



**THE ROLE OF BUSINESSES  
TO HELP REDUCE  
CONSUMPTION-BASED  
EMISSIONS IN THE NORDICS**

STOCKHOLM NOVEMBER 2024

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**Hagainitiativet**   
Klimatledarskap i näringslivet



## INNEHÅLL

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## Executive Summary

Despite their significant strides in reducing territorial emissions, the challenge of consumption-based emissions remains in the Nordic countries. These emissions account for the greenhouse gases (GHGs) released during the production, transport, and disposal of goods and services consumed within a country, regardless of where these processes occur globally. Usually, they are divided into emissions generated by households and public procurement/investments, but the statistics looks slightly different depending on the specific country. Addressing consumption-based emissions is crucial for the Nordics to achieve their climate objectives and requires innovative solutions.

Some of the main policy challenges related to reducing consumption-based emissions are that traditional climate-related policies focus on territorial emissions, which do not account for the emissions from imported goods, which requires accurate measurement and standardization of consumption-based emissions. In addition, there is a need for political commitment and clear targets to reduce consumption-based emissions, which balances individual and collective action.

Companies can play a pivotal role to address the broader consumption-based emissions challenge in the Nordics, by enabling consumers (households and public sector) to lower their emissions, through offering alternative solutions as well as guiding their consumption behaviour. This can be done

through: Strengthen sustainable Nordic value chains with co-benefits including geopolitical stability and resilience, Design and implement circular business models, Advocate for sustainable consumption patterns amongst customers, and Invest in green technologies.

With new regulatory developments in the EU, e.g. CSRD and CSDDD, the idea is that companies can become more invested in showcasing and communicating that their alternative is less emission-intensive, could potentially further drive a healthy competition to develop more sustainable products which in turn can help users reduce their consumption-based emissions.

As the report relays, Nordic businesses are in a position to be key actor in the efforts to reduce consumption-based emissions – both through offering low-emission alternatives and guiding consumers as well as changing their own “consumption behavior” upstream in their value chains. By focusing on sustainable value chains in the Nordic to also increase geopolitical stability and resilience, promoting circular economy models, advocating for sustainable consumption, investing in green technologies, collaborating with governments, and embracing supply chain transparency through e.g. CSRD and CSDDD, into their business strategies, they can make a significant impact.

## Introduction

Consumption-based emissions are often overlooked in traditional emission inventories, which focus on territorial emissions, those produced within a country's borders. However, in an increasingly globalized economy, a significant portion of emissions occurs outside national borders due to the import of goods and services. In the Nordic countries, consumption-based emissions can be substantially higher than territorial emissions. For instance, a study by the Nordic Council of Ministers revealed that consumption-based emissions in Sweden were approximately 40% higher than territorial emissions in 2016.

The Nordic countries are arguably amongst the frontrunners when it comes to the green industrial agenda in Europe, with companies such as Northvolt, H2 Green Steel, and Ørsted. They all have significant potential to reduce both territorial emissions as well as reduce emissions in other countries through export.

Despite their significant strides in reducing territorial emissions, the challenge of consumption-based emissions remains in the Nordic countries. These emissions account for the greenhouse gases (GHGs) released during the production, transport, and disposal of goods and services consumed within a country, regardless of where these processes occur globally. Usually, they are divided into emissions generated by households and public

procurement/investments, but the statistics looks slightly different depending on the specific country. Addressing consumption-based emissions is crucial for the Nordics to achieve their climate objectives and requires innovative solutions, particularly in public procurement and household consumption. In addition, it will also be an additional step in showcasing climate leadership on the global scene.

As part of Climate Neutral Nordics, a project implemented by Haga Initiative, Climate Leadership Coalition and Skift, the sub-project Fossil Free Challenge has looked at the potential export benefits of Nordic business solutions to help reduce emissions in other parts of the world. As important as these contributions are, it is important to not underestimate or downplay the large consumption-based emissions of the Nordic countries. In this report, we therefore look at some challenges and opportunities for Nordic businesses to reduce their consumption-based emissions mainly through their supply chains. The aim is to bring further attention to this aspect in the climate policy debate as well as understand the role of businesses in reducing consumption-based emissions generated by the Nordic countries.

<sup>1</sup> Nordic Council of Ministers (2022). Towards sustainable consumption in the Nordic Region.



## Background

Consumption-based emissions can be broken down into different categories. This section of the report will take a closer look at the different subcategories of consumption-based emissions.

### Emissions generated through public procurement

Public procurement—purchases made by governments and public sector entities—represents a significant portion of national expenditure and therefore has considerable potential to influence market trends towards sustainability. In the Nordic region, public procurement accounts for around 14–19% of GDP. This substantial purchasing power can drive demand for low-emission goods and services, thereby reducing consumption-based emissions<sup>2</sup>.

