Climate Change Accountability, Including TCFD in the Nordic Arctic Countries

Alexandra Middleton

Collectively, Finland, Norway and Sweden have some of the most ambitious commitments for combatting climate change, with Finland's goal to be carbon neutral by 2035, Norway's goal to reduce greenhouse gas emissions by 40% by 2030 and Sweden's goal to have zero net greenhouse gas emissions by 2045 at the latest. Recent attempts on the international level to address climate change have resulted in setting up in 2015 the FSB (Financial Stability Board) Task Force on Climate-related Financial Disclosures (TCFD). In 2017 TCFD introduced recommendations on voluntary, consistent climate-related financial risk disclosures for companies to provide information to investors and other stakeholders about risks and opportunities related to the transition to a lower-carbon economy. The article addresses climate change accountability by states and by companies in the Nordic Arctic countries. Climate change accountability or willingness to take responsibility is proxied by companies' reporting in compliance with TCFD. First, I investigate institutional mechanisms of TCFD adoption in the Nordic Arctic, including Finland, Norway and Sweden. To achieve that, I study Finnish, Norwegian, and Swedish institutions that endorse or provide practical guidelines for implementing TCFD, e.g., stock market regulators. The study results provide an overview of governance structures and practical implementation of TCFD in the Nordic Arctic (Finland, Norway and Sweden). Furthermore, the study contributes to the discussion on how to balance ambitious climate change targets with sustainable economic development in the Arctic regions.

Introduction

Human security is a people-centered concept that includes protection from threats in the areas of economic, food, health, environmental, personal, community and political security (Berghof-Foundation, 2020). It is endorsed by more than 170 states and received a new boost after the launch of the UN Agenda 2030 in 2015 (Middleton, 2019). The Nordic countries of Sweden, Norway and Finland perform exceptionally well in international assessments such as quality of life, happiness index, etc. At the same time, northern, Arctic regions of these countries experience negative population dynamics with decreasing populations of youth and young adults and disparities in tertiary education attainment (Business Index North, 2019; Business Index North, 2020). Focusing on the environmental pillar of human security, the goal of this article is to study climate change accountability in the Nordic Arctic, including Finland, Sweden and Norway. First, I introduce the role of the state and corporations in mitigating climate change. Then, I discuss mechanisms

Alexandra Middleton is a researcher at the Oulu Business School, University of Oulu.

available for accountability, such as the Task Force on Climate-Related Reporting (TCFD) guidelines. Finally, I investigate institutional factors for achieving the accountability and implementation of TCFD.

The article proceeds as follows. Section 1 discusses accountability, climate change, and the role of companies. Section 2 provides an overview of the TCFD as an accountability tool. Section 3 presents methods and data. Section 4 describes results on the institutional environment and climate change accountability in the Nordic Arctic countries. Finally, Section 5 concludes the article.

Accountability, climate change, and the role of the state and companies

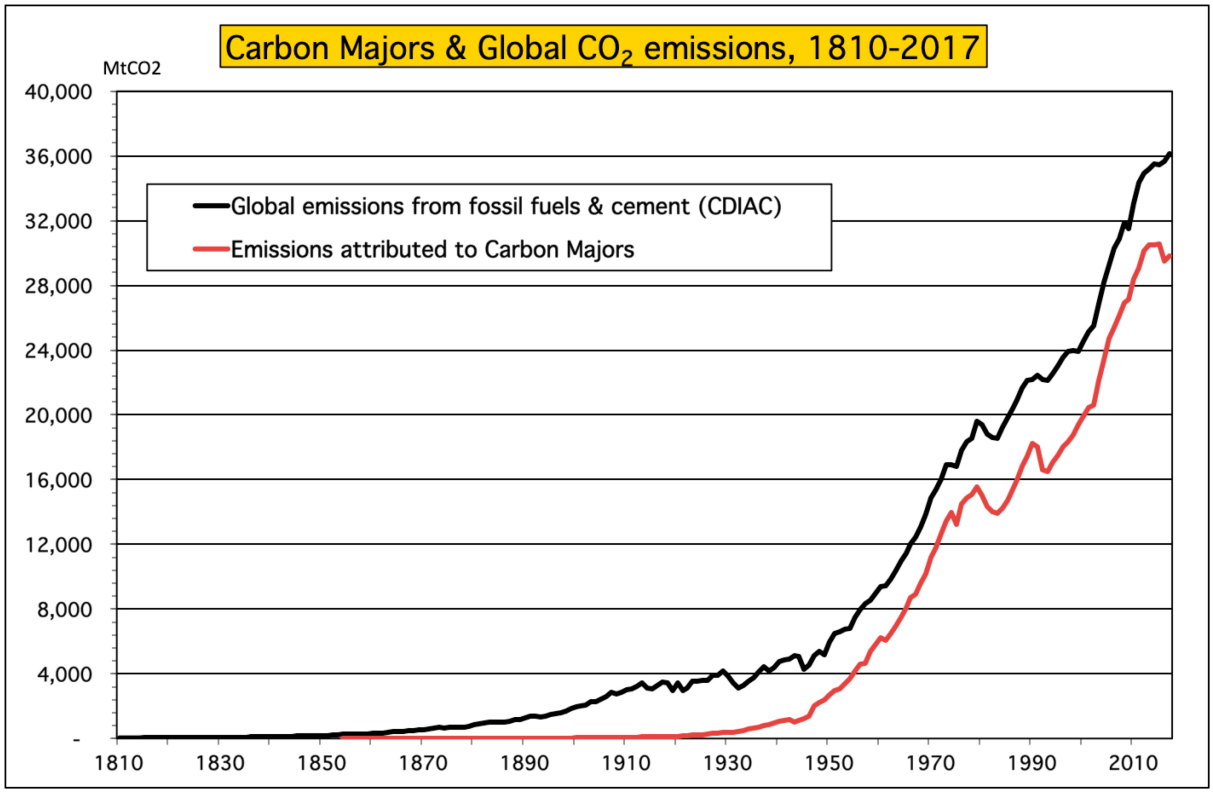
In 2015, the Paris Agreement marked an important landmark in human history when world nations agreed to commit and unite efforts in combating climate change. According to the Paris Agreement, parties should limit their emission and secure a global temperature rise this century well below 2 °C (UN). The Paris Agreement replaced the Kyoto Protocol, an earlier international treaty designed to curb the release of greenhouse gases. The Paris Agreement entered into force in 2016 and has been signed by 197 countries and ratified by 187 as of November 2019 (UN, 2020).

