor skills, leadership and development (1%)
8. HR service expertise (1%)
9. Consolidated financial statements expertise (1%)
10. Salesmanship (1%)
11. Else (3%)

The recruitment prioritization shows that the majority of the firms will recruit more of the competencies they already have inhouse. This fact must be viewed in the light of the growing market for core services in Norway at the time of the survey.

But there are positive signals in relation to sustainability reporting. Clearly the advisory side of their accounting business is high on the agenda given that core services within bookkeeping to a higher degree will be automated through RPA (Robotic Process Automation) and AI (Artificial Intelligence). Accounting firms are therefore preparing themselves for delivering new services into the marketplace in addition to their core services. The accounting firms also prioritize industry knowledge/domain insights and the ability to understand their customer needs. These skills are paramount in order to deliver good quality sustainability reporting. Even though sustainability was not high on the agenda at the time of the survey, the competencies and experiences sought after are quite suitable for working with sustainability issues.

ACCA states the following in their report "Accountants for small businesses" (ACCA, 2013):

"Although it is sometimes assumed that SMEs' accounting needs are driven by regulation, they are in fact mostly driven by genuine business and stakeholder needs. SME stakeholders, from business owners and management to finance providers, government agencies and employees, need the raw material of the finance function – information – distilled into actionable insights."

"It is hard to over-emphasize how varied the role of the finance professional can be in a small business, where distinct business functions cannot be resourced and formalized. In fast-growing businesses, the role becomes even wider: entrepreneurs need to hire complete finance professionals who can support an SME today but also lead the large business it is likely to become. In fact, properly resourced and formalized business functions occur quite late in a business's life – hence businesses' innovation potential peaks at medium size (Forbes Insights 2011)."

2.8.3 The future role of the accountant in relation to sustainability

In order to understand the future role of the accountant regarding sustainability, ACCA and A4S conducted a global survey in 2014 amongst

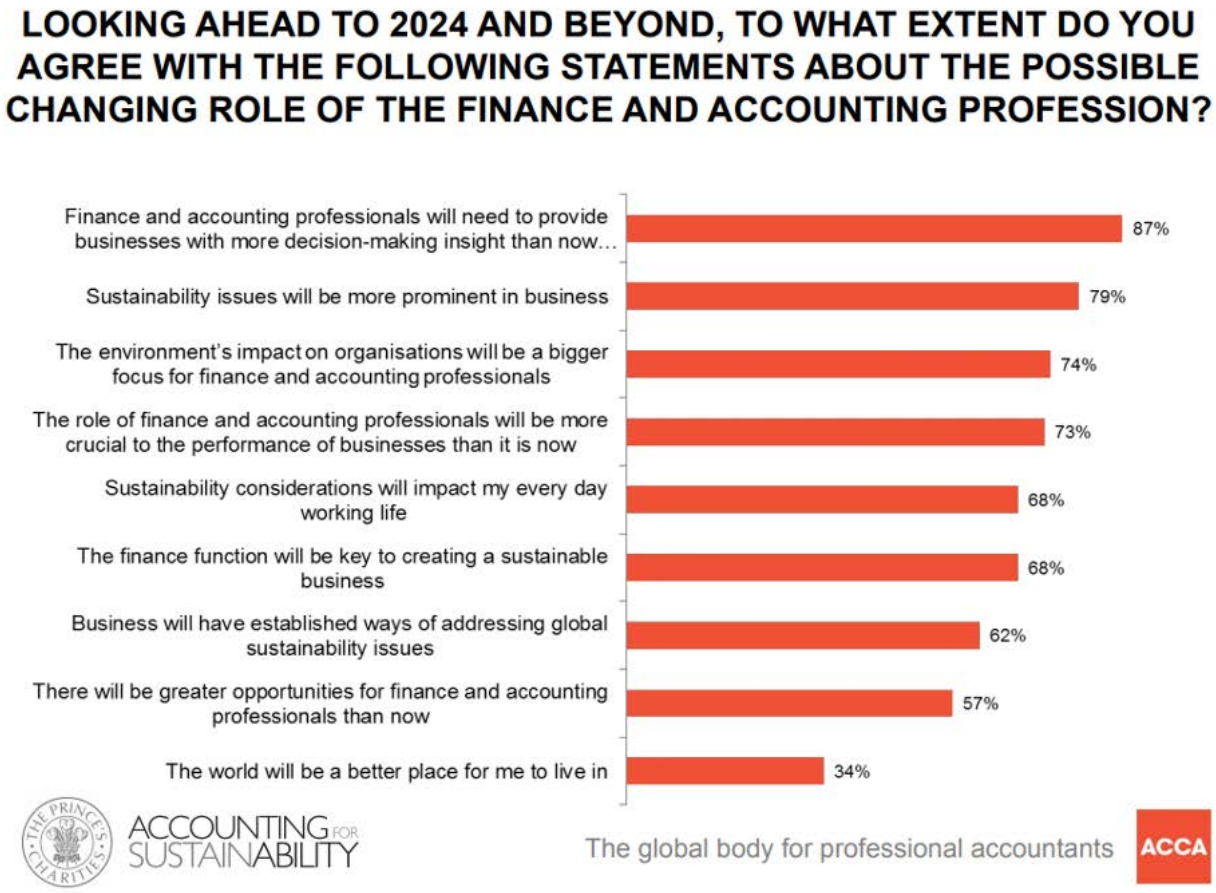
4.737 ACCA students (ACCA Global, 2014). The students view on the future were:
In the same survey, the students conclude that the accountants will have a more important role regarding sustainability in the future than they have now.

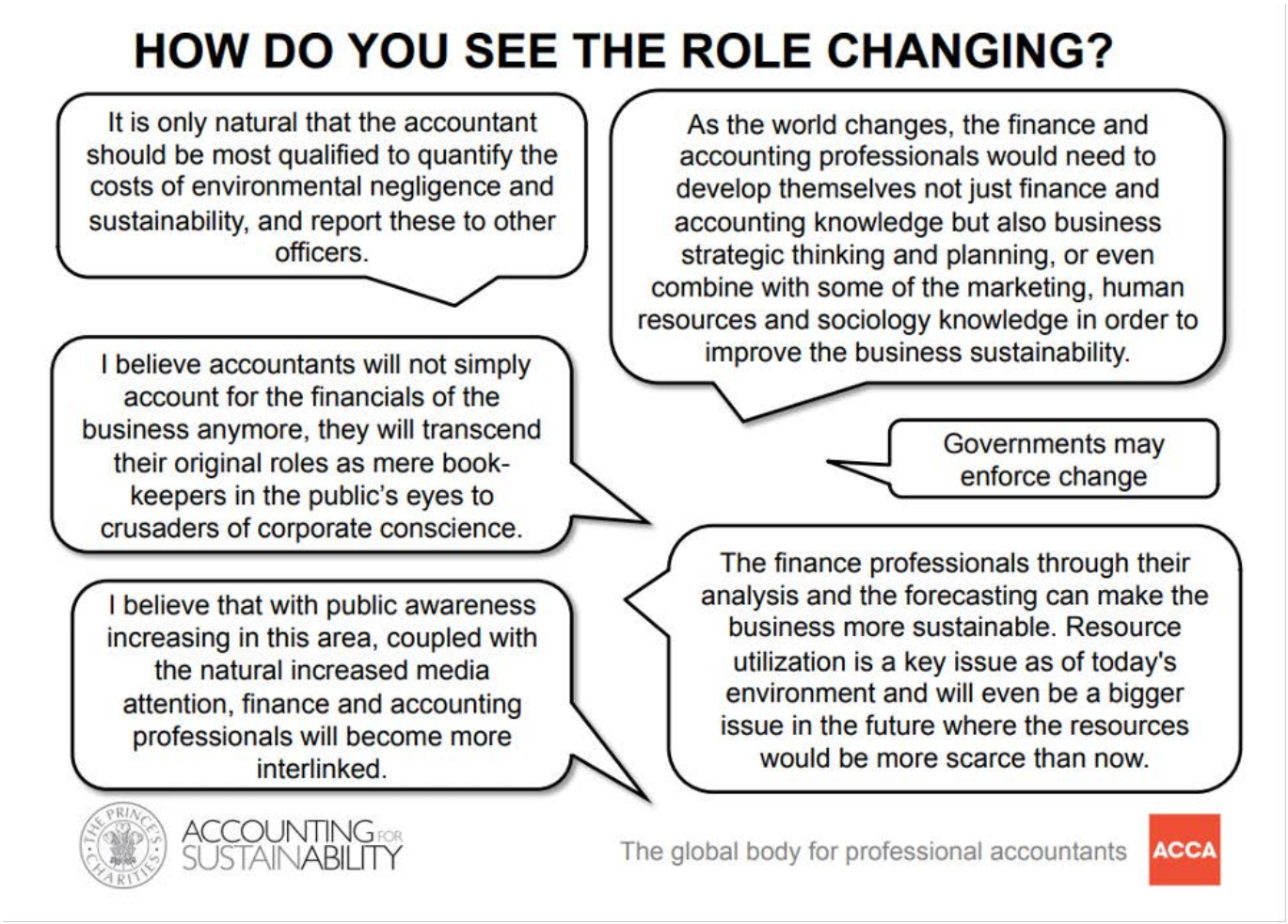
At Accounting for Sustainability (A4S) they even argue that the accountants can save the world (A4S, 2018). This view is also "supported" by Jane Gleeson-White in her book "Six Capitals, Or Can Accountants Save The Planet" (Gleeson-White, 2015). The ambitions for the future role of accountants are high, but also somewhat realistic given the role the accountant has towards SMEs and the broad competencies in the accounting industry.

2.8.4

The similarities of financial and sustainability reporting from an accountant's view

The accountants current core services consist of gathering data / information from different sources, structuring this data into systems, analyzing data and reporting - in order to relay information to their client and other primary users of the information such as the government. For financial reporting, the accountant gathers ingoing and outgoing invoices, bank transactions, receipts, cash transactions etc. These documents and transactions are entered or read into an ERP-system. Taxes are calculated and reported to the government. Suppliers are paid, customer payments are registered, and employees are paid. Draft reports are analyzed, accounts are reconciled, numbers adjusted, and the final report is submitted.





This same process is also applicable for sustainability reporting with one major difference; not all numbers are represented in a monetary value (i.e. non-financials). An example of a high-level process for sustainability reporting may be:

1. Gather data from different sources, internal and external
2. Structure data that are related to each other
3. Give data a value (monetary or non-monetary value)
4. Assess materiality and relevance
5. Enter data into a (reporting) system
6. Reconcile and check quality of data entered
7. Analyze and evaluate reasonableness
8. Adjust data
9. Report information
10. Ensure external verification / audit
11. Publish data

The major difference from the financial process is the access to adequate domain knowledge within the area of non-financial information such as environmental impact on products and services.

Most legal frameworks for accountants have a demand for capacity and competency in order to deliver services to their clients in a professional manner.

The accountant should therefore never use this process for sustainability reporting unless they have access to domain knowledge in order to:

- Qualify sources and understand the data
- Value non-monetary items correctly
- Analyze reasonableness and materiality
- Understand the results that are reported

2.8.5
The accountant is the closest advisor to SMEs

The external accountants serve approximately one million customers in Norway, Sweden and Finland. External audit is not specified specifically in this number. The services delivered encompasses bookkeeping, financial and tax reporting, quality assurance of the reporting, and relevant advisory services.

The nature of the collaboration between the accountant and their client is diverse, but a large number of the SME-clients are in contact with their accountants on a frequent basis, some as often as daily. Other SME-clients are in contact with their accountant on a monthly basis in relation to salaries, bi-monthly in relation to indirect taxes, or less frequent for SMEs without material activity.

Common for all types of collaborations is that the accountant has a high degree of insights into the business. All invoices, payments, contracts will at some time pass the accountant in their preparation of the financial reporting, and give the accountant first hand information on daily activities. Hence, the insights into resources used by the company that has an impact is on a detailed level. This will be a good basis for collecting sustainability information for reporting purposes.

A survey conducted by Regnskap Norge in 2010 with 1531 respondents amongst the accountants' clients revealed who they would ask first for economic advice if they had a problem. The results were as follows:

- Auditors 33 %
- Accountants 26 %
- The bank 16 %
- Other advisors 15 %
- Don't know 10 %

If the client already used an accountant, the numbers were a bit different:

- Accountants 37 %
- Auditors 26 %
- The bank 17 %
- Other advisors 13 %
- Don't know 7 %

The same survey shows that SMEs are more likely to use the accountant as the primary external advisor on economic issues than larger companies. This is due to the fact that SMEs to a larger extent use an external accountant. For larger companies, the auditor is preferred.

2.8.6
They collaborate frequently - but are they satisfied with the collaboration?

EPSI Rating Norway publishes annually the results of a survey on customer satisfaction across industries. Norwegian accountants (both external bookkeepers and external auditors) score consistently high from year to year. In 2019 Norwegian accountants were rated on a scale from 0-100:

- Accountants 75,9
- Auditors 75,6

In Sweden the accountants receive a score of 72,1 from EPSI Rating Sweden. Lower than Norway, but still a very high score compared to other industries in the survey.

According to EPSI Rating, a score above 75 shows a strong relation between the customer and the

supplier. Customers are clearly satisfied with their accountants. This is a fundamental basis for a strong collaboration between the accountant and the customer in relation to preparing the sustainability reporting.

A study performed by Xero in 2017 for the South African Institute of Professional Accountants states:

"The research suggests that SMEs have great respect for accountants: 65% of SMEs see them as their most trusted business advisers, 23% of SMEs frequently ask them for non-financial advice, and 27% have done so on more than one occasion. This advice was seen as important by 74% of respondents.

Branching outside of the accountant's compliant comfort zone should be a priority: 52% of SMEs believe that the role of accountants will change significantly. Becoming business advisors rather than bean counters is an obvious, and profitable, move for industry professionals. Some 62% of SMEs believe that added value is a 'very important' consideration when choosing an accountant, and 27% believe it's 'important'."

ACCA discusses the accountant's role in sustainability reporting in the article "Sustainability matters" (ACCA Global, 2014):

"Sustainability needs to be measured, reported and assured and all these areas fall under accountants' remit. Accountants have an important role to play in helping companies embed sustainability into their corporate strategies, and are very well placed to do so, confirms Gordon Hewitt, sustainability adviser at ACCA. A company's finance function is responsible for producing much of the management information that forms the basis for internal strategy as well as reports for external stakeholders. A business can only modify its behaviour if they have good quality, trusted information. When looking to address sustainability issues, companies can only manage what they can measure so it's important that accurate, complete and reliable information gets collected, says Hewitt.

In organisations where sustainability reporting is yet to be adopted, accountants have just the right knowledge and skills to help develop a credible standard of reporting. They recognise the need to be accountable to external stakeholders and the need to operate to good governance and ethical standards; they can develop performance metrics and monitoring/auditing systems, they can set budgets, produce strategic plans and manage risk, says Conway.

Many accountants are also good team-players and able to work with colleagues in the areas of the business beyond the finance function, which is important as sustainability reporting requires inputs from across the organisation and incorporates a lot of non-financial data. However, they must also be prepared to acquire new skills in developing verifiable non-financial measures for issues that cannot be easily monetised, and in enhancing estimation techniques and forward planning, especially in areas that are more subjective than many traditional accounting measures such as environmental or health impacts, points out Conway.

Practice clients also now expect their accountants to be 'trusted business advisers', including on the issues of corporate sustainability, rather than just 'number-crunchers'. The accountant's role has shifted over the past 20 years from a reporter of

historical performance to being much more the forecaster and the business planner, says Russell. This trend will almost certainly continue as the financial services industry is now increasingly pointing out that historic performance is no indication of future performance."

Further:

"ACCA believes that accountants, whether working in business, in public practice or the public sector, have an important role to play in making organizations more accountable in the pursuit of sustainable development. At the international and national levels, it will be necessary to develop new metrics and measurements of progress that look beyond economic output to factor in non-traditional measures such as human well-being and natural capital. Accountants working within both the public and private sectors will need to develop methodologies to address factors such as these, since their effective management is critical to the health of the planet, and society as well as to individual businesses."

In the report "Environmental Aspects of Sustainability: SMEs and the Role of the Accountant" (Spence, 2012),

"The 'most trusted adviser' for SMEs is their accountant (Bennett and Robson 1999; Blackburn et al. 2010). This status has been understood to be a primary reason why, in addition to their financial services, small and medium sized accountancy practices (SMPs) routinely give advice to their SME clients on a wide range of topics, including taxation, financial management/budgeting, succession and debt administration (Marriott and Marriott 2000). There is also some evidence of, and interest in, the provision of advice on more general business topics such as administrative routines; organizational issues; human resource management; salary administration and training; marketing and strategic planning; and health and safety (Gooderham et al. 2004; Dyer and Ross 2007; Blackburn and Jarvis 2010; Hasle et al. 2010; Jarvis and Rigby 2011).

This research study investigated the potential for further widening SMP advice provision to include the topic of environmental sustainability. This is of interest because sustainability and corporate social responsibility have been identified as emergent key issues for the accountancy profession, alongside the importance of addressing SME needs (IFAC 2010, 2012)."

Key findings in the report are:

Where the SMPs in the sample were offering environmental sustainability advice to SME clients it generally pertained to cost reduction opportunities that could be identified in areas such as energy consumption, transport costs, and generic resource input reduction (eg paper).

Where environmental sustainability was being discussed between SMEs and their accountants, any advice tended to be ad hoc and provided only informally as part of a conversation. Resources drawn upon included:
- personal interest on the part of the accountant in environmental sustainability; very occasionally, an accountant possesses more formal training/ qualifications on environmental matters on which to draw
- personal experience or knowledge of other clients' experience
- the professional and peer-based trust relationship between an SME and an SMP with a

proven track record
- the existing multipurpose nature of SME/ SMP exchanges (ie beyond straightforward accountancy/financial services).