The Paris Agreement is realized via nationally determined contributions (NDCs). This includes requirements that all Parties regularly report on their emissions and their implementation efforts (UN, 2020). Hence, the states are each individually responsible for NDCs that represent the country's efforts to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve (UN, 2020). Accountability mechanisms are needed due to the urgency of the actions required. According to the IPCC Special Report *Global Warming of 1.5°C* from 2018, there is just over a decade left to limit climate change and make the changes in behaviours, policies and practices needed to limit global warming to 1.5°C (IPCC, 2018).

As seen from the mechanisms of the Paris Agreement, it includes elements of "accountability," signees are required to state the targets, document them, communicate and follow-up. The meaning of the term "accountability" used in this article is more broad. It includes two notions: *answerability*, an obligation of public officials to inform and explain what they are doing and; *enforcement* the capacity of the agencies to enforce sanctions on powerholders if they violate their public duties (Schedler et al., 1999: 14). Accountability is viewed as a right to receive information and the obligation to release information, leading to a possibility of dialogue between parties (Shedler, 1999). Accountability sets the normative concept as a set of standards for the evaluation of the behavior of public actors and can be viewed as a mechanism in which an actor can be held accountable by a forum (Bovens, 2010).

Apart from state accountability, corporations play a significant role in the implementation of the Paris Agreement. In 2019, the Climate Accountability Institute released an analysis of global fossil fuel and cement emissions of CO^2 since 1751, calculating the proportion emitted since 1988. According to estimates, half of all global industrial CO^2 emissions since 1751 were emitted from 1988 through 2014. Nearly 70% of carbon dioxide emitted since the 1750s can be traced to the 90 largest fossil fuel and cement producers, most of which still operate today (see Figure 1).

Figure 1 Global CO^2 by major global corporations



Source: Climate Accountability Institute, 2019

The Carbon Majors Report by the Climate Accountability Institute attributes (GHG) emissions to companies. Direct operational emissions and emissions from the use of sold products (Scope 3) are attributed to the extraction and production of oil, gas, and coal. Scope 1 emissions arise from the self-consumption of fuel, flaring, and venting or fugitive releases of methane. Scope 3 emissions account for 90% of total company emissions and result from the downstream combustion of coal, oil, and gas for energy purposes (The Climate Accountability Institute, 2019).

Climate change accountability of corporations has been limited, and there have not been many mechanisms available. In most countries, GHG emissions reporting for companies has been and still is voluntary, even though that reporting has been recognized as an essential factor in shifting to a more sustainable economic model worldwide (Baboukardos, 2017). Investors factor GHG emissions into their valuation models and use GHG emissions as a proxy for assessing firms' unaccounted future environmental liabilities, resulting in a negative association between GHG emissions and market stock valuation (Baboukardos, 2017). Some countries, such as the UK in 2013, introduced compulsory GHG emissions disclosures for the listed companies traded on the London stock exchange. However, still, the scale and scope of climate change accountability by the companies have remained very narrow.

In 2015, Financial Stability Boards established the Task Force on Climate-related Financial Disclosures (TCFD) to develop a set of voluntary, consistent disclosure recommendations for use by companies. The next section addresses the main components of TCFD and discusses how disclosures can serve as an element of accountability.

Task-Force on Climate-Related Reporting

The Financial Stability Board (FSB) is an international body that monitors and makes recommendations about the global financial system. It was established in April 2009 as the successor to the Financial Stability Forum (FSF). The FSB is endorsed by the Heads of State and Governments of the G20. The FSB has a key role in promoting the reform of international financial regulation and supervision.

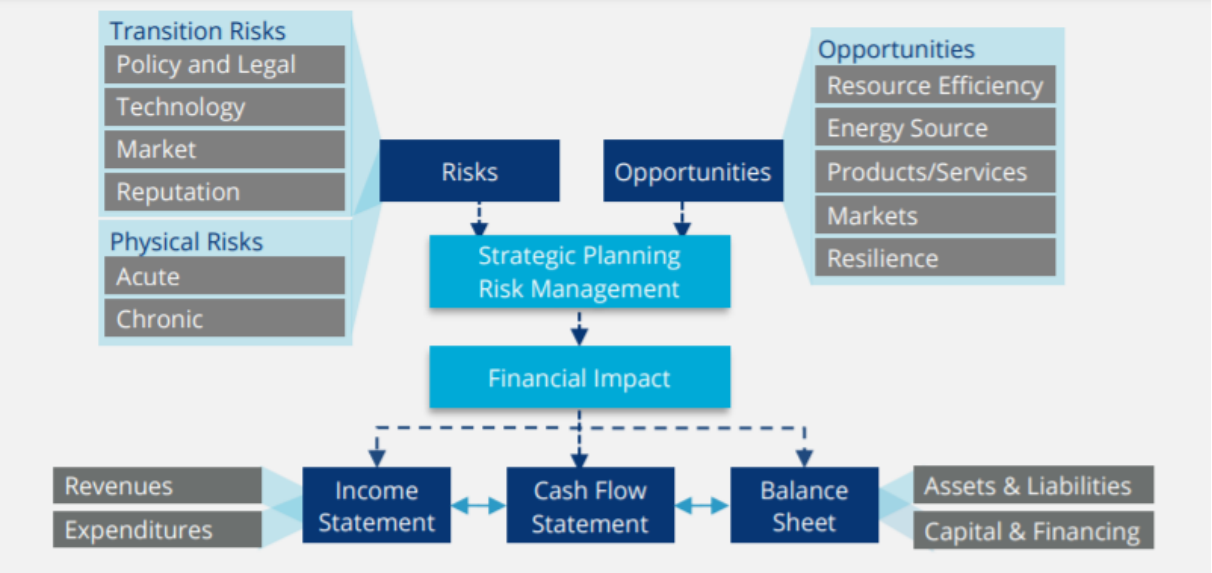
In 2015 the FSB directed the Task Force on Climate-related Financial Disclosures (TCFD) to deliver a set of recommendations for voluntary company financial disclosures of climate-related risks. The aim of the disclosures, once adopted by the companies, is to provide information to investors, lenders and insurance companies about their climate-related financial risks. The motivation to disclose risks lies in the understanding that investors who keep their stakes in companies dedicated to fossil fuels may find their investment becoming riskier with time. Market demand for decision-useful climate-related information by various participants in the financial markets has continued to grow over the last decade. Evidence suggests that the lack of consistent information hinders investors and other stakeholders from considering climate-related issues in their asset valuation, allocation and decision-making processes, which is believed to be alleviated with the introduction of comprehensive reporting standards (FSB).

The Task Force published its recommendations in June 2017 after extensive public engagement and consultation. The TCFD developed 11 recommendations on climate-related financial disclosures that apply to organizations across sectors and jurisdictions. The TCFD includes four major blocks on which reporting is expected: governance, strategy, risk management, metrics and targets (TCFD, 2017). Recommendations link financial and non-financial information, so the company could report on risks and opportunities, time horizons, and introduce scenario analysis.

Unlike previous reporting standards, introduced as a reaction to, for example, accounting scandals such as Enron, the TCFD is proactive and seeks to address the issues of financial stability before a crisis happens and supports the transition to a low carbon economy (TCFD, 2017). Schematically TCFD can be summarized as follows (see Figure 2). Climate change impact on financial performance (the lower blocks, including income statement, cash flow, and balance sheet) should encompass an assessment of risks and opportunities pertaining to climate change. Risks are grouped into two categories: transition and physical risks. *Transition risks* are linked to the transformation towards a low-carbon economy, such as regulatory changes limiting GHG and technological changes. *Physical risks* stem directly from climate change, such as more frequent and extreme weather events and changes in the balance of the ecosystem.

Therefore, to provide a TCFD compliant reporting, a company should evaluate climate-related risks (both transition and physical) and opportunities and provide estimates of how these risks and opportunities would financially affect the company. Consistent TCFD reporting can serve as a useful tool to enhance climate change accountability by companies and provide information about climate-related risks and opportunities to investors. Empirical analysis, however, demonstrates that in practice, few companies report on climate change risks and risk-management strategies through mainstream financial filings despite the physical consequences of climate change being of high value to investors (Goldstein et al., 2019).

Figure 2. Climate-related risks, opportunities, and financial impact



Source: TCFD Recommendations, 2017: 8.

Methods and data

First, I apply the concept of accountability (Shedler, 1999; Bovens, 2010) in relation to climate change, by asking questions about the mechanisms of climate change accountability in the Nordic Arctic countries. What is the role of corporations in climate change accountability in the Nordic Arctic countries?