2.8.7
Integrated reporting favors the accountant

Sustainability reporting today is presented either as a separate report or as an integrated report combined with the financial report. There are discussions amongst the professionals in the sustainability community about what is more useful. Larger companies have large presentations of their sustainability targets and sustainability work. They may choose either a separate report or an integrated report. SME-companies will have less to report since their activities are less material in relation to impact etc. This fact will support an argument that integrated reporting is more useful and less of a burden for SMEs. The content is presuming to be the same regardless of reporting format.

Since the accountant is already working with the financial reporting, it is natural that the accountant takes the role as the lead preparer of the non-financial part of the reporting. Their insights into the business will make sure that the financial and non-financial reporting is harmonized and relevant.

2.8.8
Is the accountant capable to gain relevant knowledge in the sustainability area?

Above, we have argued the fact that the working method for financial and sustainability reporting is quite comparable. The accountant's insights into the business is at a detailed level, and the clients are very happy with their accountant. Further, the accounting firms are hiring more advisors and focusing more on industry insights and customer needs.

Still, is this adequate in order for the accountant to be able to deliver good sustainability reporting?

The answer, in general, must be no. Without specialized competencies within sustainability matters, the accountant cannot be the best advisor for their clients. But there are two views on this matter:
- The accountant as a financial and sustainability reporting expert
– The accountant as a reporting expert coordinating financial and non-financial reporting items as a project

The latter view will probably be the most relevant situation. It is difficult to be a subject matter expert on both financial and non-financial issues with a high level of credibility. At least in the nearest future. Hence, the accountant must either employ subject matter experts on sustainability to the accounting firm or hire external expertise on demand by collaborating with another business partner within sustainability.

"In order to develop the capabilities necessary to offer environmental sustainability advice to SMEs, the main challenges for the accountants are the acquisition of the technical knowledge relating to environmental sustainability and gaining the understanding of how to use their accounting-based skills to measure and report on these in a manner suitable for the client." (Spence, 2012).

The documented close relationship between the accountant and the client substantiates trust. Therefore, the accountant will be able to be a trusted coordinator for the full reporting of financial and non-financial reporting regardless of the accounting firms inhouse competencies and experienced staff.

Understanding what is needed of capabilities in order to be able to prepare a sustainability report, the following table shows to what degree the accountant can contribute to the process:
According to ACCA the key areas in which accountants can apply their skills are:
- Reporting – with their long experience of reporting, accountants know how important it is to understand the regulatory, voluntary, and legal reporting environment in which business and government operates, and automatically keep abreast of any changes which may impact on reporting scope or legal requirements.
- Risk – accountants can give advice on risk management, and on the implications for an organization if it opts to start reporting on sustainability issues voluntarily.
- Establishing frameworks – accountants have a deep understanding of how to collect, measure, and analyze relevant information. This means they are able to develop frameworks which embrace new sustainability information, and which suit the circumstances of their own organization. This skill is vital, as at present there is little specific guidance from government, and the capture and collation of social and environmental data will not be as easy for some organizations as it is for others.
- Policy – it often falls to the accountant to determine organizational policy on 'necessary to report' decisions; they are therefore well placed to advise on the reporting of sustainability issues, identifying what should be covered by a report.
- Information provision – accountants are trained to provide clear and reliable information and, where required, assurance of this information; they are also able to gather the evidence required to support a business case and establish the necessary supporting processes and procedures.
In addition, many senior accountants report directly to senior management or the Board – to do this effectively, an accountant has to know the business inside out and, as a result, can link sustainability issues to organizational performance.

Furthermore, Spence state in the study (Spence, 2012) that;

"Nevertheless, there are a range of capabilities that the present research indicates need to be developed in order to support SMPs in providing environmental sustainability advice. In particular, SMPs need:
- the confidence to adapt their accounting skills to environmental accounting tasks such as cost analysis in areas such as energy, waste, water, transport and environmental protection
- detailed knowledge of environmental sustainability issues and regulations such as the Green Deal in the UK, or the European Water Directive
- access to arguments for the 'business case'
- the support of a profession seen as credible in the area of environmental sustainability.
Capabilities can be developed through:
- awareness of potential information sources on environmental sustainability (including relevant regulation)
- education to understand specific environmental sustainability issues for business, such as the implications of resource depletion and energy scarcity
- knowledge of the SME aspects of the ISO14001 and Global Reporting Initiative (GRI) standards and industry-specific regulations and standards
- training in specific environmental accounting techniques (including development of environmental auditing skills; knowledge of carbon costing, etc)."

2.8.9
The accountant as the primary user

A question to be answered is whether the accountant is the primary user of the standard or the clients themselves.

The client has through their business activities in depth domain knowledge of the industry that they operate within. This includes environmental, social and governance issues (ESG). However,

Capability needed - to be able to:	Accountants capability to add value to the step
Perform sustainability risk identification (based on frameworks such as NSRS, SASB, GRI etc)	Partly - through their understanding of the client's business and through insights from invoices
Identify legal requirements for sustainability reporting	High – Knowledge on legal reporting requirements for financial reporting is part of basic training
Gather data and put financial and non-financial values to components related to the identified risk areas	High - with the help of sustainability tools that put value to relevant components (EPD etc)
Perform materiality assessment related to the company's own impact / ESG	Partly - through their understanding of the client's business and through insights from invoices
Perform materiality assessment related to the whole value chain / the wider impact	Not likely - but to some degree be able to gather and analyse information related to the nearest suppliers and customers
Perform an evaluation process on reporting criteria's such as: • Relevant • Specific • Clear and understandable • Consistent • Comparable • Reliable and verifiable • Timely	High - these capabilities are quite common in preparing traditional financial statements
Compute and monetize relevant components for reporting purposes	High - with the help of sustainability tools that put value to relevant components (EPD etc)
Prepare verbal descriptions for reporting purposes	Partly - through their understanding of the client's business and through insights from invoices
Preparing the draft reporting	High - this is a common process in preparing traditional financial statements

Table 7: *What accountants can contribute with in regards of sustainability reporting.*

there are many small companies that do not focus on reporting to external parties such as owners, banks or the authorities. Further, they are normally not capable of putting resources into understanding reporting standards, valuation techniques and materiality assessments to mention some relevant themes. Therefore, they most likely need to get external help in order to comply with standards and reporting demands.

On the other hand, the accountant is working on reporting standards, valuation techniques and materiality assessments on a daily basis. Quality assurance processes and high integrity will add confidence to the report.

The client has domain expertise, the accountant reporting expertise. A combined effort is needed in order to deliver good and relevant sustainability reporting. Since the end product is a true and honest sustainability report, it is natural that the accountant takes the lead in the process to gather data, structure, analyze, do quality assurance and report. Hence, the primary user of the standard would be the accountant, better qualified than the client.

2.8.10
Accelerating the use of the standard

The accountant typically handles personally a portfolio of 20-50 clients - depending on client size and complexity. In Norway there are 410.000 clients and 11.700 authorized accountants, giving an average of 35 clients each. Therefore, each accountant has a considerable reach into the marketplace, better than the individual companies themselves. A firm with many authorized accountants has a relatively large client base that may be interested in sustainability reporting.

Building internal capabilities within sustainability at the accounting firm also enables the accountants to deliver sustainability reporting in a methodical and structured manner to several clients in their portfolio, enabling scaling the business with profit.

Deploying the standard into the market may happen in two ways:

– The client requests the accountant to help them with their sustainability reporting needs (pull strategy).
-
- The accountants motivate the client to start reporting on sustainability based on the standard and based on trends in the marketplace (push strategy).

It is assumed that the deployment will be fueled by

Box 1: Environmental accounting, auditing and management functions

Cost analysis in areas such as energy, waste, water, and environmental protection

Budgeting and investment appraisal programmes to include environmental factors

Cost-benefit analyses of environmental programmes

Development of the accounting and reporting system to cover all areas of environmental performance.

Establishment and maintenance of environmental management systems and complying with international and European standards (eg ISO 14001)

Product life-cycle assessment

Eco-label application

Pollution prevention programmes

Development of environmental auditing

Environmental business plans, including costs, investments and revenue projections.

Adapted from: Gray and Bebbington (2001)

both scenarios, but that the accountant is better positioned to accelerate the implementation due to their market reach.

2.8.11
The Nordic accountant – user insights

Implementing non-financial disclosures in an accountant's practice does make a lot of sense, hence the previous paragraph, but when diving into the details it is rather complex. How will an integrated reporting practice look like in the Nordics?

We do not claim to have the answer. However, we are giving it a try by an ambition of regional adaptations and a tailor-made approach. The need for user insights is prominent as it will serve as a steppingstone for the development of a standard as such. In the following section we will outline who the Nordic accountant is, and what their practices are. This user study is based on demographic surveys, statistics and interviews from the accountant's member organisations in Finland, Sweden and Norway.

The aim of this section is to get deeper insights into who our primary user is. We will unpack who they are, what their needs are, what their costumers wants and their annual user activity cycle. Secondly, we will present the accountants business model. We will end the user study section by giving a thorough introduction to the leading financial framework, well known to the accountant. Finally, a user story of the leading financial framework is presented.

2.8.12
Who are they

We wanted to investigate the demography of the Nordic accountant today in order to generate deep insight about this particular user-group. Based on member surveys and statistics covering a wide range of demographics we developed three archetypal profiles and user personas.

Investigating the demographic of the accountants in the Nordics lead us to three main archetypes of personas and profiles. As the figure suggests, the three types we found consisted of the "old school", the "mix" and the "front-runner". The pictures are displaying each persona in detail fleshing out their characteristics and relationship to sustainability. These three personas represent the average accountant in the region based on the input data from the accountants member organizations in Sweden, Finland and Norway. However, we emphasize the importance of not taking the personas literary as they are the sum of the demography and not actual individuals.

2.8.12.1 Main findings

By developing the user personas, it became evident that the majority of accountants, open for trying new things and open to sustainability as a topic, are middle aged female accountants commonly employed in a smaller company. A so called "Mix" in the user persona figure. We suggest targeting this user group as this is the largest segment of accountants in the Nordic. Furthermore, it is beneficial that this group seems to be open to sustainability as a topic (as opposed to their elder male counter parts that seems to have more resistance towards sustainability per today) on a personal level, but it is evident that investing in competence is a key as most accountants in this group do not see how sustainability links to their profession. Furthermore, this group of accountants has knowledge and the deep insight into their client's needs – so called "financial intimacy", but it seems that many accountants does not have time and

confidence to play an active role as an advisor in a changing landscape. The accountant is often very focused on compliance. However, there seems to be a potential for integrating a wider view on their services such as advisory, automation and other trends. The third user group, "the frontrunners", seems to be open for change. However, this group of accountants has less experience and thus also in many cases not so deep client relationships. But, as this group seems to be eager to learn and explore new landscapes in combination with high openness to sustainability as a topic, we suggest exploring a way where this group of accountants could support the great majority of accountants when it comes to learning, digitalization and new thinking in the field.

The "old school" persona is the smallest group of accountants. As they commonly have large networks in local communities, engaging this group of accountants seems to have the potential to lead to multiple ripple effects in local communities. However, this group of accountants seems to have little openness to both digitalization and sustainability as topics. In a phase of establishing the standard we therefore see greater benefits of targeting the middle majority first and foremost, and to some extent the front-runners. The latter group mainly for spreading the word through their channels.

2.8.13
What does the client say about them?

What the clients asks for, does not always correlate with what would serve the accountant the best. This is evident as a decoupled demand and supply materializes when analyzing client surveys, searching for the needs of the client and the relationship to their accountant. The figure below presents the main findings of what the client wants from the accountant.

2.8.13.1 Main findings

It appears that the clients yearns for more advisory-related services and personal contact with their accountants. This seems to be a window of opportunity for the Nordic accountant to extend their services. Even though many clients state that they only need compliance, it seems to us that the clients might need services beyond compliance as their pains are related to their own lack of financial know-how and insights on how to integrate these findings in their business model.

2.8.14
Gender equality: A potential pitfall of confidence-asymmetry

As most Nordic accountants are women, and the majority of entrepreneurs utilizing accounting firms are men, it is relevant to emphasize the potential gap between the male entrepreneur who has high trust in his own skills compared to the female accountant who in reality might have quite a lot of skills that would have been beneficial for the male entrepreneur, but don't offer it due to lack of confidence. This confidence-asymmetry might be beneficial to include when designing (Guillen, 2018; Börjesson, 2020).

2.8.15
Annual activities

Using data from the the accountants member organisations in Sweden, Finland and Norway, we gained insights on the daily routines and current practices of the Nordic accountant. The findings of this study are presented through an annual user activity cycle as shown below.

2.8.15.1 Main findings

Spring is the most busy period for client compliance, therefore all the internal activities in a common accounting firm in the Nordics are normally scheduled during the fall.

1 "Old School"

2 "Mix"

3 "Front-runner"

USER PERSONA: OLD SCHOOL

Name: Bengt

Age: 62 years
Occupation: Accountant
Location: Self employed in a small city.
Status: Married, adult children.
Hobby: His job is his hobby.

Personality Type:
Blue - Analytical. Not very open to change, experience himself as a logic person. Social, but not emotional.

Quote:
"I am the (self-appointed) trusted advisor for my clients."

WORK PRACTICE:
He utilises modern accounting programs, but prefer printing and his personal folder system he has been using during his entire career. Not interested in apps and dashboards. He is proud knowing how to perform income tax return manually on paper.

HIS CLIENTS:
Long client relationships, same generation, sometimes also personal friends. He has both annually and months/quarterly touch points with his clients. As he is an active participant in his local community, all his clients are local. No digital meetings.

BIO:
Bengt has been working for 40 years as an accountant and he is proud of his long experience and long client relationships. He lives is in a small city, has a name in his local community as he is actively engaged in the local Rotary-club and other local associations. He feels a lot of responsibility to his local community. He likes red wine, traveling and golf. Life is stable and good. He is not interested in all the sustainability-stuff.

Motivations: Sense of responsibility and commitment. To make a difference in my local community.

Goals: Earn good money and have a stable and good life in a good community.

Needs: He is well-established, so it is important to him to not "rock the boat".

Frustrations:
New technology: Clients asking for cloud-based or app solutions.

Sustainability

Openness to the topic 100%

Knowledge 100%

Relates/act to it personally 100%

Welcomes the change 100%

Tech savyness:

IT & Internet 100%

Software 100%

Mobile apps 100%

Social Media 100%

Icon retrieved at Freepik.

USER PERSONA: MIX

Name: Maria

Age: 51 years
Occupation: Accountant
Location: Employed in a smallcompany in a small city.
Status: Single
Hobby: Her dog

Personality Type:
Blue with a bit green - Analytical. Loyal, caretaker, committed to her job.

Quote:
"...but if I don't help them, who will?"

WORK PRACTICE:
Traditional accounting firm that utilise the digital book keeping software Fortnox. Wants to use more automative functions, but doesn't know how to start. She feels a lot of responsibility towards her clients. She follows them up personally by reminders. She answers e-mails at night. She is so loyal, that it is challenging for her to end the client relationship. She is not specialized, but takes pride in knowing many company types and industries.

HER CLIENTS:
She has a wide client segment, as everyone are welcome. She knows a bit about a lot, which is reflected in her customer segments. Many self-employed and smaller companies.

BIO:
She works in a small accounting firm with 3 employees. She works long hours, year around. After 30 years in the industry, she is proud to say that work always is her highest priority as she feels personal responsible for her clients. She feels her clients, or even her boos, don't always understand how hard she works on their behalf. She loves her dog – and brings it to work. She knows a lot, but don't have the confidence, neither the time, to start acting as an advisor for her clients. She is a bit more open to changes, as long as it is not to time-consuming.

Motivations: Sense of responsibility and loyalty. Do a good job.

Goals: Help her clients prosper.

Needs: To meet all compliance deadlines and don't make any mistakes.

Frustrations:
She understand the need for automation in her work field, but she has no time to stay up to date and be a frontrunner in the field.

Sustainability

Openness to the topic 100%

Knowledge 100%

Relates/act to it personally 100%

Welcomes the change 100%

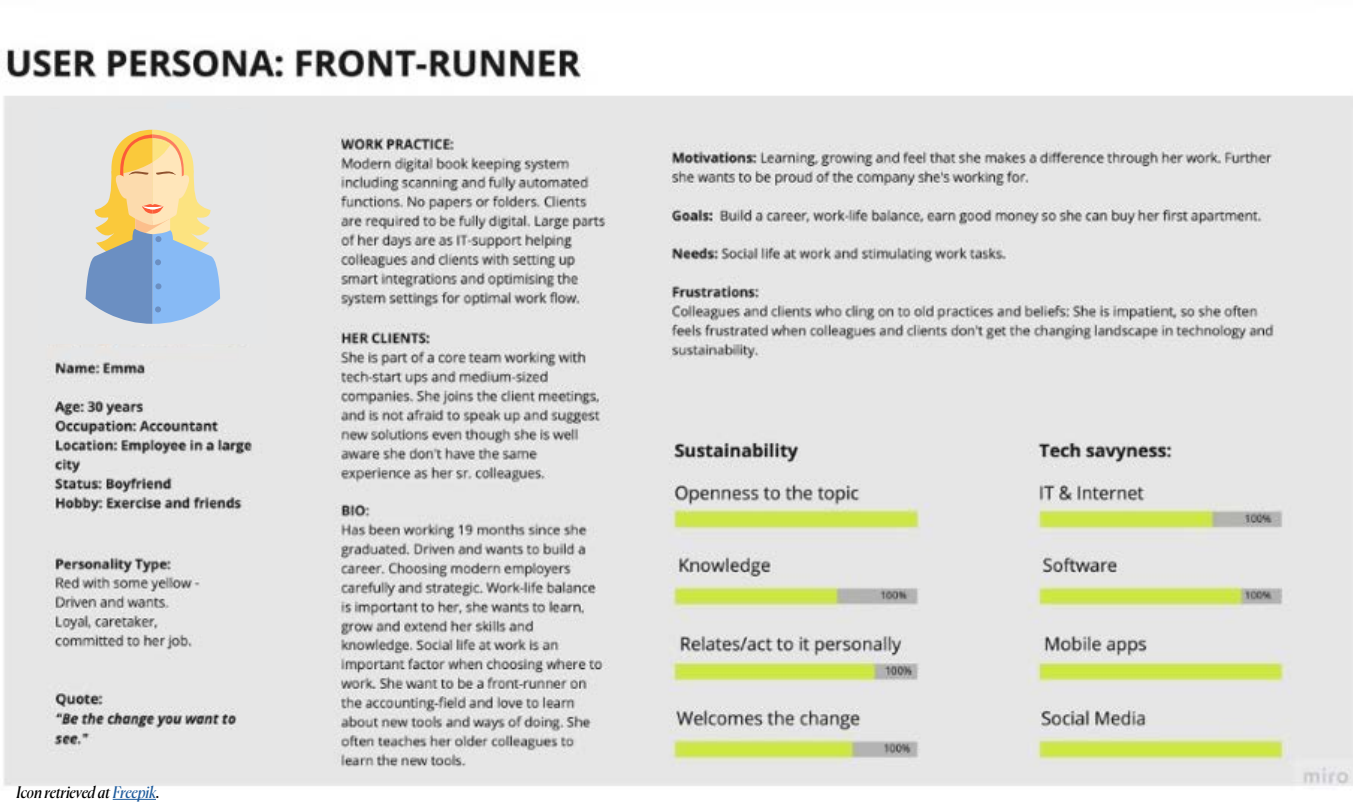
Tech savyness:

IT & Internet 100%

Software 100%

Mobile apps 100%

Social Media 100%



Icon retrieved at Freepik.