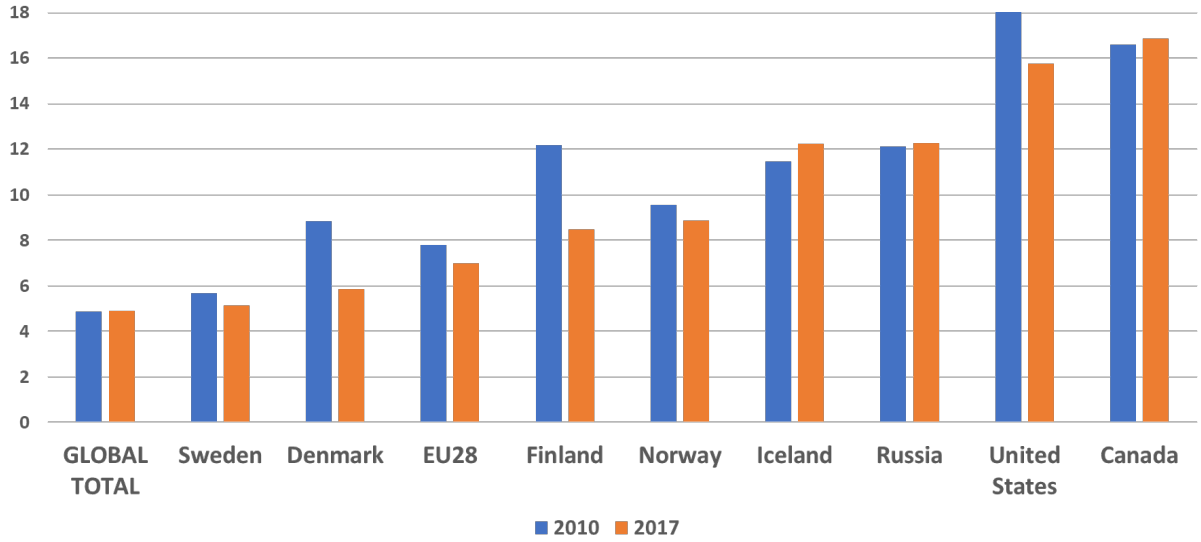
Second, I apply institutional theory dealing with regulatory processes that establish rules for firms' behavior and sanctions for violating it (Lawrence & Morell, 1995; Scott, 1995). While initially institutional theory viewed the institutional environment and its elements (regulations, norms and associative forces) as top-down forces on the organization (Scott, 1995), later bottom-up models of influence emerged, where organizations themselves can be active players in setting the rules and norms and reflect their institutional environment through creative processes (DiMaggio, 1988). Hence, in my analysis, I evaluate the actors and the processes that pertain to the state and corporations in climate change accountability.

I used publicly available data from the UN Climate Change platforms, European Commission's in-house Emissions Database for Global Atmospheric Research (EDGAR), data from the Business Index North Reports (2018-2020) and national websites on progress to Paris Agreement. Furthermore, I collected publicly available data from stock exchanges in Norway, Sweden, and Finland, the TCFD hub database, and data from state pension companies.

Results and discussion

In order to understand where the Arctic countries stand in terms of global levels of CO^2 emissions and their progress in reducing CO^2 emissions, I collected data from the European Commission's in-house Emissions Database for Global Atmospheric Research (EDGAR) (see Figure 3). The data points are available for indicating ton CO^2 per capita in the Arctic states from 2010 and 2017, making it possible to evaluate the progress.

Figure 3 Ton CO^2 per capita in the Arctic states, in 2010 and 2017



Source: European Commission's in-house Emissions Database for Global Atmospheric Research (EDGAR), collected by the author.

Figure 3 illustrates that among the Arctic countries, Canada and the USA are the top contributors in terms of CO^2 emissions when compared to the EU-28 average. The graph demonstrates that the Arctic countries, being developed ones, are contributing much more in terms of CO^2 emissions as the Global Total. Best performing out of Arctic countries are Sweden and Denmark with the lowest ton CO^2 per capita in the Arctic states and well below the EU-28 average of 7 ton CO^2 per capita in 2017. In terms of progress in CO^2 reductions, Denmark, Finland, and the USA have considerably reduced their CO^2 emissions per capita from 2010 to 2017.

Factors that contribute to the levels of CO^2 emissions per capita include (Pettinger, 2019): GDP level (countries with higher GDP levels tend to be more industrialized and use hydrocarbons in industrial production), economy focus (e.g. oil production), transport policy (levels of petrol tax and car usage), and policies to reduce CO^2 emissions and modes of power generation. In the case of Arctic states, the levels of CO^2 emissions are influenced by climatic factors (cold winters), a high percentage of population living in off-grid settlements (McDowall, 2018) and a different scale of technological development in terms of renewable energy in the total energy mix (Business Index North, 2019).

In this article, I focus on the polices that Nordic Arctic countries use to address climate change by reducing their CO^2 emissions.

Regional level CO^2 emissions in the Nordic Arctic states

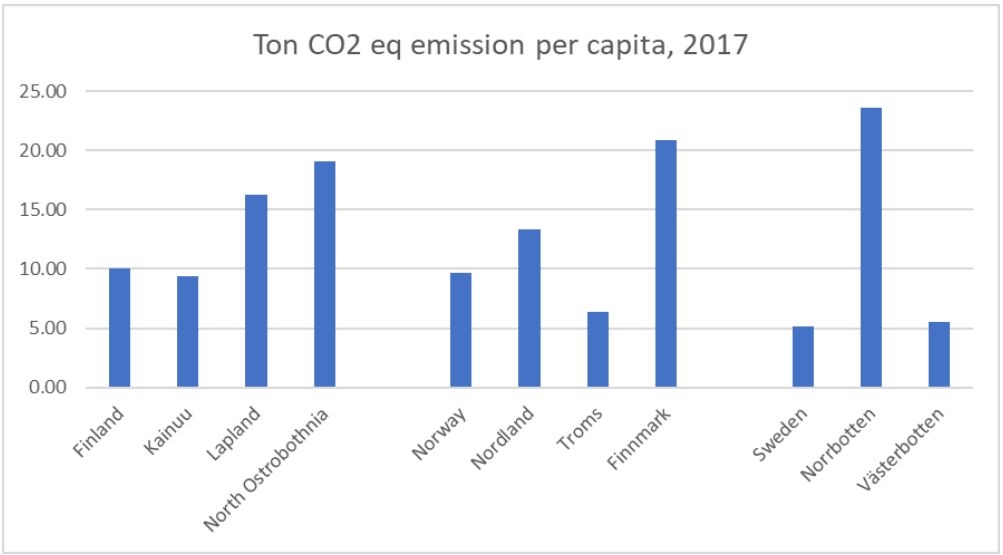
When investigating CO^2 emissions in the Nordic Arctic states, I focus on the northern regions of Finland (Lapland, Kainuu, North Ostrobothnia), Norway (Troms, Finnmark, Nordland) and Sweden (Västerbotten, Norrbotten) (see Figure 4).