2.8.16
Tools: Most common software among Nordic accountants

Most popular software packages for accounting for accountants, in Sweden: (Source: Srf konsulterna):
- At least 80% in Sweden utilise FortNox
- Visma
- Wolters Kluwer
- Hogia

Most popular software packages for accounting for accountants, in Norway: (Source: Regnskap Norge, Teknologiundersøkelsen 2020):
- Visma (including Tripletex and Poweroffice)
- Duett
- Uni Micro
- 24SevenOffice

2.8.17
Existing financial reporting frameworks

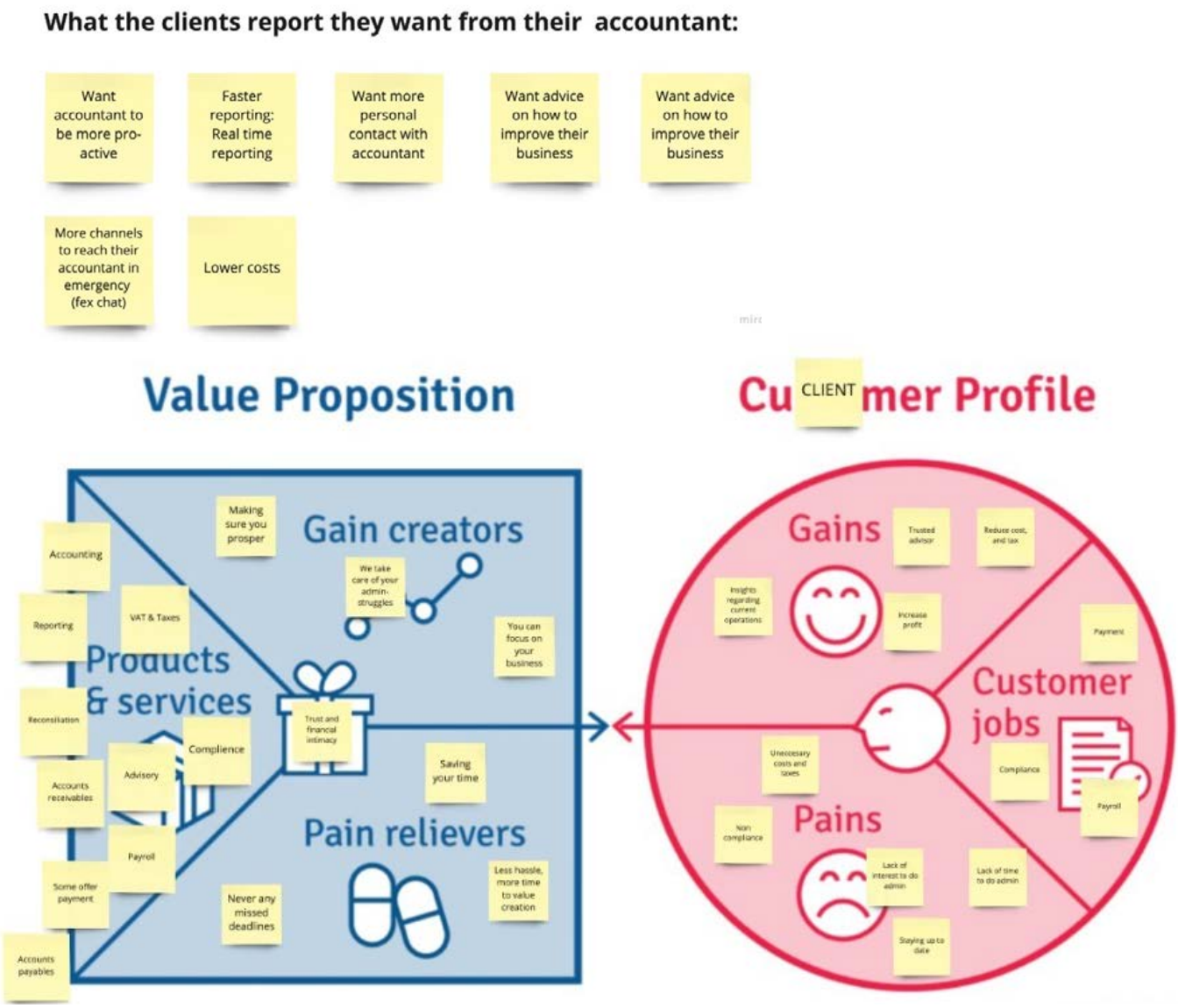
IFRS (International Financial Reporting Standards) is developed by the IFRS Foundation and its standard-setting body "International Accounting Standards Board" (IASB). IFRS is the dominating financial reporting standard worldwide. However, full IFRS is complex and requires large resources to be able to report on the requirements. Hence, IFRS is mainly adapted by larger listed enterprises and not smaller or mid-sized entities. Therefore, local jurisdictions have in addition a set of financial reporting frameworks tailored to meet the needs of non-listed entities, smaller entities and special purpose entities.

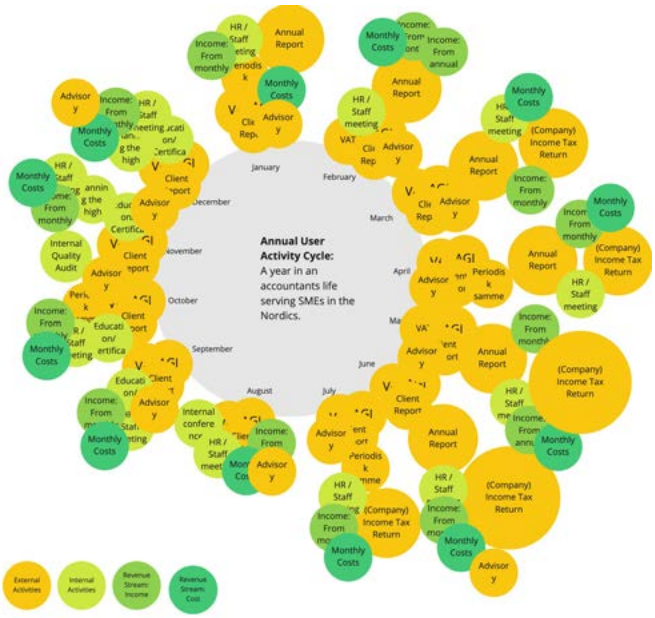
Below is a table of the current financial reporting frameworks for the Nordic countries. IFRS is only mandatory for listed companies and companies with traded debt and equity instruments. This is in accordance with EU regulation. IFRS may be used voluntary as a framework for the holding company and the consolidated statements for the group accounts if the company is audited. Voluntary use of full IFRS may also apply to ordinary larger companies, but due to cost/effort considerations,

hardly any company do this. IFRS for SMEs, specifically developed for small and mid-sized entities, is not in use in the Nordic countries. Norway is the only country that has stated an intention to implement IFRS for SMEs as a part of the accounting regulation in the future.
The close connection between financial reporting and the basis for taxation in the Nordic countries underline the need for a local act that is different from IFRS. Hence, the process of adopting IFRS and IFRS for SMEs for all companies will probably not happen in the nearest future in the Nordic countries.

Most countries have a simplified version of the local accounting act for small entities. The definition of a small entity may vary, so also how the simplification is implemented.
In addition to the accounting act/financial reporting framework, all countries have national accounting standards developed by national standard-setting bodies to interpret the laws and regulations in more detail. These underlying standards are not listed here due to the large number that exists in each country.

Special financial reporting frameworks are available for i.e. governmental bodies, not-for-profit organizations, foundations, voluntary





organizations and companies with limited accounting requirements. Several of these are applicable for small and mid-sized entities.

Transitioning from a simpler reporting level to a higher reporting level implies that the reporting information is more detailed, especially in the notes to the financial statement. Further, the accounting principles become more complex (typically recognition and measurement). Simplifications are usually no longer available as an option. A company may not reverse the transition from a higher reporting level to a simpler reporting level unless the company is no longer a listed company or certain objective thresholds are met. As a rule, a company may not change financial reporting levels too often since that may compromise the comparability over time. In summary, you are encouraged to move upwards, but you must be very careful moving downwards.

IFRS 1 "First-time Adoption of International Financial Reporting Standards" sets out the procedures that an entity must follow when it adopts IFRSs for the first time as the basis for preparing its general-purpose financial statements. The IFRS grants limited exemptions from the general requirement to comply with each IFRS effective at the end of its first IFRS reporting period.

There are some fundamental differences between local accounting acts and IFRS. Typically, local accounting acts are mainly focused on the profit & loss statement (linked to the taxation). IFRS, however, is more focused on the balance sheet. Transitioning to IFRS, the company must review its business model, all its activities, contracts, collaborations, assets and debts to see if all relevant balance sheet items are taken into consideration. This process is called "Recognition". Should it be a part of the financial reporting and the balance sheet? If the issue at hand meets the recognition requirements of the standards, the next step is "Measurement". What value should the balance sheet item be presented with in the balance sheet?

This process is quite similar to introducing sustainability reporting in a company. What is relevant for the company and its surroundings, and what kind of metrics should I use in my report to measure impact or savings? In both situations, the preparer must have a holistic view on its business. This view must not be influenced too much by traditional thinking, but it is always good to have the company´s history as a part of the analysis.

As with both IFRS reporting and sustainability reporting, it is always room for interpretations of the wordings in the standards. In the IFRS community there are several other formal and informal sources available for the preparer in order to understand the standards in accordance with

the wider communities' thoughts on the matter at hand. Source are i.e. IFRIC Interpretations, IFRS Staff letters, Basis for Conclusions, comment letters from organizations to Request For information (RFIs).

2.8.17.1 User journey first time adoption of IFRS

Since we are designing a standard that aims at enabling the accountant to include non-financial matters in their current operations, we emphasize the importance of gaining insights from the accountants existing practices. We therefore see a potential for drawing inspiration from the IFRS user journey. This journey is based on requirements in IFRS 1. However, the method is relevant for all transitions from one financial reporting framework to another. The steps are as following:

1) Preparation
- Is IFRS relevant as a reporting framework for your company, or are other GAAPs more relevant? Is the framework mandatory or do you adopt this voluntary?
- Have you used IFRS before? If "Yes" continue using it. If "No" use IFRS 1 and work on the following steps below.
- Choose format for reporting. This will affect how much data you need to collect backwards in time.
- Perform a holistic business review from a IFRS point of view to understand your business model, contracts, collaborations, uncertainty, assets and debt.

2) Recognition and classification
- Derecognize items in the old financial reporting that do not meet IFRS recognition criteria's
- Identify new items that meet the IFRS recognition criteria´s that should be reported on from now on. Assets, liabilities and equity.
- Reclassify items in the balance sheet according to the rules in the standards

3) Measurement
- Review or perform Measurement on recognized items
- Adjustments to numbers
- Valuation technics according to the relevant standards
- Estimates

Table 8: *Financial frameworks currently being used in the Nordics.*

Company type	Norway	Sweden	Finland	Denmark	Iceland
Small	NRS 8 Generally Accepted Accounting Principles for small entities.	K2	Simplified version of the Accounting Act / Decree	Danish Financial Statement Act	Act on annual accounts
Medium	Accounting Act	K2	Accounting Act / Decree	Danish Financial Statement Act	Act on annual accounts
Large / Others	Accounting Act	K3	Accounting Act / Decree	Danish Financial Statement Act	Act on annual accounts
Consolidated statements - For holding companies and group *)	Accounting Act, IFRS	K3 or IFRS	Accounting Act / Degree or IFRS	Danish Financial Statement Act or IFRS	Act on annual accounts or IFRS
Listed companies and com panies with traded debt and equity instruments	IFRS	IFRS	IFRS	IFRS	IFRS

- Evaluate uncertainty in the estimates
- Understand impairment of assets or future liabilities
- Evaluate changes to disclosures

Discuss disclosures before and after first time adoption
Discuss disclosures in interim reports
Make exemptions to the retrospective adoption

- Adjust according to rules in specific standards such as leases, financial instruments, hedge accounting, business combinations etc.

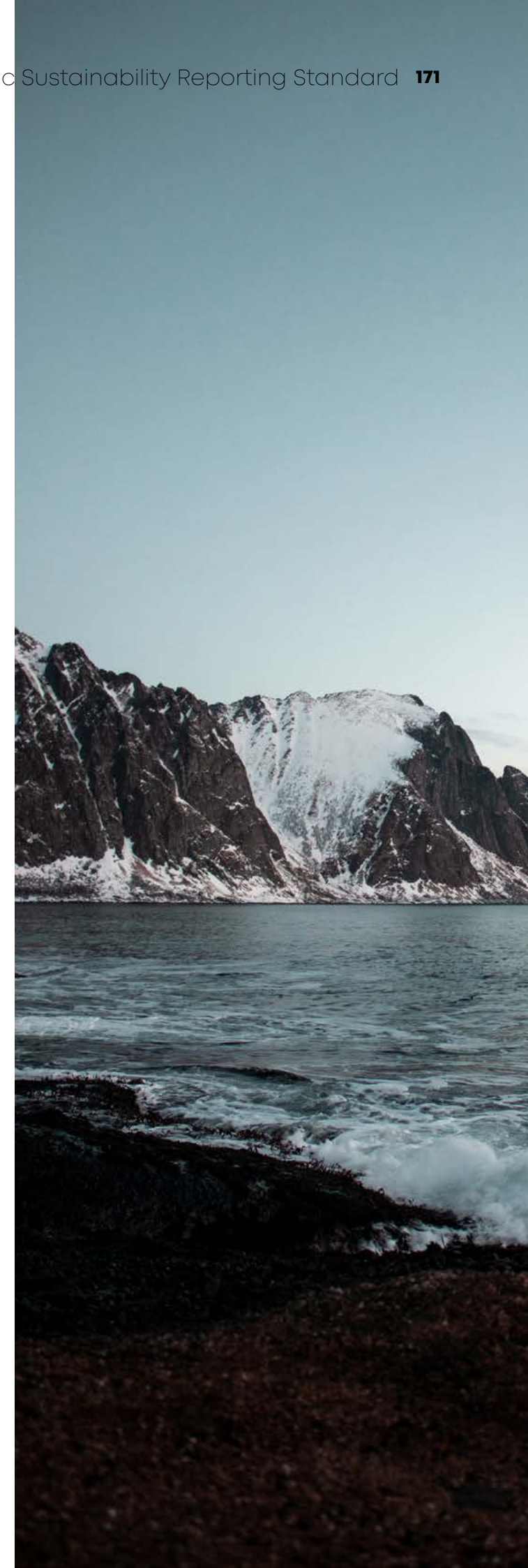
4) Reporting and post-review
- Make a draft reporting
- Do quality assurance / audit
- Report
- Get feedback
- Perform a post-review, adjust and improve the financial reporting accordingly

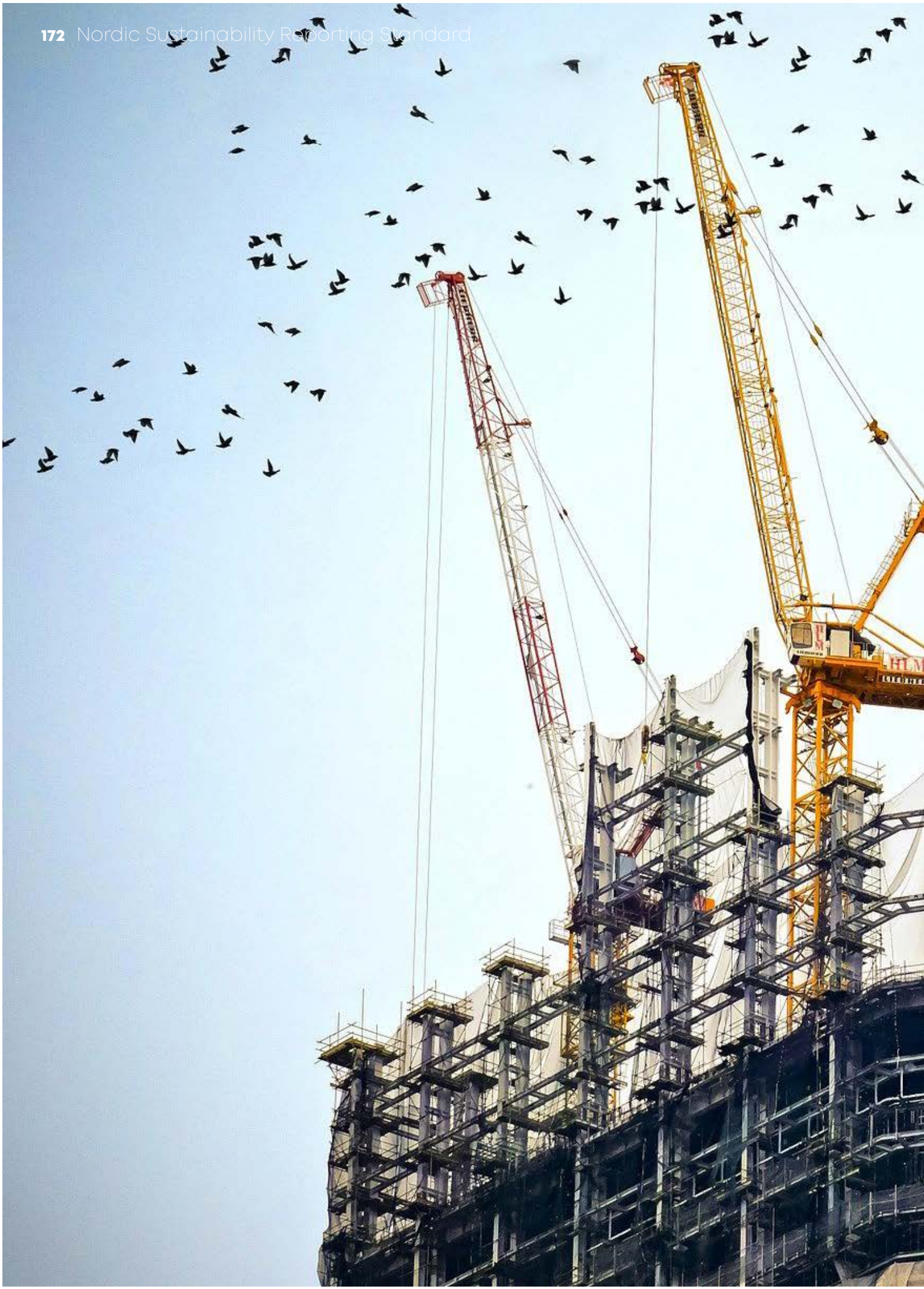
2.8.17.2 The connection between IFRS and sustainability

According to IFRS "In Brief" November 2019, Nick Anderson states that the potential financial implications arising from climate-related and other emerging risks may include, but are not limited to:

- asset impairment, including goodwill
- changes in the useful life of assets
- changes in the fair valuation of assets
- Effects on impairment calculations because of increased costs or reduced demand
- changes in provisions for onerous contracts because of increased costs or reduced demand
- changes in provisions and contingent liabilities arising from fines and penalties
- changes in expected credit losses for loans and other financial assets.