Figure 4 Regions in the Nordic Arctic states (The Nomenclature of territorial units for statistics (NUTS) level 3).

Source: Business Index North, 2018.

At the state level, all three countries (Finland, Norway and Sweden) have made progress on reducing their CO^2 emissions (see Figure 3). The situation on the regional level presented in Figure 5 is different. For example, regions of Lapland and North Ostrobothnia have reasonably high CO^2 equivalent emissions per capita than Finland as a whole due to developed industrial clusters of metallurgical and other carbon-intensive industries; the same holds for Finnmark and Nordland in Norway and Norrbotten in Sweden (Business Index North, 2019). These Arctic regions with large industrial and manufacturing bases are very sparsely populated. Hence the industrial emissions per capita are high.

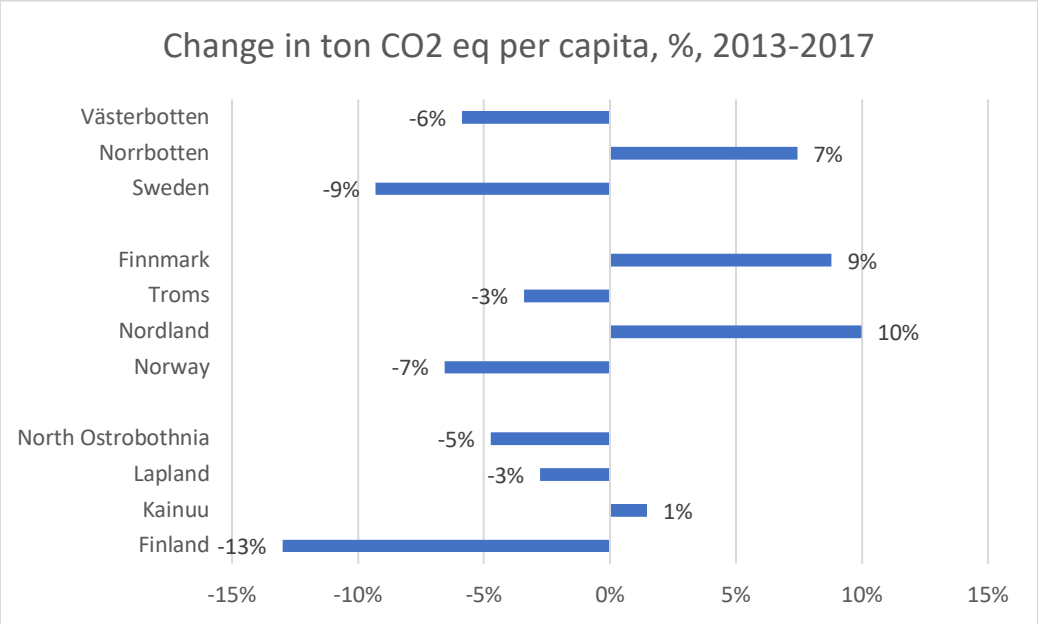
Figure 5 Ton CO^2 equivalent emissions per capita, 2017



Source: Business Index North, 2019

On the regional level, the same industry-driven regions of Norrbotten, Finnmark, and Nordland had growth of ton CO^2 eq emissions per capita from 2013 to 2017 in the range of 7-10% (see Figure 6). Figure 6 highlights challenges on the regional level for national climate change targets. The growth of industrial activity coupled with challenging demographic trends (e.g., decline in youth and young adult population and growing elderly population)(Business Index North, 2019) demonstrates the vulnerability of the Arctic regions and the need for targeted climate-change mitigation plans.

Figure 6 Change in ton CO^2 equivalent per capita, %, 2013-2017



Source: Business Index North, 2019.

Climate change institutional setting in the Nordic Arctic countries

Analysis of climate change policies yields results that all three countries have a comprehensive set of climate change policies with very ambitious goals. Next, I address the specifics of each country's climate change policies individually.

Finland

Finland introduced the Climate Change Act (609/2015) in 2015. It is the first national statute defining general long-term guidelines for Finland's climate change policy and laying down provisions on a planning system for climate change policy.

The purpose of this Act is: 1) to establish a framework for the planning of climate change policy in Finland and the monitoring of its implementation; 2) to enhance and coordinate the activities of state authorities in planning measures that are aimed at mitigation of climate change and adaptation to it, and the monitoring of the implementation of these measures; and 3) to strengthen the opportunities of Parliament and the public to participate in and affect the planning of climate change policy in Finland. According to the Act, the Finnish Government submits a report to Parliament on the climate change policy plans that it has prepared. Parliament also receives information about the achievement of targets and objectives concerning climate change and on the effectiveness of the measures as part of the annual climate change report included in the Government's annual report. Additionally, the Climate Change Act contains provisions on

appointing a multidisciplinary expert body called the Finnish Climate Panel (Ministry of the Environment).