Further, in the same brief, IFRS emphasises that IFRS has several standards that take into consideration sustainability risks even though sustainability is not expressed explicitly.





Chapter 2.9

Choosing the Industry

Keywords:
Focus industry, construction, building, Nordics, SMEs.

Topic:
Nordic SME analysis for focus-industry.

Objective:
The objective of this chapter is to narrow the focus of the first prototype of standard from universally appealing into one specific industry. In addition, this chapter pursues to understand why there is a need for a focus-industry for a standard, and how climate change might affect the given industry.

"We shape our buildings: Thereafter, they shape us."

Winston Churchill

PURPOSE

The purpose of this chapter is to choose an initial industry for the first prototype of the standard.

METHOD & APPROACH

We analyze the five Nordic countries in terms of different criteria and narrow our focus between the different industries using NACE codes. The effects of climate-change facing the industry are gathered through a literature study.

Main findings – Choosing the Industry

1. We have decided to increase the relevance of our standard to SMEs by focusing first on one industry. We hope this will reduce the amount of irrelevant material in sustainability reports and increase value amongst SMEs.

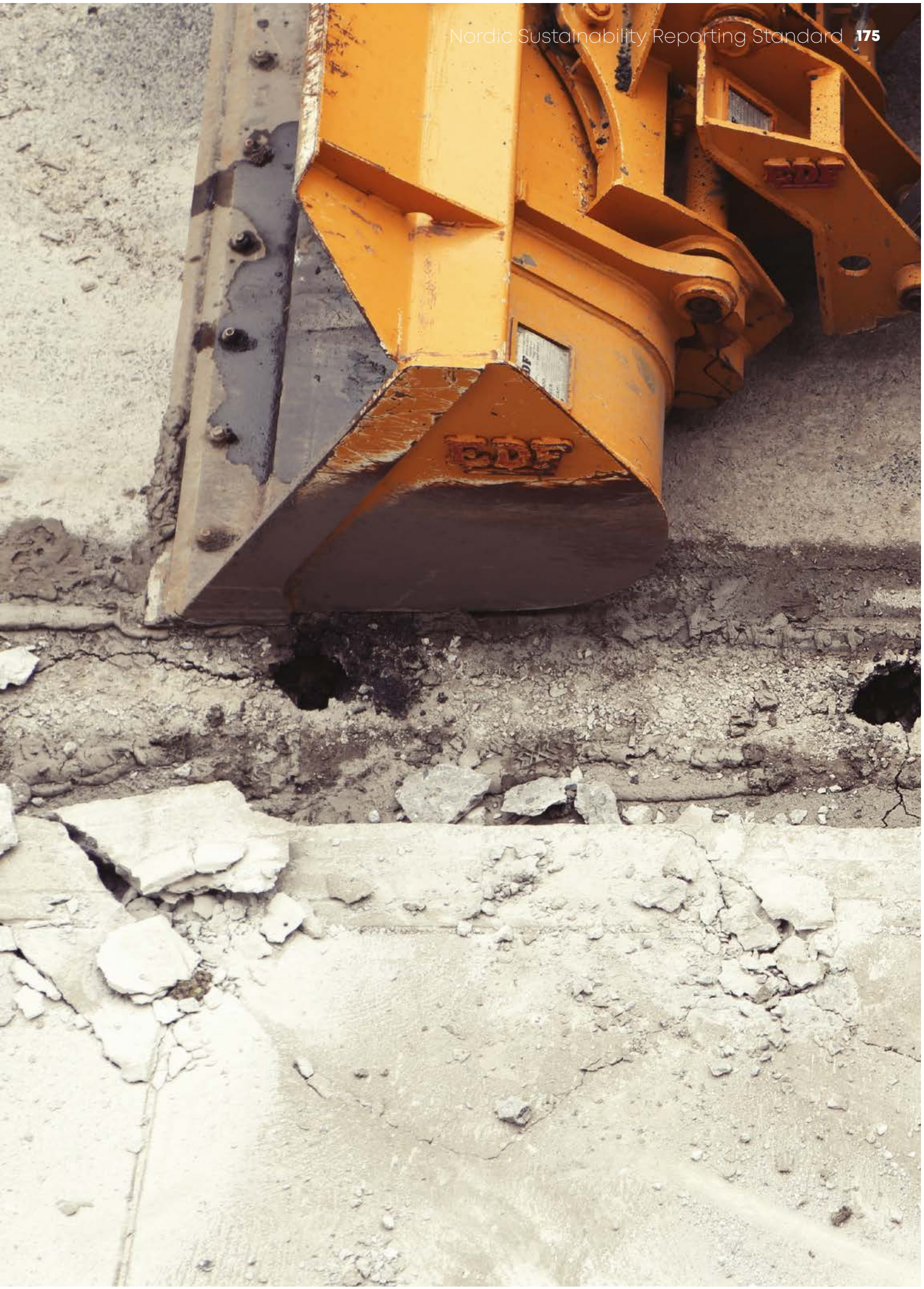
2. The standard's subject material will have a universal core similar to the UN Global Compact or the OECD Guidelines for Multinational Enterprises. This core allows the standard to be relevant for all industries, but specific for the focus-industries, similarly to SASB reporting framework.

3. For the first iteration of the standard, the focus-industry will be the construction and building industry. We came to this conclusion by analysing Eurostat data on the highest GHG emitting Nordic countries and the number of SMEs per industry in those countries.

4. The construction and building industry is one of the most exposed sectors for climate-change risks according to the European Union.
The industry's environmental impact has been estimated to include 35% of EUs waste generation and 5-12% total national GHG emissions

5. The Intergovernmental Panel on Climate Change has recognized several industry changes for the construction and building industry. These changes include:
- Higher costs on construction due to flooding
- Changes in building season
- Designs of buildings to withstand climate-change impacts
- Greater demand for rebuilding and repairs

6. Currently there is no confirmed motion for legislation to reduce the environmental impact of the construction industry,
but the EU's 2020 Circular Economy Plan and EU's Green Deal are planning to push the regulatory measures for greener construction and building.


EDF
EDF

Chapter 2.9

Choosing the Industry

2.9.1
Introduction

The objective of this project is to assist Nordic SMEs in their pursuit of sustainable development by building a standard for sustainability reporting. To avoid the pitfalls of a universal, over-generalised 'one-size fits all' standard, we have chosen to ensure that our standard is relevant, and applicable to SMEs. This requires us to incorporate the nuances of each industry sector, so therefore we need to be industry specific. While the standard will have a universal core, with elements that are general to all industries, it must be industry specific, to take into consideration the nuance of different industry sectors. Consequently, we desire to beta test our nuanced standard in a specific SME industry sector. While it is intended that this standard will be relevant for all SME industries, we have limited resources for beta testing. So, we have developed a rationale to choose an industry sector we will beta test in. The purpose of this section is to explain our rationale for the choice of industry and harvest, unpack and identify valuable insights into the chosen industry.

This will help us to focus our limited resources to an industry, which has and will have a significant impact, in terms of sustainability, in the Nordics, and helps us to build the standard to assist SME leaders who have no or little knowledge of sustainable development or sustainable impact. We hope that these criteria will drive the use of the standard in the industry and reduce the significant environmental impact of the SMEs.

An industry-specific approach also allows us to

tackle weaknesses in more commonly referenced frameworks and standards. Especially materiality issues due to too broad instructions (for example in SASB and IIRC) can lead to misleading disclosures (Eccles et al. 2012). For this reason, to avoid too broad instructions and materiality issues, we will focus on a specific industry to create a standard with specific instructions to collect and disclose information on sustainability.

The chapter begins by presenting the methodology utilized when choosing industry. It also presents the variables in our analysis and continues to present the used data and results of our methodology. Finally, the chapter ends with a conclusion justifying the choice of industry and fleshing out the main findings of the chapter. The main findings summarize the choice of industry-specific standard and give insight into the chosen focus-industry.

2.9.2
Variables and methodology

Our analysis is based on a qualitative and quantitative country- and industry-level analysis. Our analysis will analyse the Nordic countries Denmark, Finland, Iceland, Norway and Sweden, and their industries according to five criteria:
1. the amount of greenhouse gas (GHG) emissions in a country,
2. number of SMEs in a country,
3. number of SMEs in an industry,
4. total turnover of an industry and
5. number of employees in the industry.

The qualitative analysis is based on two criteria:
1. Climate-change related transition risks and regulatory risks in the Nordics
2. Suitability for beta testing

Criteria 1 will reference to previous Chapters and European Union's future plans to understand how candidate industries after qualitative analysis will be affected by climate-change related transition and regulatory risks. Criteria 2 is based on expert interviews in the focus industry to discuss what are the acquirements of the focus-industry to disclose information on its sustainability.

2.9.3
The methodology

We determine our focus-industry in the following manner:

1. We choose our focus-country by using country specific GHG emissions and number of SMEs in Finland, Sweden, Norway, Denmark and Iceland between 2009-2018.

2. We determine the focus-industry in our focus-country by analysing the top 10 largest industries in terms of number of SMEs with the sum of employees and turnover between 2009-2018.

3. The top 5 industries of the top 10 largest industries in terms of turnover and number of employees are cross-examined to determine similarities between the two top 5 groups. This will give us a list of suitable candidates for qualitative analysis.

4. Industry with the most environmental and social impact according to literature is chosen for further analysis by accountants and payroll experts. This analysis is formed as interviews to discuss the current sustainability reporting situation in the industry, the readiness of the companies to report on sustainability and how great is the resistance to change.

5. If the analysis is positive for beta-testing, the chapter concludes the focus-industry analysis.

Otherwise, the chapter returns to point 4 and continues the analysis.

2.9.4 The rationale for the variables and the methodology

1. We have chosen the amount of GHG emissions in a country to determine which Nordic countries have the largest number of emissions. Emissions are collected by the European Environment Agency from the energy sector, industrial processes and product use, agricultural sector, waste management sector, international aviation, indirect carbon dioxide emissions and other sectors.

2. The second criteria is finding the industries with the largest number of SMEs. Since this will be our first version of the standard, we need a high number of SMEs to test it for robust results and feedback. Another reason for choosing an industry with a high number of SMEs is to find an industry that has the potential of having the most impact given that the SMEs are beginning to use the standard.

The first two variables will determine our focus country. The reasons we have chosen a focus-country for our first version of the standard are language and industry-differences between countries. Even though Nordic countries can be considered relatively homogeneous (for example Ásgeirsdóttir and Gerdtham 2016), the languages are different and the industries between countries have different levels of impact. To simplify our standard in terms of language and industry-level analysis, we will first focus on one country.

Our variables continue with variables three to five, which are on industry-level and will determine our focus-industry in our focus country.

3. We have chosen number of SMEs in an industry for the same reasons we have chosen variable number two: to have a large pool of test SMEs for our standard, and potentially have great impact on the industry once the standard is released.

4. Variable four (total turnover of an industry) determines how much revenue an industry has accumulated in a specific period. It can be deduced that the increase in a company's wealth would imply an increase in resources and an increase in size, which would increase the likelihood of our standard to be implemented within an industry (see for example the increase in GRI reporting in large and multinational enterprises compared to SMEs by Thaslim and Anthony). Even though the focus of our standard is within SMEs, our standard should not exclude larger companies and a possibility for status quo within an industry as a sustainability reporting standard.

• The last variable number five (the number of employees) has been chosen in our analysis to determine which industries have, by likelihood, the largest social impact. This is based on a reasoning that a higher number of employees increases the corporate responsibility to take care of the employees and thus the social impact on a company.

2.9.5 Data

In step 1 to determine our focus-country, we use data from Eurostat on five different countries: Denmark, Finland, Iceland, Norway and Sweden. The GHG emissions data is from 2018 and displayed in units of 1000 tons of CO2 equivalent. The energy sector includes the total emissions of all GHGs from stationery

and mobile energy activities. Emissions from industrial processes and product use comprise of by-product or fugitive emissions of GHGs from industrial processes. Fuel combustion in industry is reported under the energy sector. Agricultural sector includes all anthropogenic emissions, except fuel combustion emissions (energy sector) and sewage emissions (waste management sector). The waste management sector includes emissions from solid waste disposal on land, wastewater, waste incineration and from any other waste management activity. This includes CO2 –emissions from fossil-based products. Other sectors –category includes little to no data on emissions as most emissions are accounted in their specific categories. Emissions from LULUCF are excluded from the sectors as well as international bunkers, international aviation, international navigation, multilateral operations and CO2 emissions from biomass. The data on the number of SMEs is observed between 2009-2018, also provided by Eurostat. We use size classes by the number of persons employed to differentiate the companies to micro, small, medium and large. We follow the European Union definition on SMEs to determine which portion of our data belong to our analysis (Companies within the industry with less than 250 staff headcounts).

In step 3 to determine our focus-industry, we use three different economic indicators: number of enterprises, number of employees and turnover between 2009-2018. The number of enterprises represents the actual number of enterprises per industry. Number of employees reports the number of employees in the industry and turnover is the total invoiced by a company during the reference period, which includes market sales of goods or services supplied to third parties (ec.europa.eu/metadata). These indicators have also been limited to SMEs by size classes.

After choosing our focus-country, we analyse the number of SMEs, the number of employees and the turnover per industry, following the NACE Rev.2 codes. The data on NACE codes has been provided on Levels 1, 2 and 3.

2.9.6 Analysis and results

2.9.6.1 Quantitative

We begin our analysis by determining our focus-country using the GHG emissions criteria (from 2018 on country-level). The largest emitter is Finland followed by Sweden, Norway, Denmark and Iceland (see Table: Largest emitting countries in the Appendix). Next, we calculate the countries with the greatest number of SMEs as a sum of SMEs between 2009 until 2018. The greatest number of SMEs during the period is in Sweden followed by Norway, Finland, Denmark and Iceland (see Table: Countries with greatest number of SMEs in the Appendix). The two greatest emitters in the Nordics are Finland and Sweden, and the two countries with the greatest number of SMEs is in Sweden and Norway. Sweden is prominent in both, so we will choose Sweden as our focus country for our focus-industry.

Next, we determine candidates for our focus-industry. We begin by determining the largest industries in Sweden by the number of SMEs from 2009 until 2018. The top 10 largest industries in terms of the number of SMEs are:

1. Total business economy; repair of computers, personal and household goods; except financial and insurance activities,
2. Professional, scientific and technical activities,
3. Wholesale and retail trade; repair of motor vehicles and motorcycles,

4. Construction,
5. Real estate activities,
6. Information and communication,
7. Manufacturing,
8. Transportation and storage,
9. Accommodation and food service activities, and
10. Electricity, gas, steam, and air conditioning supply (see Table: Industries with largest number of SMEs in the).

The industry category "Total business economy: repair of computers, personal and household goods; except financial and insurance activities" includes information from several level 1 sectors according to NACE codes. These are: mining and quarrying, manufacturing, electricity, gas, steam and air conditioning supply, water supply; sewerage, waste management and remediation activities, construction, wholesale and retail trade; repair of motor vehicles and motorcycles, transportation and storage, accommodation and food service activities, information and communication, real estate activities, professional, scientific and technical activities, administrative and support service activities and repair of computers and personal and household goods. Because there are overlapping level 1 sectors with other industries, we have decided to exclude Total business economy –sector from our analysis and focus on the next 10 largest industries.

We continue our analysis by comparing the top 10 industries in terms of number of SMEs by the industries' turnover and number of people employed. The top 5 industries in terms of turnover in Sweden between 2009 and 2018 are:

1. Wholesale and retail trade; repair of motor vehicles and motorcycles,
2. Manufacturing,
3. Real estate activities,
4. Construction,
5. Professional, scientific and technical activities (see Table: Top 10 industries with the highest number of SMEs in terms of turnover).

The top 5 industries in terms of number of people employed are
1. Wholesale and retail trade; repair of motor vehicles and motorcycles,
2. Manufacturing,
3. Construction,
4. Professional, scientific and technical activities, and
5. Transportation and storage (see Table: Table: Top 10 industries with the highest number of SMEs in terms of employment in the Appendix).

Next, we cross-examine the two lists of the top 5 industries and compare which industries are prominent in both lists. This will give us the maximum amount of five largest industries in Sweden by the number SMEs with the highest turnover and the greatest number of employees. The cross-examination shows (see Picture: A cross-examination of top 5 industries) that the top 4 candidate industries are:

1. Wholesale and retail trade; repair of motor vehicles and motorcycles,
2. Manufacturing,
3. Construction and
4. Professional, scientific and technical activities.

The last part of our analysis introduces the top 4 candidate industries' NACE code level 2 and 3 subcategories. Because some of the main categories have significantly more level 2 sub-categories than others (especially Manufacturing), we have decided to reduce the number of level 2 categories to a maximum of five largest in

terms of turnover and employment. The five largest categories are determined by a ratio of sub-category turnover to total turnover and sub-category employment to total employment (see Table: Sub-categories of chosen 4 main categories). The resulting NACE code level 1, 2 and 3 industry categories of the top 4 candidate industries are the prominent focus-industries, which we will compare to the climate and regulation related risks facing the Nordics.

2.9.6.2 Qualitative: Industries facing large climate and regulation risks in the Nordics

According to the European Union report, industry sectors most exposed to the negative impacts of climate change include infrastructure and buildings, energy, agriculture and forestry, insurance and tourism (ec.europa.eu/sectors). By comparing this list to table "Sub-categories of chosen 4 main categories" we can determine that construction industry is represented in the Europe Union's report on sector "infrastructure and buildings". In addition to the European Union, the International Panel on Climate Change has presented business sectors vulnerable to climate change amongst their 2014 AR5 report (IPCC 2014). When this list is compared to the table "Sub-categories of chosen 4 main categories" industries, the IPCC report highlights the impact on manufacturing, and construction and housing industries.

Manufacturing is facing impact from three different channels:

1. Effects on primary economic activities which would result in a difference between input price and quality.
2. Effects on the supply chain or the quality of the product.
3. Effect on the demand of the product, especially on products in the primary sectors (industries involved in the extraction and production of raw materials) and construction materials.

In the construction and housing industry the impacts arise from three different channels as well:

1. The length of building season will change and measures against flooding will affect the costs of construction.
2. Changing weather and environmental conditions will affect the design of the buildings as current designs do not consider climate change in the long term. This will result in further costs on renovation.
3. The changing patterns of natural disasters will have effects on the demand of rebuilding and repairs.

Renovation, rebuilding and repairs due to climate-change are similar themes discussed in the EU's Green Deal –plan to reduce the environmental impact of different industries. This includes policies on biodiversity, agriculture, energy, industry, construction, pollution and climate (ec.europa.eu/Green Deal). In the construction industry the focus is on buildings and renovation, which emphasises energy-efficiency, circular economy, digitalisation, climate-proofing and energy performance on buildings (ec.europa.eu/Green Deal). This can also be seen in the EUs 2020 Circular Economy Action Plan, where building and construction industry is reported to have a significant environmental impact (35% of EU's total waste generation and 5-12% of total national GHG emissions). This has led to a suggestion for the revision of the EU's Construction Product Regulation and a possible introduction of recycled content requirements for specified construction products (ec.europa.eu/CE Action Plan). The Action Plan also suggests

life-cycle assessments to public procurements and considers a revision of the material recovery targets for construction and demolition waste. However, there is no confirmed legislation in motion, but the 2020 Circular Economy Action Plan and EU's Green Deal push the need for regulatory measures for greener construction and building industry. This can also be seen in the new 2020 strategy "A renovation Wave for Europe – greening our buildings, creating jobs, improving lives", which includes minimizing the footprint of buildings with resource efficiency and circularity. This can also be seen IPCC's Special Report on global warming of 1.5 Celsius, which states that new construction would have to be fossil-free and near-zero by 2020 for the UN Paris Agreements to be consistent (IPCC 2018).

In the IPCC's report "AR5 Climate Change 2014: Mitigation of Climate Change" buildings sector has received attention from the growth of energy demand and resulting indirect emissions. The report suggests the adoption of very low energy building codes to reduce energy demand in the future. Even though the report does not mention sustainability information disclosure, knowledge of the environmental impact of buildings and construction from intergovernmental organizations like the IPCC creates pressure for action. And if the demand for low energy green buildings, repairs and renovation of old buildings to withstand the effects of climate-change does increase, so does the demand for low-emitting building construction. This can drive competition where construction industries who report on sustainability are more successful than companies who do not report on sustainability.

2.9.7
Tables

all tables visualising the selection process can be found in by scanning the rq-code below with the camera on your phone.

2.9.8
Concluson

In order to be relevant for the users of this reporting standard, we cannot have a large set of general KPIs and other general disclosure items trying to cover all types of industries. Therefore, in addition to a smaller set of general disclosures, we need to present a set of industry specific KPIs and disclosure items. By analysing country- and industry-level data from Eurostat on the Nordics and combining the results to large climate and regulation risks in terms of sustainability in the Nordics, this chapter concludes that the focus-industry for our standard would be the construction and building industry.

2.9.9
Main findings

From the conduction of this study, we have not only justified the choice of industry to be the entry point of this standard, we have also unpacked the chosen industry. The insights harvested by the conduction of this study will also be brought forth

in the development phase. The main findings will be presented below:

We have decided to increase the relevance of our standard to SMEs by focusing first on one industry. We hope this will reduce the amount of irrelevant material in sustainability reports and increase value amongst SMEs.

The standard's subject material will have a universal core similar to the UN Global Compact or the OECD Guidelines for Multinational Enterprises. This core allows the standard to be relevant for all industries, but specific for the focus-industries, similarly to SASB reporting framework.

For the first iteration of the standard, the focus-industry will be the construction and building industry. We came to this conclusion by analysing Eurostat data on the highest GHG emitting Nordic countries and the number of SMEs per industry in those countries.

The construction and building industry is one of the most exposed sectors for climate-change risks according to the European Union. The industry's environmental impact has been estimated to include 35% of EUs waste generation and 5-12% total national GHG emissions.

The Intergovernmental Panel on Climate Change has recognized several industry changes for the construction and building industry. These changes include:

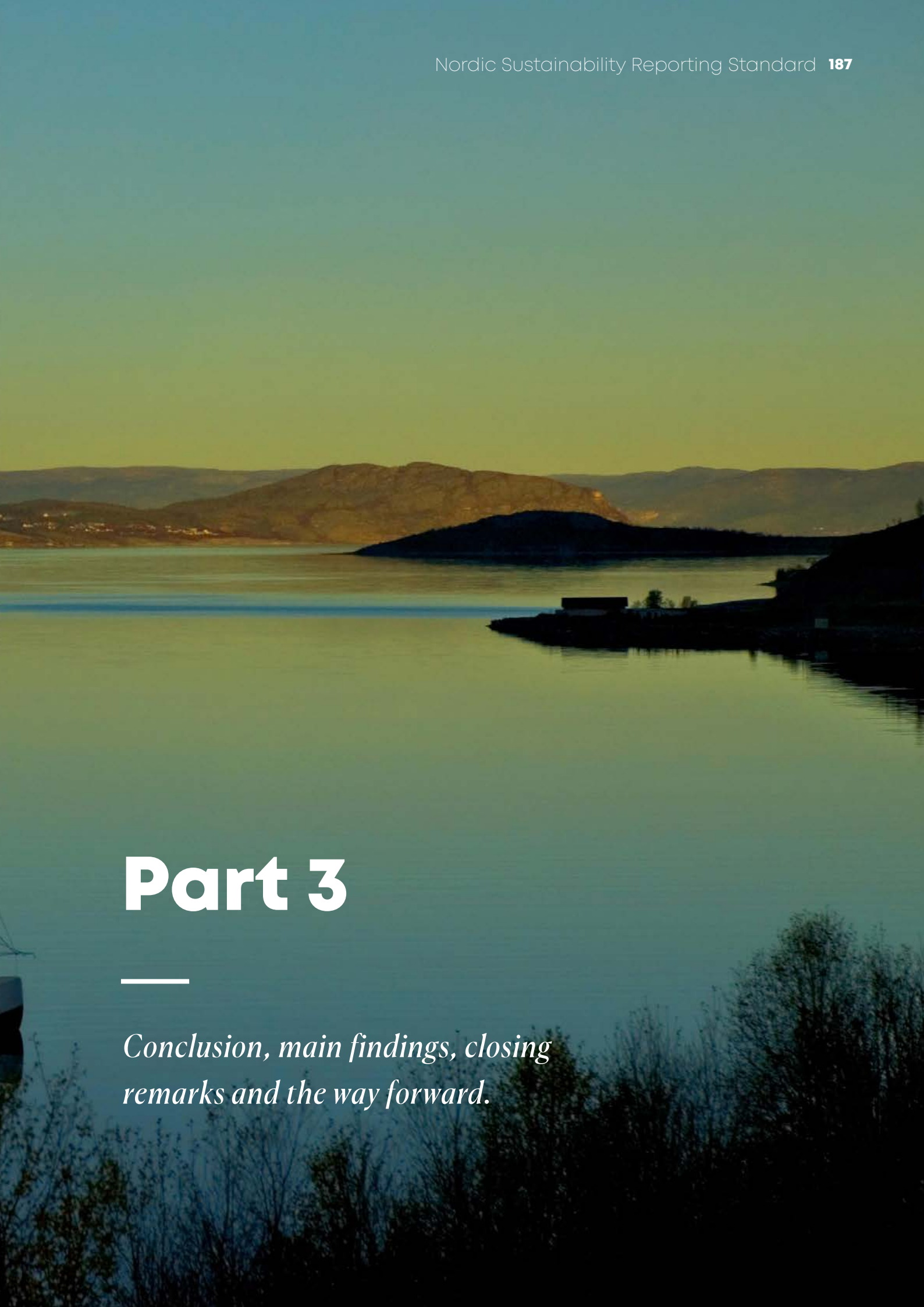
- Higher costs on construction due to flooding

- Changes in building season

- Designs of buildings to withstand climate-change impacts

- Greater demand for rebuilding and repairs

Currently there is no confirmed motion for legislation to reduce the environmental impact of the construction industry, but the EU's 2020 Circular Economy Plan and EU's Green Deal are planning to push the regulatory measures for greener construction and building.



Part 3

Conclusion, main findings, closing remarks and the way forward.

Part 3

In this section you will find a conclusion, a brief summary of the report, a research summary, suggestions for future research, the process at a glance, the way forward and some closing remarks.

3.1 Conclusion

This chapter concludes the report. In part one we defined the problem and introduced the project of which the outcome aims at easing the problem introduced. Secondly, we present our research philosophy, methodology and theory of change which lays the foundation of the development of the standard. Conclusively, part one ends off with a thorough introduction to the NSRS-team. In part two we present the findings of the insight-harvest of the project, which serves as the knowledge pool of our main findings. The main findings have paved way for how and what to focus upon when developing the standard.

For this conclusion we will give a brief research summary and the methodologies utilized to harvest the findings. After the findings and methodologies are summarized, suggestions for further research are given. In addition, practical implications of the process are introduced.

3.2 A brief summary of the report

The purpose of this report was to explore the need for a tailormade sustainability reporting standard for SMEs. We aimed at unpacking this need, identifying the opportunities and obstacles of a potential standard. Further, the purpose of this report was to understand what this standard needs to include and exclude, and further flesh out the complexity of the landscape the standard is entering. We also wanted to measure and clarify the impact the chosen segment has on our society, and we wanted the report to serve as a well-anchored argument justifying the aim and outcome of this project.

Several appropriate research approaches were

developed for the deliverance of this project. The research method for the investigation phase of this project has been a mix of several methodologies. The main methodology for harvesting insight has been analysing and synthesizing existing literature. We have also conducted both quantitative and qualitative empirical studies. For the empirical research the data collection consisted of different methods, whereas the database of the accountant's member organisations has been a prominent contributor. Further, semi-structured interviews have been a main data collection source for our qualitative studies. The findings from the interviews were supported by content analysis of, among others, sustainability reports and open interviews with relevant institutes and interest organisations. The results of the study are summarized in the following subsection.

3.3 Research summary

In this subsection a summarized version of all the main findings from the different chapters are presented.

Landscape: General introduction

Chapter 2.1: There is no planet B

1. There is a need for sustainability transitions globally – and in particular in the Nordics as they contribute substantially to the planetary degradation.

Chapter 2.2: The Corporate Sustainability Conundrum

1. There are insufficient motivations for businesses to improve their sustainability performance is lacking due to a number of underlying issues. This is due to a lack of awareness on sustainability issues and non-financial risk, but also due to businesses or stakeholders being dominated by mindsets focused on short-term capital returns. But it is also linked to external factors such as system rules.
- There are insufficient sticks: constraints and punishments for businesses who are lagging or going backwards with their sustainability performance
- There is also lack of carrots: rules that incentivize, reward or equip businesses who work to improve their sustainability performance.

2. Sustainability related governance, or as it is referred to in this section, "climate governance" is a complex and fragmented jungle of various mandates and guidelines for operationalizing actions to improve sustainability performance. That is both challenging and expensive for businesses, especially SMEs to navigate and conform to.

3. Mission oriented innovation policy is one such climate governance approach to see the economy become mission oriented to deliver growing quality, rather than missionless and simply growing in size.

4. For businsses who are mentally motivated to improve due to a positive mindset and having sufficient awareness, a lack of internal capacity to move forward in this jungle is often the major impediment that makes it difficult for businesses to improve.

Chapter 2.3: Sustainability Reporting

1. Most businesses use sustainability reporting as a communication tool, rather than a tool to improve sustainability performance

2. The sustainability report is rarely integrated into the strategy and operations of a business, this the

report containing information that is insufficient and low quality, the motivation of the business for reporting, and their internal capacity.

3. There is a growing jungle of various sustainability reporting instruments of mandatory and voluntary requirements and guidelines. This increasing complexity is increasing the difficulty and expense for businesses wanting to satisfy requirements.

4. Insufficient standardisation and harmonisation of sustainability reporting instruments has led to this increasing jungle that is expensive for businesses to navigate.

5. A lack of government regulation setting out mandatory requirements is a key reason for the insufficient standardisation and proliferation of the current jungle of sustainability reporting instruments that is directly impacting quality and sufficiency characteristics.

6. Literature make a compelling argument that a mandatory sustainability reporting regime must be established if there is to be any hope to preference sustainability leaders and punish laggards.

7. Businesses motivated to improve their sustainability performance face significant challenges

8. The current governance and market landscape is not sufficiently punishing the laggards nor incentivising leaders for operationalising action for sustainability.

9. Most businesses lack the internal capacity to operationalise action for sustainability.

10. There is a large variation in the sufficiency and quality of the information as follows, it is difficult to compare across businesses, the scope and depth, materiality and the reliability.

11. These large variations makes it extremely difficult for stakeholders to use these sustainability reports to identify leaders and laggards and incentivise and punish accordingly.

Chapter 2.4: Existing Frameworks

1. Even if there are hundreds of sustainability frameworks and standards, only a few frameworks and standards dominate the field.

2. The most referenced and the most popular framework is the Global Reporting Initiative.

3. Several frameworks pose materiality issues, which are difficult to respond to with limited resources or self-assessment systems provided by the framework.

4. Motivation is the key. The balance between "too strict information requirements" and "too broad information requirements" is a difficult task which some of the most common frameworks pursues to handle with sector-specific guidelines. Unfortunately, sector-specific guidelines are not always sufficient enough to respond to the needs of an organization because prior knowledge of the management affects how the guidelines of a framework or a standard are implemented. The standard or the framework needs to motivate the user or the performance of the standard/framework becomes poor.

5. Sometimes the incentive to implement a standard or a framework comes externally from stakeholders, which can result in a more symbolic action

to stakeholder pressure rather than the organization pushing sustainable development as an internal motivator.

Scope: SMEs – Size Matters

Chapter 2.5: Size Matters: SMEs, Sustainability and the Road Blocks

1. Studies show that SME-managers tend to have more freedom in decision-making processes compared to managers in large organizations carrying out a sense of responsibility and increased motivation which in many cases generates higher social and environmental engagement on a personal level (Williams & Schaefer 2012; Hamann et al., 2009).

2. The centralized power structure and low level of hierarchy commonly find in SMEs enables easy integration of market needs and technological changes (Pierre & Fernandez, 2018; Rothwell, 1989).

3. However, the simple, informal and flexible structure of SMEs can on the other hand limit innovation performance as formalities such as processes or methods to properly assess the costs of the innovation projects is not integrated (Pierre & Fernandez, 2018; Hadjimanolis, 1999, 2000).

4. Yet it is dangerous to accept homogeneity of SMEs, as their characteristics vary essentially in size and history, and across regions, sectors, cultures and ownership structures (Džupina & Mišún, 2014; Williams & Schaefer 2012).

5. While it is said that elephants cannot dance, SMEs by contrast are nimble and flexible by nature which is an important characteristic for change. Nonetheless, they are the laggards in taking action towards sustainability oriented activities (OECD, 2015).

6. Research shows that the characteristics that make out the biggest difference in SMEs compared to larger companies ability to enable a sustainable transition (Loucks et al., 2010), emerge largely from effects caused by differences of resource availability such as capital, time, knowledge and skilled personnel, and differences in scale of operations (Walt, 208; Hörisch et al. 2014).

7. Over 70% of European SMEs report access to talent as obstacle to new investment across the EU (Bellitto et al, 2018).

8. Few tools designed and simplified to support SMEs in their transition (Džupina & Mišún, 2014), Available instruments are not fitting for SMEs due to their complexity, limited flexibility and formal procedure (Arena and Azzone, 2012).

10. SMEs have limited capacity to interpret and respond to relevant regulatory requirements and policy incentives, making the transition landscape challenging for SMEs to operate within (Walt, 2018; Williams & Schaefer 2012; Bos-Brouwers 2009).