Initially, the 2050 target was to "*ensure that the total anthropogenic emissions of greenhouse gases into the atmosphere is reduced in Finland by at least 80 per cent by 2050 compared to 1990 levels*". However, with a newly elected government, the target has been changed to a more ambitious one. The objectives of the Programme of Prime Minister Sanna Marin's Government include a carbon-neutral Finland by 2035.

Hence, for Finland the targets are:

> Finland becoming a carbon-neutral by 2035, carbon neutrality means that emissions and the sinks that sequester carbon are of the same size.
>
> To reduce greenhouse gas emissions from the non-emissions trading sectors by at least 16% by 2020 and 39% by 2030 from the levels in 2005 (Valtioneuvosto, 2020).

Norway

Norway introduced the Climate Change Act (2017) to promote the implementation of Norway's climate targets as part of its process of transformation to a low-emission society by 2050. The purpose of the Act is to: 1) promote the implementation of Norway's climate targets as part of its process of transformation to a low-emission society by 2050; and 2) promote transparency and public debate on the status, direction and progress of this work. The Act specifies climate targets for 2030 and 2050:

> The target is for greenhouse gas emissions to be reduced by at least 40% by 2030 compared with the reference year 1990.
>
> Becoming low-emission society by 2050, achieving reductions of greenhouse gas emissions of the order of 80-95% from the level in the reference year 1990.

The Act includes elements of accountability, since each year, the Government shall, on the basis of scientific information, provide the Parliament with an account of changes in emissions and removals of greenhouse gases, projections of emissions and removals, and progress towards the climate targets.

Sweden

In 2017 Sweden adopted a new climate policy framework. The framework consists of a climate act, climate targets and a climate policy council. The Climate Act entered into force on the first of January 2018. The Act establishes that the government's climate policy must be based on climate targets and specifies how the implementation is to be carried out. According to the Climate Act the government shall: 1) present a climate report in its budget bill each year; 2) draw up a climate policy action plan every fourth year to describe how the climate targets are to be achieved; and 3) make sure that climate policy goals and budget policy goals work together.

Climate targets for Sweden are:

> The long-term target for Sweden is zero net greenhouse gas emissions by 2045 at the latest. After 2045 Sweden is to achieve negative net emissions.
>
> Mid-term targets include emissions compared to 1990 to be 40% lower by 2020, to be 63% lower by 2030, and to be 75% lower by 2040.

Overall, all three countries have well-defined climate change policies with accountability mechanisms in terms of measurable targets. Still, much more clarity is required on the role of each industry and the role of regional climate targets. While policies provide some indication on the role of certain industries in the transition to a carbon-neutral future, none of them directly addresses the role of the companies in the process.

Institutional environment for TCFD implementation

As discussed in the review of TCFD recommendations, the guidelines related to climate-related reporting remain voluntary, and it is up to the companies themselves to decide on the timeframe of their adoption. In this section, I assess the scale of TCFD reporting in the Nordic Arctic countries. Moreover, I address the presence or absence of institutional forces that would support or suppress the transition towards climate-related reporting.

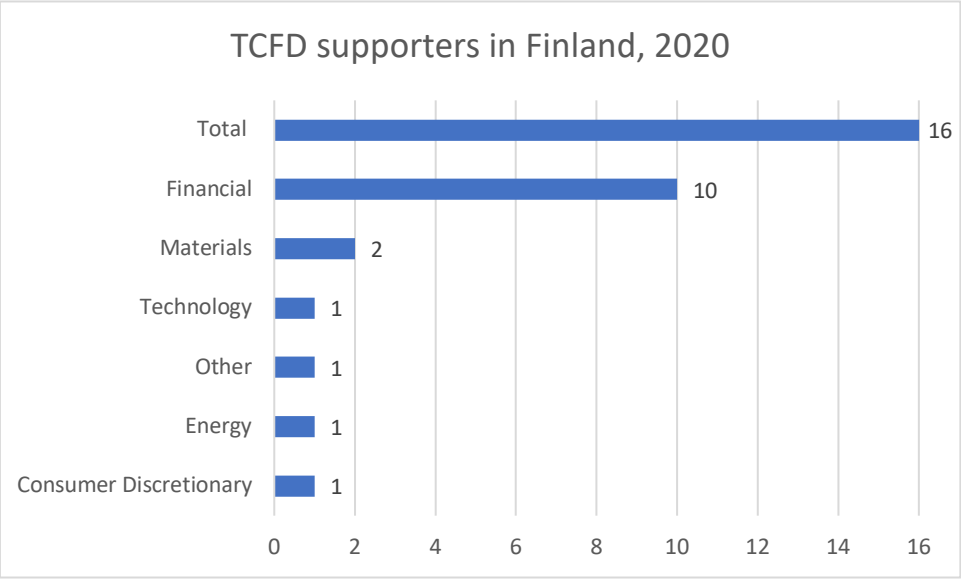
TCFD status report 2019 reviews the status of TCFD uptake worldwide and lists that governments from Belgium, Canada, France, Sweden, and the UK support climate-related reporting for companies. In 2020, the Government of New Zealand announced a planned mandatory TCFD reporting for all banks, asset managers and insurance companies with more than NZ$1 billion (CDSB 2020). In Sweden, TCFD support is concentrated among financial firms. The Swedish International Development Cooperation Agency (SIDA), a government agency, has organized TCFD workshops to bring together Swedish financial firms to work on TCFD implementation.