11. Furthermore, the lack of resources is likely to lead to risk-averse behaviour among SMEs as the payback period when investing in sustainabiilty-oriented activities is uncertain in terms of time horizon (OECD, 2015).

12. The bundle of barriers, mainly related to lack of resources, can partly explain the lack of action in relation to sustainability transitions among SMEs (OECD, 2015).

13. 1/3 of all reporting instruments apply exclusively to large listed companies. The remaining 2/3 either belong to all companies or to other types of companies such as state-owned. Only 9 instruments applied specifically to SMEs (KPMG, GRI, UNEP, 2016).

14. The large set of key sustainability indicators featured in the GRI framework make it hardly applicable for SMEs (Arena et al., 2012).

15. As a result, sustainability reporting practices among SMEs are not very common (Plugge, L. & Wiemer, 2008; KPMG, GRI, UNEP, 2016).

16. When SMEs do have a sustainability report practice running, they tend to find it easist to disclouse on indicators already being measured such as energy consumption and waste management (Plugge, L. & Wiemer, 2008; KPMG, GRI, UNEP, 2016).

Chapter 2.6: Sustainability Reporting as a Sustainability Performance Improver

1. The prevailing mindset seemed to be that the company´s believe they have a sustainability responsibility.

2. Internally motivated: Companies being internally motivated tend to use more resources on sustainability, which tend to lead to making the non-financial information gathered of higher quality and more useful. Internally motivated SMEs also tend to integrate the non-financial information into their day-to-day-activity and rig themselves to measure their actual sustainability performance better and more extensively, compared to SMEs largely being externally motivated. As a result, the non-financial information gathered in these processes tend to be for both internal and external eyes. Non-financial information which are made for both internal and external eyes seem to be of better value than non- financial information only made to impress external eyes.

3. Externally motivated: Existing literature finds that motivation to engage in the sustainability agenda largely stem from customer demand and branding today. Companies that are largely externally driven seem to centre their sustainability infrastructure around the sustainability report and shows limited insight in how to measure sustainability performance. They seem to be motivated largely to do sustainability activities as a response to customer demand and branding, and the handling of sustainability tend to be decoupled from business as usual. As a result, the non-financial information gathered in these processes tend to be mainly for external eyes.

4. The more sustainable, the more pleased with internal sustainable investments: Our findings reveals that a main barrier to overcome to enable SMEs in utilizing the non-financial information efficiently towards increased sustainability performance, is to engage SMEs to take part in the sustainability transition. However, I find that the more sustainability matter for the company, the happier the SME is with the sustainability investment, and the better the non-financial information is utilized towards sustainability performance increase.

5. How to retrieve non-financial information is cumbersome and resource demanding: There is high variation of the methods used to find relevant non-financial information to disclose (finding the materiality), and a high variation of methods used to retrieve non-financial information. All the cases we investigated, however, express that

this is resource demanding and cumbersome. With already scarce resources, re-organizing, documenting and measuring sustainability with today´s technology and tools comes across as highly resource demanding. Quality non-financial information is resource demanding to retrieve and is outsourced if measured. Only the cases having sustainability built into their business model, retrieved high quality non-financial information. They all agree that the non-finical information is used for increasing sales, and all wish that the non-financial information could work to inform, enlighten and increase awareness among employees. We further find that all cases investigated agree that more trustworthy and more uniform ways of measuring and documenting sustainability is preferable. Easing the process of measuring and documenting sustainability seem to bear great potential to make SMEs overcome this barrier.

6. The frameworks shape the utilization of the non-financial information: How the non-financial information is integrated and utilized within a company depends highly upon the choice of sustainability framework the company utilizes to disclose itself. Thus, the sustainability framework utilized has massive impact on how sustainability is handled in the SMEs investigated.

7. Sustainability is perceived as incomprehensible and complex: All the cases investigated express that measuring sustainability in order to know how sustainable their company is, tend to be perceived as a vast, ungraspable and a massive operation. To create a direct link between the non-financial data and sustainability performance, the company needs to know how sustainability performance is measured. If the firm does not know when, how or what is increasing their sustainable performance, the firm does not know how to use the sustainability reporting to increase sustainability performance.

8. Sustainability externalities: Hauzer and Kreuzer states that "you are what you measure" and highlights the necessity to know what and how you can improve performance in order for it to materialize. The SMEs investigated undertake sustainability activities which are not labelled as sustainability. A significant degree of non-financial data is thus never gathered, measured or documented.

9. Stakeholder trust-issues: The inside-out perspective in the five Norwegian SMEs investigated, are more developed then the outside-in perspective. The first perspective gets more attention and seem to be given more importance. We have also uncovered that some of the cases show trust-issues relating to if their stakeholder could in fact serve valuable information that ultimately could potentially improve the company´s sustainability performance. This could be a possible explanation for the underdeveloped outside-in perspective.

10. Start-kit tip: They expressed that "the sustainability monster" could be slowly defeated by increasing awareness about the general ungraspable feeling, as fumbling in the dark together is better than fumbling in the dark alone. Thereafter, starting very small – that is, by finding some indicators and thereafter extend their individual measure-accounting-library could be a good springboard to trigger non-sustainable SMEs to join the transition.

Chapter 2.7: Climate Risk: Survive and Thrive in the Future Ahead

1. Climate risk is financial risk. Climate changes themselves, but also the political and technological

responses to them, pose an economic risk to private sector activities.

2. The Nordic countries are small open economies which are highly dependent on events in the rest of the world. Climate changes impact business either directly, by damaging physical assets, or indirectly, by causing disruption in value chains and global markets. Acknowledging the inherently volatile nature of the globalized system is key to understanding the risk picture one is up against.

3. Physical risks: The Nordic climate is expected to become warmer, wetter and wilder. Major physical risks in the region include temperature increase, rising sea levels, storm surges and extreme precipitation and floods. Critical infrastructure, hereunder energy, transport, and industry, is vulnerable for the extreme weather events ahead.

4. Transition risks: Heavy-emitting sectors, hereunder the energy sector, transport and shipping are the sectors currently facing the largest transition risks. These will not only be subject to new, ambitious EU climate regulations, but also face increasing levels of liability- and reputational risk as the sustainable transition starts to materialize.

5. The Nordics have a historical record of incorporating EU environmental regulations in their national jurisdictions. When the EU is taking progressive leaps towards recuding 50% of emmissions by 2030 and becoming carbon-neutral by 2050 (through the EU Green Deal and Taxonomy), it is therefore likely that these measures will be reflected in Nordic legislation in the short to medium term perspective.

6. There is little to no national guidelines pertaining to how SMEs as a business segment are expected to navigate the upcoming regulatory landscape. Even if various organizations and private sector actors are forerunners in terms of facilitating a smooth implementation of the Taxonomy, general political attention seems to be directed elsewhere.

8. The EU Taxonomy is a classification tool for sustainable private sector activities designed to steer capital in a sustainable direction. It directly targets large companies and financial actors. Knowledge about its ripple effects on non-targeted actors such as the SME segment however, is very limited at this point in time.

9. SME financiers, who are directly targeted by the taxonomy, express a need to receive data from their downstream stakeholders if they are to successfully report according to the Taxonomy.
10. Interviewed banks are currently in the process of developing incentivation systems for their SME-loan takers in order to accelerate the Taxonomy alignment of their portfolios. Carrots, in the form of improved interest rates and longer repayment times, are here combined with sticks, in the form of more expensive capital and stricter capital access criteria. Some are also incorporating stricter sustainability screening criteria of SMEs early in the credit rating process.

11. In 2020, the Taxonomy is still open for adjustment through dialogue with the Technical Expert Group (TEG). This window of opportunity is expected to close by the end of the year.

12. Several inteviewees expressed their concern about government's lack of attention to the matter. They pointed to a general lack of awareness and disinterest or inability to successfully advocate

national interests. One Norwegian bank for example, came across a Taxonomy criteria that defined hydro power below a certain quantity as non-sustainable, which would have classified the vast majority of Norwegian hydro power thereafter. After raising the matter on EU-level, the bank managed to adjust the criteria, successfully avoiding a major crisis for the Norwegian energy sector.

13. There is a clear correlation between company size and the propensity to incorporate climate risk assessments in operations: the smaller the company the less focus on climate risk.

14. Lack of resources - hereunder time, money and know-how - is highlighted as a main barrier for SMEs to effectively address and integrate climate risk in their operations. The TCFD framework for addressing corporate climate risk is similarly found to be too comprehensive for the vast majority of Nordic companies, and particularly so for SMEs.

15. There is little knowledge on SME-specific climate risks, which makes it difficult for SMEs to get started. The Nordic SME segment is moreover extremely heterogenous. To assess climate risk on the individual company level would demand a tailorized and sector-specific apporach, which is very resource-demanding. The difficulty to generalize accross company size and sectors is currently a key impediment for effective integration.

Opportunity: The Accountant

Chapter 2.8: The Accountant

1. The advisory side of the accounting business in the Nordics is high on the agenda given that core services within bookkeeping to a higher degree will be automated through RPA (Robotic Process Automation) and AI (Artificial Intelligence).

2. We find that many Nordic accounting firms are preparing themselves for delivering new services into the marketplace in addition to their core services.

3. We find that the accounting firms prioritize industry knowledge, domain insights and the ability to understand their customer needs.

4. In order to adapt to a changing landscape, SMEs are looking to their finance teams to have the skills to identify and understand a wider set of data and provide additional insight for the sustainability transition required.

5. SME stakeholders, from business owners and management to finance providers, government agencies and employees, need the raw material of the finance function – information – distilled into actionable insights.

6. Common for all types of accountant-SME-collaborations is that the accountant has a high degree of insights into the business, commonly called 'financial intimacy'.

7. Cost-reduction is the main driver for SMEs to engage with their accountants in optimising their businesses.

8. We find that integrated reporting is more useful and less of a burden for SMEs as they in most cases have less complexity in their value chains, and thus also in their financial reporting, compared to larger companies.

9. At the international and national levels, it

will be necessary to develop new metrics and measurements of progress that look beyond economic output to factor in non-traditional measures such as human well-being and natural capital.

10. The external accountants serve approximately one million customers in Norway, Sweden and Finland.

11. The Nordic accountant typically handles a portfolio of between 20-50 SMEs (depending on size), with a Nordic average of 35.

12. The accountant are versatile – they can develop performance metrics and monitoring/ auditing systems, they can set budgets, produce strategic plans and manage risk.

13. The accountant is working on reporting standards, valuation techniques and materiality assessments on a daily basis. Quality assurance processes and high integrity will add confidence to a sustainability report.

14. The accountant's role has shifted over the past 20 years; many clients also now expect their accountants to be 'trusted business advisers', including on the issues of corporate sustainability, rather than just 'number-crunchers'.

15. The majority of accountants, open for trying new things and open to sustainability as a topic, are middle aged female accountants commonly employed in a smaller company.

16. One common personality trait acting as a barrier for the average accuntant to meet the demand as an advisor, is lack of confidence.

17. Most SME-business owners in the Nordics are male, and indications reveals that confidence is higher in this group compared to the average accountant (Guillen, 2018).

18. Thus, one evident barrier for the average accountant to evolve into the role as a sustainability consultant is the so called confidence-asymmetri (Guillen, 2018; Börjesson, 2020).

19. Most common softwares used by accountants in the Nordics is FortNox and Visma including Tripletex and Poweroffice.

20. It might be valuable for NSRS to draw inspiration from the steps in the user journey to the financial framework IFRS as the implementation process of standards in many cases are familiar to the Nordic accountant.

21. Lack of time is for the 'average' majority of the Nordic accountant the main barrier for investing in learning new skills.

22. Spring is the busiest period for client compliance, therefore all the internal activities in a common accounting firm in the Nordics are normally scheduled during the fall.

23. Without specialized competencies within sustainability matters, the accountant cannot be the best advisor for their clients.

24. Education and practical tools are keys in order to prepare the accountant for the job as a sustainability advisor.

25. Partnerships: Accountants should establish collaboration with local environmental sustainability experts in order to gain local access to credible knowledge and data.

Focus: Entry point for the NSRS prototype

Chapter 2.9: Choosing the Industry

1. We have decided to increase the relevance of our standard to SMEs by focusing first on one industry. We hope this will reduce the amount of irrelevant material in sustainability reports and increase value amongst SMEs.

2. The standard's subject material will have a universal core similar to the UN Global Compact or the OECD Guidelines for Multinational Enterprises. This core allows the standard to be relevant for all industries, but specific for the focus-industries, similarly to SASB reporting framework.

3. For the first iteration of the standard, the focus-industry will be the construction and building industry. We came to this conclusion by analysing Eurostat data on the highest GHG emitting Nordic countries and the number of SMEs per industry in those countries.

4. The construction and building industry is one of the most exposed sectors for climate-change risks according to the European Union.

5. The industry's environmental impact has been estimated to include 35% of EUs waste generation and 5-12% total European GHG emissions.

6. The Intergovernmental Panel on Climate Change has recognized several industry changes for the construction and building industry. These changes include:
- Higher costs on construction due to flooding
- Changes in building season
- Designs of buildings to withstand climate-change impacts
- Greater demand for rebuilding and repairs

7. Currently there is no confirmed motion for legislation to reduce the environmental impact of the construction industry,
but the EU's 2020 Circular Economy Plan and EU's Green Deal are planning to push the regulatory measures for greener construction and building.

Suggestions for further research
The findings presented in this report has paved way for the development in the research. However, the teams knowledge and insight will deepen as the project continues. Therefore, this report is the first version of this publicly released report. We acknowledge the complexity of the topic and acknowledge that as the development of the standard proceeds, the understanding of the complexity in the field we are operating withing will deepen. In the progress plan of the standard, a version two of the report is planned in order to openly share what we anticipate will become a strengthened pool of knowledge and insights as the process proceeds.

3.5
The process at a glance – a retrospective

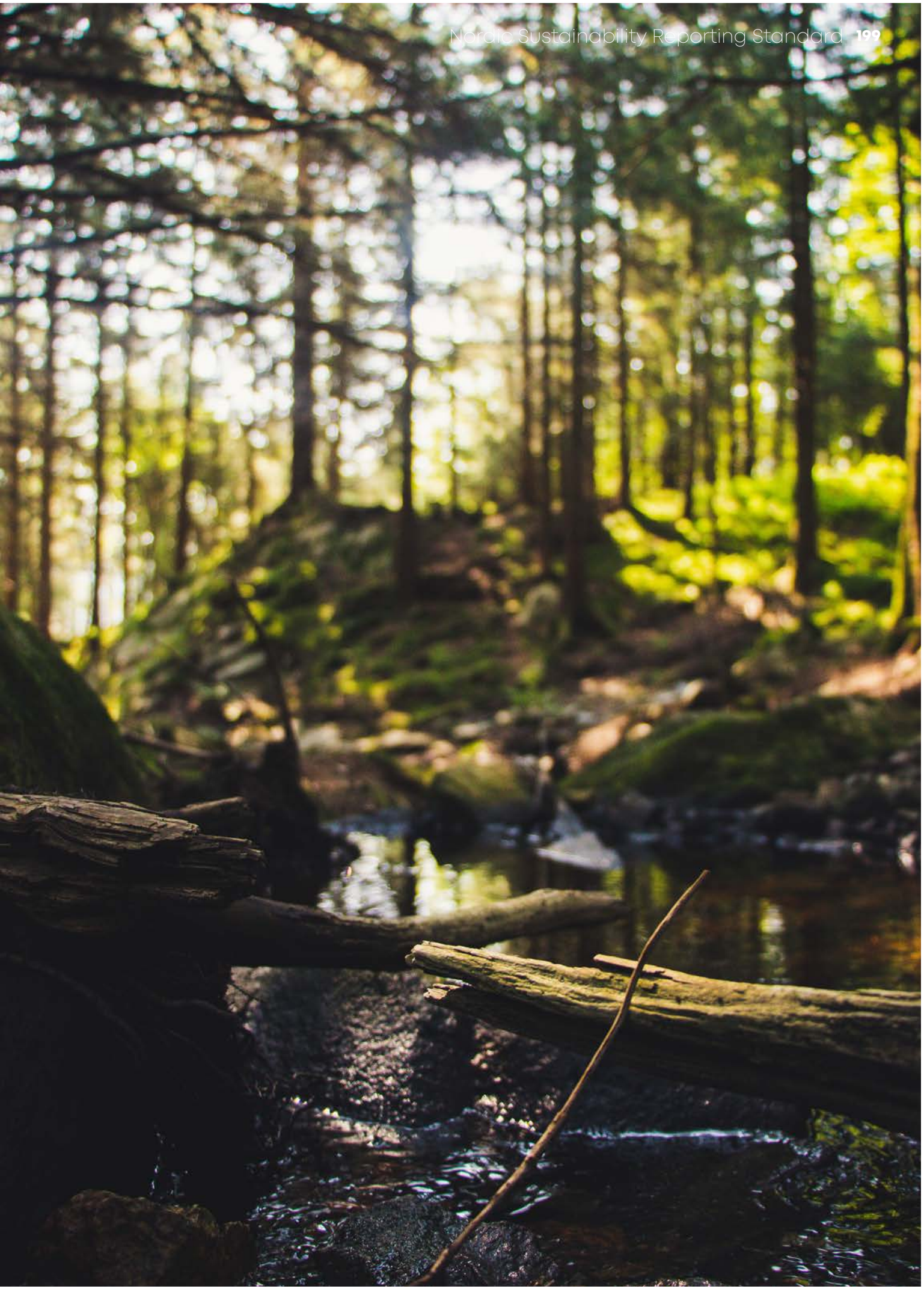
Now we are 15 participants – most of us have never met physically – based in four countries, three generations, two time zones and a massive digital infrastructure to support our work and progress. The challenges are not few to say it at least. However, we developed at infrastructure that could handle this processual complexity. However, we did not plan for Covid-19. Looking at the process the entire project got thrown into the digital sphere and out of the initial project plan as Covid-19 touched upon us as well. The process has been highly affected by the global pandemic and has offered some severe obstacles, which has led to delays. Consequently, the quality and progress has been suffering from the situation. Nevertheless, we believe we have brought forth a foundation of which the standard is developed from of great value, importance and relevance.

3.6
The way forward – some closing remarks

Following the methodology of design thinking, we are now closing the first iteration of phase one and two; empathizing and defining, with this report as the outcome. The road ahead for the project is to dive into the next phase of the design thinking methodology; the ideation phase, and if the world stays the same-ish until February we should be able to release the very first beta-version of the standard by then.

In the next part of the project we will also use participatory methodology, were we seek to co-develop the standard with future stakeholders and future users of the standards. Therefore, we appriciate all the input, feedback and welcome new participants that wants to come join the making. If you would like to contribute in any way, don´t hesitate to contact us; www.nsrs.eu

We look forward to hear from you and thank you for your attention.




Nordic
Sustainability
Reporting
Standard

Citations

An overview of citations can be found in the following section. The citations are organised after chapters. Note that some citations have been used in multiple chapters.

Part 1 of the Report – The Introduction

AKSU KARGIN, İ. (2018). Leverage Points: Places to Intervene in a System. History Studies International Journal of History, 10(7), 1–19. https://doi.org/10.9737/hist.2018.647

Cambridge Dictionary. (2020, November 24). trade-off definition: 1. a situation in which you balance two opposing situations or qualities: 2. a situation in which.... Learn more. https://dictionary.cambridge.org/dictionary/english/trade-off

Geels, F., Turnheim, B., Asquith, M., Kern, F., & Kivimaa, P. (2019). Sustainability transitions: Policy and practice. European Environment Agency Program, 09, 1. https://www.eea.europa.eu/publications/sustainability-transitions-policy-and-practice

Hauser, J., & Katz, G. (1998). Metrics: You are what you measure! European Management Journal, 16(5), 517–528. https://doi.org/10.1016/S0263-2373(98)00029-2

IPCC Glossary. (2019). Special Report on the Ocean and Cryosphere in a Changing Climate. https://www.ipcc.ch/srocc/chapter/glossary/

Markard, J. (2017). Sustainability transitions: Exploring the emerging field and its relations to management studies. Academy of Management Proceedings, 2017(1), 14100. https://doi.org/10.5465/ambpp.2017.14100abstract

Markard, J., Raven, R., & Truffer, B. (2012). Sustainability transitions: An emerging field of research and its prospects. Research Policy, 41(6), 955–967. https://doi.org/10.1016/j.

respol.2012.02.013

Meadows D. Thinking in Systems. A Primer. London, United Kingdom: Earthscan; 2008.

Morioka, S. N., & Carvalho, M. M. (2016). Measuring sustainability in practice: exploring the inclusion of sustainability into corporate performance systems in Brazilian case studies. Journal of Cleaner Production, 136, 123–133. https://doi.org/10.1016/j.jclepro.2016.01.103

Sustainable finance. (2017, July 4). European Commission - European Commission. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

Chapter 2.1 – There is no Planet B

Benini, L., & Viaud, V. (2020). Drivers of change of relevance for Europe's environment and sustainability. European Environmental Agency. https://doi.org/10.2800/129404

Bolt, J., Inklaar, R., Jong, H., & Zanden, J. L. (2018). https://www.rug.nl/ggdc/html_publications/memorandum/gd174.pdf. Groningen growth and development centre. https://www.rug.nl/ggdc/html_publications/memorandum/gd174.pdf

Crutzen P.J. (2006) The "Anthropocene". In: Ehlers E., Krafft T. (eds) Earth System Science in the Anthropocene. Springer, Berlin, Heidelberg. https://doi.org/10.1007/3-540-26590-2_3

EEA, Ganzleben, C., & Marnane, I. (2019). Healthy environment, healthy lives: how the environment influences health and well-being in Europe. European Environmental Agency. https://doi.org/10.2800/53670

Guterres, A., & Msuya, J. (2018). UN Environment Annual Report 2018. UN Environment. https://www.unenvironment.org/annualreport/2018/index.php#cover

Hoegh-Guldberg, O., D. Jacob, M. Taylor, M. Bindi, S. Brown, I. Camilloni, A. Diedhiou, R. Djalante, K.L. Ebi, F. Engelbrecht, J.Guiot, Y. Hijioka, S. Mehrotra, A. Payne, S.I. Seneviratne, A. Thomas, R. Warren, and G. Zhou, *2018: Impacts of 1.5ºC Global Warming on Natural and Human Systems. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I.Gomis, E. Lonnoy, T.Maycock, M.Tignor, and T. Waterfield (eds.)]. In Press.

Rao, C., Rapoport, E., Rasmuson, M., & Raven, P. et al (1997). Worlds Scientists' Warning to Humanity. Union of Concerned Scientists. https://www.ucsusa.org/sites/default/files/attach/2017/11/World%20Scientists%27%20Warning%20to%20Humanity%201992.pdf

Ripple, W. J., Wolf, C., Newsome, T. M., Galetti, M., Alamgir, M., Crist, E., Mahmoud, M. I., & Laurance, W. F. (2017). World Scientists' Warning to Humanity: A Second Notice. BioScience, 67(12), 1026–1028. https://doi.org/10.1093/biosci/bix125

Steffen, W., Broadgate, W., Deutsch, L., Gaffney, O., & Ludwig, C. (2015). The trajectory of the

Anthropocene: The Great Acceleration. The Anthropocene Review, 2(1), 81–98. https://doi.org/10.1177/2053019614564785

Steffen, W., Richardson, K., Rockstrom, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., de Vries, W., de Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Ramanathan, V., Reyers, B., & Sorlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. Science, 347(6223), 1259855. https://doi.org/10.1126/science.1259855

United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019: Highlights. ST/ESA/SER.A/423.

Chapter 2.2 – The Corporate Sustainability Conondrum

Bernstein, S., Betsill, M., Hoffmann, M., & Paterson, M. (2010). A tale of two Copenhagens: carbon markets and climate governance. Millennium, 39(1), 161–173.

Bulkeley, H., & Newell, P. (2015). Governing climate change. Routledge.

Burck, J., Hagen, U., Höhne, N., Nascimento, L., & Bals, C. (n.d.). Climate Change Performance Index: Results 2020. Berlin and Beirut: Germanwatch, New Climate Institute and Climate Action Network; 2019.

CAANZ. (2020). Guide to non-financial risks in 2020. In CAANZ. https://www.charteredaccountantsanz.com/news-and-analysis/news/accountants-are-pivotal-in-identifying-and-managing-nonfinancial-risk

Carbon Market Watch. (2020). Climate governance - Carbon Market Watch. In Carbon Market Watch. https://carbonmarketwatch.org/our-work/climate-governance

Case, D. W. (2005). Corporate environmental reporting as informational regulation: a law and economics perspective. U. Colo. L. Rev., 76, 379.

Esty, D. C. (2001). Next generation environmental law: A response to Richard Stewart. Cap. UL Rev., 29, 183.

Esty, D. C. (2004). Environmental protection in the information age. NYUL Rev., 79, 115.

Jagers, S. C., & Stripple, J. (2003). Climate governance beyond the state. Global Governance: A Review of Multilateralism and International Organizations, 9(3), 385–399.

Johnson, M. P., & Schaltegger, S. (2016). Two decades of sustainability management tools for SMEs: How far have we come? Journal of Small Business Management, 54(2), 481–505.

Karkkainen, B. C. (2000). Information as environmental regulation: TRI and performance benchmarking, precursor to a new paradigm. Geo. LJ, 89, 257.

Kleindorfer, P. R., & Orts, E. W. (1998). Informational regulation of environmental risks. Risk Analysis, 18(2), 155–170.

Light, S. E. (2012). NEPA's Footprint: Information Disclosure as a Quasi-Carbon Tax on Agencies. Tul. L. Rev., 87, 511.

Mazzucato, M. (2017). Mission-oriented

innovation policy. UCL Institute for Innovation and Public Purpose Working Paper.

Pearson, A., & Worthington, B. (2009). ETS SOS: Why the flagship 'EU Emissions Trading Policy'needs rescuing. Sandbag, July.

Sunstein, C. R. (1998). Informational regulation and informational standing: Akins and beyond. U. Pa. L. Rev., 147, 613.

Tietenberg, T., & Wheeler, D. (2001). Empowering the community: information strategies for pollution control. Frontiers of Environmental Economics, 85–120.

Wishnie, L. G. (2008). NEPA for a New Century: Climate Change & (and) the Reform of the National Environmental Policy Act. NYU Envtl. LJ, 16, 628.

Wrenn, M. (2019). Renegade Inc: Neoliberalism - An Idea Swallowing The World. Renegade Inc. https://www.youtube.com/watch?v=B5OnWsc0G_Y&t=208s

Chapter 2.3 – Sustainability Reporting

Bernow, S., Godsall, J., Klempner, B., & Merten, C. (2019). More than values: The value-based sustainability reporting that investors want. McKinsey & Company.

CAANZ. (2020). Guide to non-financial risks in 2020. In CAANZ. https://www.charteredaccountantsanz.com/news-and-analysis/news/accountants-are-pivotal-in-identifying-and-managing-nonfinancial-risk

Delmas, M. A., & Burbano, V. C. (2011). The Drivers of Greenwashing. Calif. Manage. Rev., 54(1), 64–87. https://doi.org/10.1525/cmr.2011.54.1.64

Eccles, R. G., Krzus, M. P., Rogers, J., & Serafeim, G. (2012). The Need for Sector-Specific Materiality and Sustainability Reporting Standards. Journal of Applied Corporate Finance, 24(2), 65–71. https://doi.org/10.1111/j.1745-6622.2012.00380.x

Ernst Young, E. Y. (2014). Sustainability Reporting the time is now. EYGM Limited. Preuzeto Sa Sajta Dana, 31(08), 2016.

Esty, D. C., & Karpilow, Q. (2019). Harnessing Investor Interest in Sustainability: The Next Frontier in Environmental Information Regulation. Yale J. on Reg., 36, 625.

GRI. (2019). SDD - GRI Database. In Gri. https://database.globalreporting.org/search/

Johnson, M. P., & Schaltegger, S. (2016a). Two decades of sustainability management tools for SMEs: How far have we come? Journal of Small Business Management, 54(2), 481–505.

Johnson, M. P., & Schaltegger, S. (2016b). Two Decades of Sustainability Management Tools for SMEs: How Far Have We Come? Journal of Small Business Management, 54(2), 481–505. https://doi.org/10.1111/jsbm.12154

KPMG. (2016). Carrots and sticks: Global trends in sustainability reporting regulation and policy.

Nelson, M. (2020). How will ESG performance shape your future? EY. https://www.ey.com/en_gl/assurance/how-will-esg-performance-shape-your-future

Thaslim, K. A. M., & Antony, A. R. (2016). Sustainability reporting--Its then, now and the emerging next! World Scientific News, 42, 24–40.

Chapter 2.4 – Existing Frameworks

ACCA 2016. Mapping the sustainability reporting landscape. Lost in the right direction. From: https://www.accaglobal.com/

ACCA 2017. Insights into Integrated Reporting: challenges and best practice responses. From: https://www.accaglobal.com/

Balachandran, K., Taticchi, P., Clarke-Sather, A.R., Hutchins, M.J., Zhang, Q., Gershenson, J.K. and Sutherland, J.W., 2011. Development of social, environmental, and economic indicators for a small/medium enterprise. International Journal of Accounting & Information Management.

Blanco, C., Caro, F. and Corbett, C.J., 2016. The state of supply chain carbon footprinting: analysis of CDP disclosures by US firms. Journal of Cleaner Production, 135, pp.1189-1197.

Capitals Background paper 2013. IIRC. From: https://integratedreporting.org/wp-content/uploads/2013/03/IR-Background-Paper-Capitals.pdf

Cernic, J.L., 2008. Corporate responsibility for human rights: A critical analysis of the OECD guidelines for multinational enterprises. Hanse L. Rev., 4, p.71.

Aid, C., 2005. Amnesty International UK & Friends of the Earth Flagship or failure. The UK's implementation of the OECD guidelines and approach to corporate accountability.

Curkovic, S. and Sroufe, R., 2011. Using ISO 14001 to promote a sustainable supply chain strategy. Business strategy and the environment, 20(2), pp.71-93.

Deloitte 2019. Greenwashing or measurable results? Analyst of the 50 largest companies in Norway 2019. From: https://integratedreporting.org/wp-content/uploads/2020/02/IR-and-Sustainability-Report-Deloitte-Norway.pdf

Depoers, F., Jeanjean, T. and Jérôme, T., 2016. Voluntary disclosure of greenhouse gas emissions: Contrasting the carbon disclosure project and corporate reports. Journal of Business Ethics, 134(3), pp.445-461.

Eccles, R.G. and Krzus, M.P., 2017. An analysis of oil & gas company disclosures from the perspective of the task force on climate-related financial disclosures. Available at SSRN 3091232.

Eccles, R.G., Krzus, M.P., Rogers, J. and Serafeim, G., 2012. The need for sector-specific materiality and sustainability reporting standards. Journal of Applied Corporate Finance, 24(2), pp.65-71.

EcoAct 2019. The Big eBook of Sustainability Reporting Frameworks. From: https://info.eco-act.com/en-gb/the-big-ebook-of-sustainability-reporting-frameworks

Fonseca, A., 2010, March. Barriers to Strengthening the Global Reporting Initiative Framework: Exploring the perceptions of consultants, practitioners, and researchers. In Trabajo presentado en Accountability Through Measurement: 2nd National Canadian Sustainability Indicators Network Conference. Toronto.

García, R. and Freire, F., 2014. Carbon footprint of particleboard: a comparison between ISO/TS 14067, GHG Protocol, PAS 2050 and Climate Declaration. Journal of cleaner production, 66, pp.199-209.

ghgprotocol.org. From: https://ghgprotocol.org/calculation-tools

globalreporting.org/sector-program. From: https://www.globalreporting.org/standards/sector-program/

Gupta, S.K. and Racherla, U.S., 2016. Effect of ISO 14000 certification on sustainability: evidence from the Indian leather industry. The Journal of Social, Political, and Economic Studies, 41(1), pp.34-50.

Hąbek, P. and Wolniak, R., 2016. Assessing the quality of corporate social responsibility reports: the case of reporting practices in selected European Union member states. Quality & quantity, 50(1), pp.399-420.

Hahn, R., 2013. ISO 26000 and the standardization of strategic management processes for sustainability and corporate social responsibility. Business Strategy and the Environment, 22(7), pp.442-455.

Hedberg, C.J. and Von Malmborg, F., 2003. The global reporting initiative and corporate sustainability reporting in Swedish companies. Corporate social responsibility and environmental management, 10(3), pp.153-164.

Ideasonpurpose.com. From: https://www.ideasonpurpose.com/on/2019-guidance-on-reporting-frameworks-gri-iirc-sasb/

Iied.org. From:https://www.iied.org/will-standard-for-social-responsibility-make-any-difference

IIRC Framework 2013. From: https://integratedreporting.org/resource/international-ir-framework/

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

iso.org/ISO 14001. From: https://www.iso.org/iso-14001-environmental-management.html

iso.org/ISO 26000. From: https://www.iso.org/iso-26000-social-responsibility.html

iso26000.info. From: https://iso26000.info/certification/

KPMG 2017. The KPMG Survey of Corporate Responsibility Reporting 2017. From: https://home.kpmg/xx/en/home/insights/2017/10/the-kpmg-survey-of-corporate-responsibility-reporting-2017.html

Latan, H., Jabbour, C.J.C., de Sousa Jabbour, A.B.L., Wamba, S.F. and Shahbaz, M., 2018. Effects of environmental strategy, environmental uncertainty and top management's commitment on corporate environmental performance: The role of environmental management accounting. Journal of Cleaner Production, 180, pp.297-306.

Mahmood, Z., Kouser, R. and Iqbal, Z., 2017. Why Pakistani small and medium enterprises are not reporting on sustainability practices?. Pakistan Journal of Commerce and Social Sciences (PJCSS), 11(1), pp.389-405.

Matisoff, D.C., Noonan, D.S. and O'Brien, J.J., 2013. Convergence in environmental reporting: assessing the Carbon Disclosure Project. Business Strategy and the Environment, 22(5), pp.285-305.

mneguidelines.org. From: http://mneguidelines.oecd.org/guidelines/

O'Dwyer, B. and Unerman, J., 2020. Shifting the focus of sustainability accounting from impacts to risks and dependencies: researching the transformative potential of TCFD reporting. Accounting, Auditing & Accountability Journal.

OECD Guidelines 2011. OECD Guidelines for Multinational Enterprises 2011 edition. From: https://www.oecd.org/daf/inv/mne/oecdguidelinesformultinationalenterprises.htm

oecdwatch.org. From: https://www.oecdwatch.org/oecd-ncps/the-oecd-guidelines-for-mnes/

Oll, J. and Rommerskirchen, S., 2018, December. What's wrong with integrated reporting? A systematic review. In NachhaltigkeitsManagementForum| Sustainability Management Forum (Vol. 26, No. 1-4, pp. 19-34). Springer Berlin Heidelberg.

Oxford Dictionary. From: https://www.oxfordlearnersdictionaries.com/definition/english/standard_1?q=standard

Poksinska, B., Dahlgaard, J.J. and Eklund, J.A., 2003. Implementing ISO 14000 in Sweden: motives, benefits and comparisons with ISO 9000. International Journal of Quality & Reliability Management.

PwC 2018. PwC Corporate Responsibility Barometer Finland. From: https://www.pwc.fi/en/publications/corporate-responsibility-barometer-2018.html

Rasche, A., 2009. "A necessary supplement" what the United Nations Global Compact is and is not. Business & Society, 48(4), pp.511-537.

Rasche, A., 2011. Corporate responsibility standards. Continental philosophy and business ethics, pp.263-284.

Rasche, A., Waddock, S. and McIntosh, M., 2013. The United Nations global compact: Retrospect and prospect. Business & Society, 52(1), pp.6-30.

Rasche, A., Waddock, S. and McIntosh, M., 2013. The United Nations global compact: Retrospect and prospect. Business & Society, 52(1), pp.6-30.