TCFD support at country level

The TCFD website contains data on supporters of TCFD that are available by country and by sector of economy and industry basis. To compare the prevalence of TCFD support in the Nordic Arctic region, I extract data on Finland, Norway, and Sweden summarized in Figures 7, 8 and 9.

In Finland, 16 companies and organizations are listed as TCFD supporters, with the largest proportion being the financial industry (10 organizations) (See Figure 7).

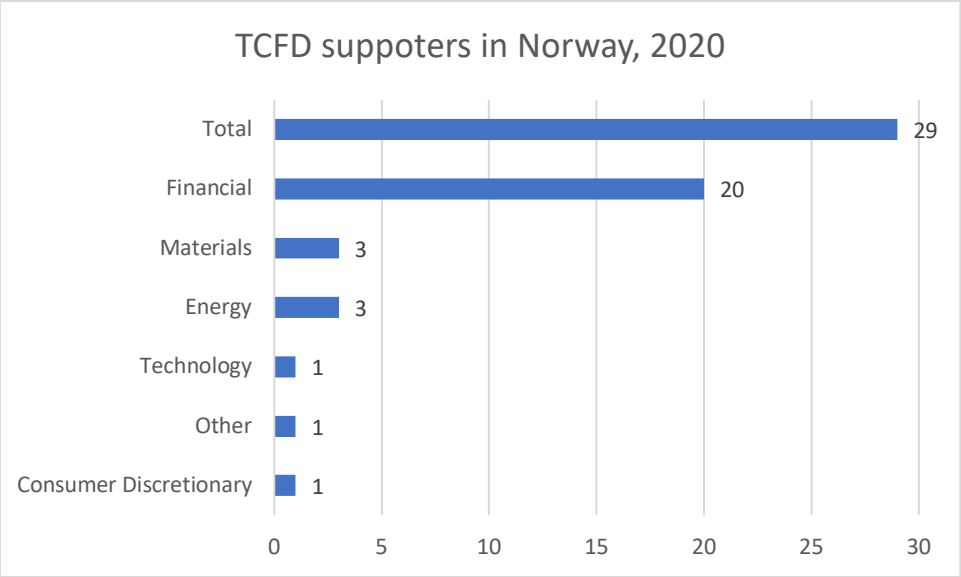
Figure 7. TCFD supporters in Finland, 2020



Source: TCFD hub database (2020).

In Norway, out of 29 TCFD supporters, 70% comes from the financial sector, and a very small number of supporters are from the energy and materials sector (6 organizations altogether) (see Figure 8).

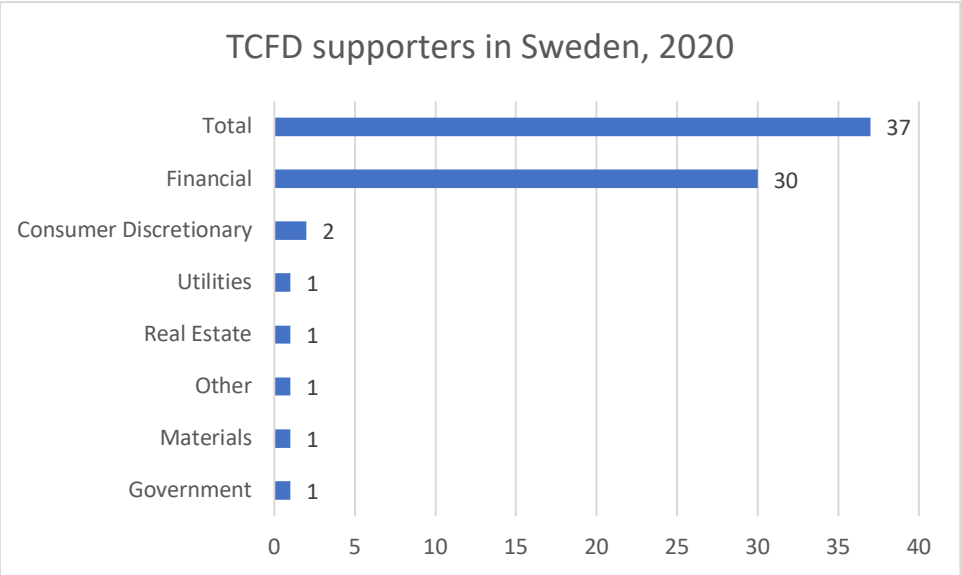
Figure 8. TCFD supporters in Norway, 2020



Source: TCFD hub database, 2020

Similarly, in Sweden, out of 37 TCFD supporters, a large proportion originates from the financial sector (81%), while the share of carbon-intensive sectors is minimal.

Figure 9. TCFD supporters in Sweden, 2020



Source: TCFD hub database, 2020

Overall, in all three Nordic Arctic countries, TCFD support is outnumbered by the financial sector. Therefore, from the institutional perspective, the field of TCFD development and compliance is

driven by the financial sector represented by banks, financial institutions, and investment firms. In Sweden, one may see the rising role of national pension funds as avid supporters of TCFD.

Role of stock exchanges

Stock exchanges provide an essential function to the economy where money can be raised by companies, and trading can be done securely. They can also offer listing and reporting requirements for stock issuers (Macey & O'Hara, 2002). Stock exchanges in Finland, Norway, and Sweden offer written guidance of environmental, social, and corporate governance (ESG), but at the same time do not require ESG reporting from listed companies. The same principle of voluntary reporting applies to TCFD. A quote from the president of Oslo stock exchange below summarizes the spirit of reporting requirements well:

> Oslo Børs encourages our listed companies to implement the voluntary recommendations of the Task Force on Climate-related Financial Disclosures. The TCFD framework provides companies and investors with valuable tools for sustainable business and investment decisions – Bente A. Landsnes, President & Chief Executive Officer, Oslo Børs ASA.