Rondinelli, D. and Vastag, G., 2000. Panacea, common sense, or just a label?: The value of ISO 14001 environmental management systems. European Management Journal, 18(5), pp.499-510.

Ruggie, J.G., 2002. Trade, sustainability and global governance. Colum. J. Envtl. L., 27, p.297.

SASB 2017. Conceptual framework. From: https://www.sasb.org/standard-setting-process/conceptual-framework/

Siew, R.Y., 2015. A review of corporate sustainability reporting tools (SRTs). Journal of environmental management, 164, pp.180-195.

Suerf 2020. TCFD: strengthening the foundations of sustainable finance, by Mark Carney the Governor at Bank of England. From: https://www.suerf.org/policynotes/9319/tcfd-

strengthening-the-foundations-of-sustainable-finance

Sustainable profile 2016. From: https://www.sicm.com/docs/Sustainable_Profile-SASB.pdf

TCFD Phase 1 report. From: https://www.fsb-tcfd.org/publications/phase-i/

Thaslim, K.M. and Antony, A.R., 2016. Sustainability reporting–Its then, now and the emerging next!. World Scientific News, (42), pp.24-40.

Todea, N., Stanciu, I.C. and Joldoş, A.M., 2011. ENVIRONMENTAL AUDIT, A POSSIBLE SOURCE OF INFORMATION FOR FINANCIAL AUDITORS. Annales Universitatis Apulensis-Series Oeconomica, 13(1).

Toppinen, A., Virtanen, A., Mayer, A. and Tuppura, A., 2015. Standardizing social responsibility via ISO 26000: Empirical insights from the forest industry. Sustainable Development, 23(3), pp.153-166.

unglobalcompact.opg/who should join. From: https://www.unglobalcompact.org/participation/join/who-should-join

unglobalcompact.org/sdgs. From: https://www.unglobalcompact.org/sdgs

unglobalcompact.org/sdgs/about. From: https://www.unglobalcompact.org/sdgs/about

Urbaniak, M., 2017. The Role of Environmental Management Concept in the Supply Chain. Acta Universitatis Lodziensis. Folia Oeconomica, 5(331), pp.131-141. n.

Waddock, S., 2008. Building a new institutional infrastructure for corporate responsibility. Academy of Management perspectives, 22(3), pp.87-108.

WEF 2020. Measuring Stakeholder Capitalism Towards Common Metrics and Consistent Reporting of Sustainable Value Creation. From: https://www.weforum.org/reports/measuring-stakeholder-capitalism-towards-common-metrics-and-consistent-reporting-of-sustainable-value-creation

White & Case 2019. A Survey of Sustainability Disclosures by Small- and Mid-Cap Companies. From: https://www.whitecase.com/publications/alert/survey-sustainability-disclosures-small-and-mid-cap-companies

Vílchez, V.F., 2017. The dark side of ISO 14001: The symbolic environmental behavior. European Research on Management and Business Economics, 23(1), pp.33-39.
Wintergreen, J. and Delaney, T., 2007, May. ISO 14064, international standard for GHG emissions inventories and verification. In 16th Annual International Emissions Inventory Conference, Raleigh, NC.

WRI, WBCSD 2011. Product Life Cycle Accounting and Reporting Standard. World Resources Institute and World Business Council for Sustainable Development. From: http://www.ghgprotocol.org/.

Chapter 2.5 – Size Matters: SMEs, Sustainability and the Road Blocks

Arena, M., Azzone, G., Gestionale, I., & Milano, P. (2012). A process-based operational framework for sustainability reporting

in SMEs. 19(4), 669–686. https://doi.org/10.1108/14626001211277460

Bos-brouwers, H. (2015). Sustainable innovation processes within small (Issue January 2010).

Džupina, M., & Mišún, J. (2014). A comparative study of principles of corporate social responsibility in small and medium-sized enterprises and multinational enterprises. Economic Review, 43(3), 284–294. https://old.euba.sk/department-for-research-and-doctoral-studies/economic-review/preview-file/er3_2014_dzupina_misun_fulltext-17713.pdf

European Commission. (2020). An SME Strategy for a sustainable and digital Europe. Eurepean Commission, 110(9), 1689–1699.

European Commission. (2014). SMEs and the Environment in the European Union - Technical Annex. 132.

European Commission. (2016). Annual Report on European SMEs 2014/2015 - SME recovery continues. 1–15. http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2012/portugal_en.pdf

Katua, N. T. (2014). The Role of SMEs in Employment Creation and Economic Growth in Selected Countries. International Journal of Education and Research, 2(12), 461–472.

KPMG, GRI, UNEP, C. F. C. G. I. A. (2016). Global trends in sustainability reporitng regulation and policy. Carrots & Sticks.

Lepoutre, J., & Heene, A. (2006). Investigating the impact of firm size on small business social responsibility: A critical review. Journal of Business Ethics, 67(3), 257–273. https://doi.org/10.1007/s10551-006-9183-5

Loucks, E. S., Martens, M. L., & Cho, C. H. (2010). Engaging small- and medium-sized businesses in sustainability. Sustainability Accounting, Management and Policy Journal, 1(2), 178–200. https://doi.org/10.1108/20408021011089239

Muller, P., Robin, N., Jessie, W., Schroder, J., Braun, H., Becker, L. S., Farrenkopf, J., Ruiz, F. A., Caboz, S., Ivanova, M., Lange, A., Lonkeu, O. K., Muhlshlegel, T. S., Pedersen, B., Privitera, M., Bomans, J., Bogen, E., & Cooney, T. (2019). Annual Report on European SMEs 2018/2019 - Research & Development and Innovation by SMEs. https://ec.europa.eu/docsroom/documents/38365/attachments/2/translations/en/renditions/native

OECD. (2015). Policy toolkit for Greening SMEs.

Pierre, A., & Fernandez, A.-S. (2018). Going Deeper into SMEs' Innovation Capacity: An Empirical Exploration of Innovation Capacity Factors. Journal of Innovation Economics, 25(1), 139. https://doi.org/10.3917/jie.pr1.0019

Plugge, L. & Wiemer, J. (2008). Small, Smart and Sustainable - Experiences of SME Reporting in Global Supply Chains. Global Reporting Initiative. https://issuu.com/gcolombo/docs/pp_small__smart_and_sustainable_experiences_of_sme

Solymossy, E., & Masters, J. K. (2002). Ethics through an entrepreneurial lens: Theory and observation. Journal of Business Ethics, 38(3), 227–240. https://doi.org/10.1023/A:1015832123366

Walt, C. van der. (2018). SUSTAINABILITY REPORTING PRACTICES IN SMALL-TO-MEDIUM SIZED ENTERPRISES. University of Tampere, School of Managment, May.
Bellitto, M., Conde, J., Bianco, F., Donno, A., Fichot, A., Galli, M., Gkrimmotsis, K., Lake, A., & Ségol, M. (2018). EIB Investment Report 2018/2019: Retooling europe's economy. European Investment Bank. https://doi.org/10.2867/9501

Stoknes, P. (2018). Representantforslag om forbedring og forenkling av små og mellomstore bedrifters (SME) rapportering om vesentlig bærekraft- og samfunnspåvirkning. The Norwegian Parliament. https://www.stortinget.no/no/Saker-og-publikasjoner/Publikasjoner/Representantforslag/2017-2018/dok8-201718-173s/?all=true

Chapter 2.6 – Sustainability Reporting as a Sustainability Performance Improver

Adams, C. A. (2015). The international integrated reporting council: A call to action. Critical Perspectives on Accounting, 27, 23–28. https://doi.org/10.1016/j.cpa.2014.07.001

Adams, C. A., & Frost, G. R. (2008). Integrating sustainability reporting into management practices. Accounting Forum. https://doi.org/10.1016/j.accfor.2008.05.002

IIRC. (2013). The International <IR> Framework. The IIRC, 35. https://doi.org/10.1254/fpj.71.757

Maas, K., Schaltegger, S., & Crutzen, N. (2016). Integrating corporate sustainability assessment, management accounting, control, and reporting. Journal of Cleaner Production, 136, 237–248. https://doi.org/10.1016/j.jclepro.2016.05.008

Chapter 2.7 – Climate Risk: Survive and Thrive in the Future Ahead

A European Green Deal. (2019, October 12). European Commission - European Commission. https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

Adger, W. N., Brown, I., & Surminski, S. (2018). Advances in risk assessment for climate change adaptation policy. Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, 376(2121), 1. https://doi.org/10.1098/rsta.2018.0106

Averchenkova, A., Fankhauser, S., & Nachmany, M. (2017). Trends in Climate Change Legislation. Edward Elgar Pub.

Backer, Larry Catá, Transparency and Business in International Environmental Law (January 12, 2012). DOI: http://dx.doi.org/10.2139/ssrn.1984346

Bærekraft på børs. (2019). The Governance Group. https://static1.squarespace.com/static/59f0a1d780bd5ece4761c6ae/t/5d6d01c41c83ed000100f10a/1567424974977/TheGovGroup+Bærekraft+på+børs.pdf

Center for Circular Economy Denmark. (2019). MEMORANDUM NON-FINANCIAL BUSINESS DATA FOR SMEs IN THE FRAMEWORK OF NORDIC SMART GOVERNMENT (NSG). https://nordicsmartgovernment.org/sites/default/files/2019-09/Non-financial%20business%20data%20for%20SMEs%20in%20the%20framework%20of%20Nordic%20Smart%20

Government.pdf

Climate change impacts, adaptation measures and vulnerability assessment in Finland. (2017). Stat Finnish. http://www.stat.fi/tup/khkinv/luku6

Danish Energy Agency. (2008). Danish adaptation to future climate (No. 978-87-7844-761–6). Schultz. https://www.klimatilpasning.dk/media/5322/klimatilpasningspjece_uk_web2008.pdf

Deloitte Oy. (2020). The impact of climate change on Finnish business. https://www2.deloitte.com/content/dam/Deloitte/fi/Documents/risk/Deloitte%20for%20EK_Impacts%20of%20Climate%20Change%20Summary.pdf

Doughman, P. M. (2004). Carolyn L. Deere and Daniel C. Esty (Eds.), Greening the Americas: NAFTA's Lessons for Hemispheric Trade. International Environmental Agreements: Politics, Law and Economics, 4(1), 96–100. https://doi.org/10.1023/b:inea.0000019142.41540.ab

EU climate benchmarks and benchmarks' ESG disclosures. (2020c, March 7). European Commission - European Commission. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-climate-benchmarks-and-benchmarks-esg-disclosures_en

EU taxonomy for sustainable activities. (2020d, March 7). European Commission - European Commission. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en

Finansdepartementet, Skancke, M., Aven, T., Koç, N., Mohn, K., Myklebust, T., Nøstbakken, L., & Torvik, R. (2018). Klimarisiko og norsk økonomi. The Norwegian Government. https://www.regjeringen.no/no/dokumenter/nou-2018-17/id2622043/

Holgersson, B. (2007). Final report from the Swedish Commission on Climate and Vulnerability. Swedish Government Official Reports. ISBN 978-91-38-22850-0. Retrieved at: https://www.government.se/

How far have Nordic businesses come on their sustainability journey? (2020, September 17). Nordea. https://insights.nordea.com/en/business/nordic-businesses-on-their-sustainable-journey/

Kartlegging av bedriftenes bærekraftsrapportering. (2020). Finanstilsynet. https://www.finanstilsynet.no/globalassets/tilsyn/finansiell-rapportering/kartlegging_av_foretakenes_barekraftsrapportering_01092020.pdf

Krikken, F., Lehner, F., Haustein, K., Drobyshev, I., & van Oldenborgh, G. J. (2019). Attribution of the role of climate change in the forest fires in Sweden2018. Natural Hazards and Earth System Sciences Discussions, 1. https://doi.org/10.5194/nhess-2019-206

Nachmany, M., Byrnes, R., & Surminski, S. (2019, December 1). National laws and policies on climate change: A global review. Grantham Institue. https://indd.adobe.com/view/bcf46ab4-8e57-48df-a4c1-bda9060db13f

Nachmany, M., & Setzer, J. (2018). Global trends climate change legislation and litigation: 2018 snapshot. Grantham Insitute. https://

www.lse.ac.uk/granthaminstitute/wp-content/uploads/2018/04/Global-trends-in-climate-change-legislation-and-litigation-2018-snapshot-3.pdf

O'Dwyer, B., & Unerman, J. (2020). Shifting the focus of sustainability accounting from impacts to risks and dependencies: researching the transformative potential of TCFD reporting. Accounting, Auditing & Accountability Journal, 1. https://doi.org/10.1108/AAAJ-02-2020-4445

Sarkis, J. (2017). The Toxics Release Inventory (TRI) and Online Database ResourcesThe Toxics Release Inventory (TRI) and Online Database Resources. Academy of Management Learning & Education, 16(3), 497–499. https://doi.org/10.5465/amle.2017.0187

Sustainable finance. (2017, July 4). European Commission - European Commission. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

Sustainable Finance Teg Final Report Taxonomy Annexes. (2020d). European Commission. https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy-annexes_en.pdf

Sustainable Edge: Exploring green shading for companies. (2019). CICERO. https://pub.cicero.oslo.no/cicero-xmlui/bitstream/handle/11250/2582576/Rapport%202019%2001%20web%20ny%20versjon.pdf?sequence=11&isAllowed=y

Sustainability-related disclosure in the financial services sector. (2020b, March 7). European Commission - European Commission. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/sustainability-related-disclosure-financial-services-sector_en

TCFD. (2020). 2020 Status Report. Task Force on Climate-related Financial Disclosures. https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Status-Report.pdf

The New Climate Economy Report 2016. (2016). The New Climate Economy. https://newclimateeconomy.report/2016/

The Society For Risk Analysis. (2020). Society for Risk Analysis. https://www.sra.org/

Tompkins, E. L., & Amundsen, H. (2008). Perceptions of the effectiveness of the United Nations Framework Convention on Climate Change in advancing national action on climate change. Environmental Science & Policy, 11(1), 1–13. https://doi.org/10.1016/j.envsci.2007.06.004

Vises det grønne skiftet i selskapsrapporteringen? (2020). Deloitte. https://www2.deloitte.com/no/no/pages/audit/articles/integrert-rapportering-2020.html

Verschuur, S., & Sbrolli, C. (2020). The European Green Deal and State Aid: European State Aid Law Quarterly, 19(3), 284–289. https://doi.org/10.21552/estal/2020/3/5

World Economic Forum. (2020). Global Risk Report 2020. http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf

Chapter 2.8 – The Accountant

A4S. (2018). Can Accountants Save the World? Accounting 4 Sustainability. https://www.accountingforsustainability.org/en/knowledge-hub/blogs/can-accountants-save-the-world.html

ACCA. (2013). Accountants for small business. Association of Chartered Certified Accountants. https://www.accaglobal.com/gb/en/technical-activities/technical-resources-search/2013/march/accountants-for-small-businesses.html

ACCA Global. (2014). Sustainability and business: the next ten years |. Association of Chartered Certified Accountants. https://www.accaglobal.com/gb/en/technical-activities/technical-resources-search/2014/december/sustainability-and-business.html

ACCA Global. (2014). Sustainability matters. Association of Chartered Certified Accountants. https://www.accaglobal.com/gb/en/student/sa/features/sustainability.html

Accountants and Auditors : Occupational Outlook Handbook. (2020, November 19). U.S. Bureau of Labor Statistics. https://www.bls.gov/ooh/business-and-financial/accountants-and-auditors.htm#tab-2

Career Explorer. (2019, November 14). What does an accountant do? https://www.careerexplorer.com/careers/accountant/

Gleeson-White, J. (2015). Six Capitals, or Can Accountants Save the Planet? (1st ed.). W. W. Norton & Company.

Green, W. L. (2016). History and Survey of Accountancy (RLE Accounting) (1st ed.). Routledge.

Guillen, L. (2018). Is the Confidence Gap Between Men and Women a Myth? Harvard Business Review. https://hbr.org/2018/03/is-the-confidence-gap-between-men-and-women-a-myth

Oxbridge Academy. (2018, April 17). The Role of an Accountant. https://www.oxbridgeacademy.edu.za/courses/bookkeeping-accounting/role-accountant/

Spence, L., Agyemang, G., & Rinaldi, L. (2012). Environmental Aspects of Sustainability: SMEs and the Role of the Accountant. Certified Accountants Educational Trust. https://www.accaglobal.com/gb/en/technical-activities/technical-resources-search/2012/july/environmental-aspects-sustainability-smes.html

Chapter 2.9 – Choosing the Industry

ec.europa.eu.
From: https://ec.europa.eu/growth/smes/sme-definition_en

Ec.europa.eu/eurostat/metadata.
From. htm https://ec.europa.eu/eurostat/cache/metadata/en/sts_esms.htm

ec.europa.eu/eurostat/persons employed
From: https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Persons_employed_-_SBS

ec.europa.eu/Green Deal
From: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en#policy-areas

ec.europa.eu/metadata
From: https://ec.europa.eu/eurostat/cache/metadata/en/sts_esms.htm

ec.europa.eu/sectors
From: https://ec.europa.eu/clima/policies/adaptation/how/sectors_en

Investopedia.com.
From: https://www.investopedia.com/terms/g/gdp.asp

IPCC 2018. Global warming of 1.5°C.
From: https://www.ipcc.ch/sr15/)

IPCC 2014. AR5 Cliamte Change: Impacts, Adaptations and Vulnerability.
From: https://www.ipcc.ch/report/ar5/wg2/

Lenssen, G., Bevan, D., Fontrodona, J., Spitzeck, H. and Hansen, E.G., 2010. Stakeholder governance: how stakeholders influence corporate decision making.
Corporate Governance: The international journal of business in society.

Milne, M.J. and Gray, R., 2013. W (h) ither ecology? The triple bottom line, the global reporting initiative, and corporate sustainability reporting.
Journal of business ethics, 118(1), pp.13-29.

Stubbs, W. and Higgins, C., 2018. Stakeholders' perspectives on the role of regulatory reform in integrated reporting.
Journal of Business Ethics, 147(3), pp.489-508c

Nordic Sustainability Reporting Standard