In terms of GHG reporting, a study by SITRA (2017) finds that only 34% of companies in Nasdaq Helsinki disclose their emissions, compared to 27% in the Nasdaq Stockholm. The largest contributors to the emissions of Nasdaq Helsinki are Fortum (34%), SSAB (18%), and UPMKymmene (13%), which have substantial operations in the Arctic regions. The climate risk disclosure barometer by EY (2017) found that there is a lack of company disclosures around 2^0 C scenarios of companies listed on the Oslo stock exchange.

Analysis of institutional settings for climate change accountability

Analysis of the institutional environment provides us with an understanding of climate change accountability in the Nordic Arctic. I observe both the lack of binding reporting requirements under TCFD in the Nordic Arctic countries and lack of voluntary disclosures by the firms listed on the Finnish, Norwegian, and Swedish stock exchanges. While the governments of Finland, Norway and Sweden have ambitious plans towards GHG reductions, the role of corporations and the regional complexity of transition towards a carbon-neutral future is not well operationalised. TCFD, as an element of corporate accountability, is pioneered mostly by financial institutions and not by the carbon-intensive players themselves. Therefore one may observe a phenomenon of mediated accountability (Kostogriz & Doecke, 2011) when financial institutions are expected to exert pressure on other sectors to follow TCFD in exchange for finance provision or inclusion in, for example, environmentally friendly portfolios.

The mechanisms for including TCFD as part of compulsory reporting already exist. The World Economic Forum's Global Risk Report 2019 outlines a clear role for governments worldwide to mandate legislation on climate-related disclosures and thus accelerate climate action by businesses (World Economic Forum, 2019). Moreover, in 2019 CDP and the Climate Disclosure Standards Board (CDSB) created a roadmap outlining possible avenues for embedding the TCFD recommendations into national legislation across G7 member countries (CDP, 2019).

The concept of human security plays an important role in designing a just transition to a carbon-free future. Analysis of Arctic regions in Finland, Norway and Sweden demonstrates that a high level of industrialization coupled with socio-demographic problems may present challenges for a

just transition. According to Elizabeth Yeampierre, Co-Chair of the national Climate Justice Alliance, a just transition includes the following elements (Gardiner, 2020):

> A just transition is a process that moves us away from a fossil fuel economy to local liveable economies, to regenerative economies. A just transition looks at the process of how we get there, and so it looks at not just the outcomes, which is something that the environmentalists look at, but it looks at the process – workers' rights, land use, how people are treated.

Ultimately, climate change accountability should contribute to the sustainable development of Arctic communities. Therefore, the notion of human security encompassing all seven pillars (economic, food, health, environmental, personal, community and political) shall be incorporated in the strategies on climate change. Moreover, it would be beneficial to have dedicated regional strategies and action plans that account for the challenges the Arctic regions are facing. Climate change accountability on the national level should go hand in hand with human security accountability in the Arctic.

Conclusions

Climate change accountability is developed in the Nordic Arctic countries at the country level with strong climate change policies and accountability mechanisms. Analysis of regional climate change situations, however, reveals that the Arctic regions of the countries under analysis face challenges in reducing their GHG emissions.

On the institutional level, there is a substantial level of commitment from the governments of Finland, Norway, and Sweden to meet the Paris Agreement goals, but the role of corporations is not explicitly elaborated in any of the policies under analysis. TCFD reporting that can serve as a useful tool for increasing climate-change accountability by corporations remains voluntary since neither governments nor stock exchanges require TCFD compliant disclosures. The strongest driver of TCFD adoption is the financial sector in Finland, Sweden, and Norway, represented by banks, investment and financial organization, and pension funds. Yet, very little support is given to TCFD by carbon-intensive industries such as oil and gas, utilities and manufacturing.

Findings reveal that corporations need to be involved in a meaningful way in climate change accountability, and some mechanism of compulsory minimum level disclosures should be considered for implementation. Moreover, Arctic regions that face challenges in climate change mitigation strategies due to industry structure would require some tailored and targeted solutions. On the EU level, this can be achieved via the Just Energy Transition Fund linking energy transition targets with the reduction of economic inequality (Polish Economic Institute, 2019). All in all, the goal of the Just-Transition Fund is the reduction of emissions that includes social support and ensures a socially and economically just transition. In Finland, the Arctic regions of Lapland, Kainuu, and North Ostrobothnia are eligible for the fund; in Sweden, the regions of Västerbotten and Norrbotten are eligible. Norway, not being part of the EU, is not included in this mechanism. In October 2020 Finland initiated a public citizens' consultation on the Climate Change Act to include views on just transition towards a carbon-neutral society. Pertaining to the Arctic regions, consulation collects opinions on how the rights of the Saami people should be included in the Act (Ministry of the Environment, 2020). This can be viewed as one the approaches to account for the Arctic regions specifics on the way to transition.

To conclude, the article highlights the challenges of climate change accountability and climate change mitigation strategies, with a particular focus on the institutional forces and actors involved in the Nordic Arctic. Furthermore, climate change accountability requires an understanding of regional specifics of the Arctic regions. It hence needs to be targeted to their needs, including human security and the wellbeing of Arctic communities.

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