One notable initiative is the adoption of Green Public Procurement (GPP) policies. GPP involves the integration of environmental criteria into the procurement process, encouraging the selection of products and services that have a lower environmental impact over their lifecycle. For example, Finland's government has set ambitious targets for GPP, aiming for at least 50% of public procurement to comply with sustainability criteria by 2025. Companies can support these efforts by providing innovative products and services that meet or exceed these criteria, thereby gaining a competitive advantage while contributing to emission reductions.<sup>3</sup>

### Household consumption

Households are another critical sector for reducing consumption-based emissions. In the Nordic countries, household consumption patterns significantly influence overall emissions, particularly through food, housing, and transportation. Companies can play a pivotal role by offering sustainable alternatives that help households reduce their carbon footprint.

In the housing sector, companies can offer energy-efficient appliances, renewable energy solutions, and sustainable building materials. For example, the Norwegian company Elkjøp, a major electronics retailer, provides a range of energy-efficient appliances and has introduced eco-labels to help consumers make more environmentally friendly choices. The sharing economy is also growing in popularity in the Nordics. In Sweden, Fritidsbanken Umeå, which is a public lending service for sports equipment, toys and leisure items offers people to borrow equipment such as skis, skates, rollerblades, life jackets and snowboards. In Norway, Mobilitetsprosjektet (The Mobility Project) is the first municipality initiative to establish a car (and bike) sharing system where a pool set up primarily to serve the municipality and its employees was extended to become accessible on equal terms to the general public outside of office hours, as part of a larger trend in Norway of both start-ups and traditional companies increasingly offer shared solutions<sup>4</sup>.

<sup>2</sup> European Commission. "Public Procurement in Europe." 2020.

<sup>3</sup> Ministry of the Environment, Finland. "Green Public Procurement." 2021.

<sup>4</sup> Halvorsen, Trond, Christoph Lutz, and Johan Barstad. 2021. "The Sharing Economy in Norway: Emerging Trends and Debates." In *The Collaborative Economy in Action: European Perspectives*, edited by Andrzej Klimczuk, Vida Česnuityté, and Gabriela Avram, 225–236. Limerick, Ireland: University of Limerick.

## Consumption-based emissions in the Nordic countries

In a recent report “Policy Options for Reducing Consumption-based Emissions - A Nordic Survey” published by the Nordic Council of Ministers statistics over consumption-based emissions in the Nordic is presented. The methods used for calculating the levels of consumption-based emissions vary slightly and are therefore not directly comparable. Nonetheless it provides an overview of the trajectory and pathway ahead for the CO<sub>2</sub> emissions. As the figure below shows, in 2021, for Sweden the total

CO<sub>2</sub> consumption-based emissions were 67,175 million tonnes, for Norway it was 54,463 mton, for Denmark it was 52,752 mton and for Finland it was 50,011 mton<sup>5</sup>. In Iceland there is no overall statistics for the country’s consumption-based emissions, but a recent research study shows that the consumption-based carbon footprints of private consumption is around 7 tonnes per capita<sup>6</sup>.

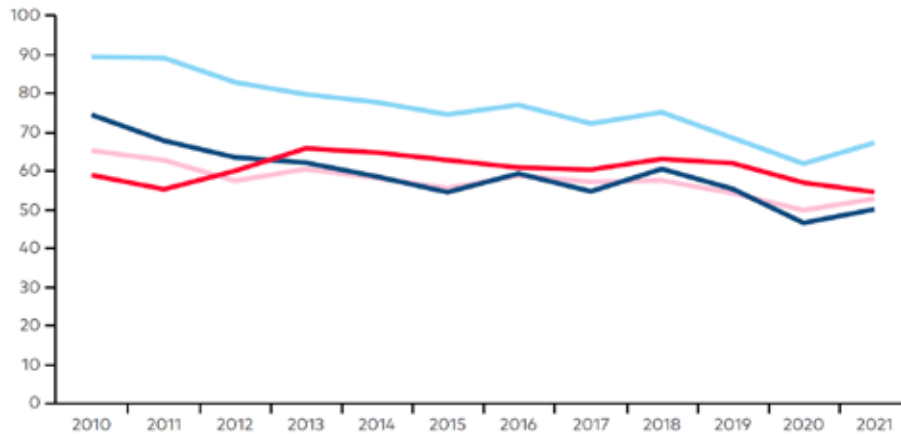


Figure 1. Source: Eurostat (2024) in the report “Policy Options for Reducing Consumption-Based Emissions A Nordic Survey” (Nordic Council of Ministers, 2024).

<sup>5</sup> Nordic Council of Ministers (2024). Policy Options for Reducing Consumption-based Emissions - A Nordic Survey.

<sup>6</sup> Jukka Heinonen et al 2022 Environ. Res. Commun. 4 125007

# Challenges and policy gaps to address consumption-based emissions in the Nordics

A policy brief from CONCITO (2023) has identified some main challenges pertaining to consumption-based emissions in the Nordics as well as which political obstacles that need to be addressed in order to address them:

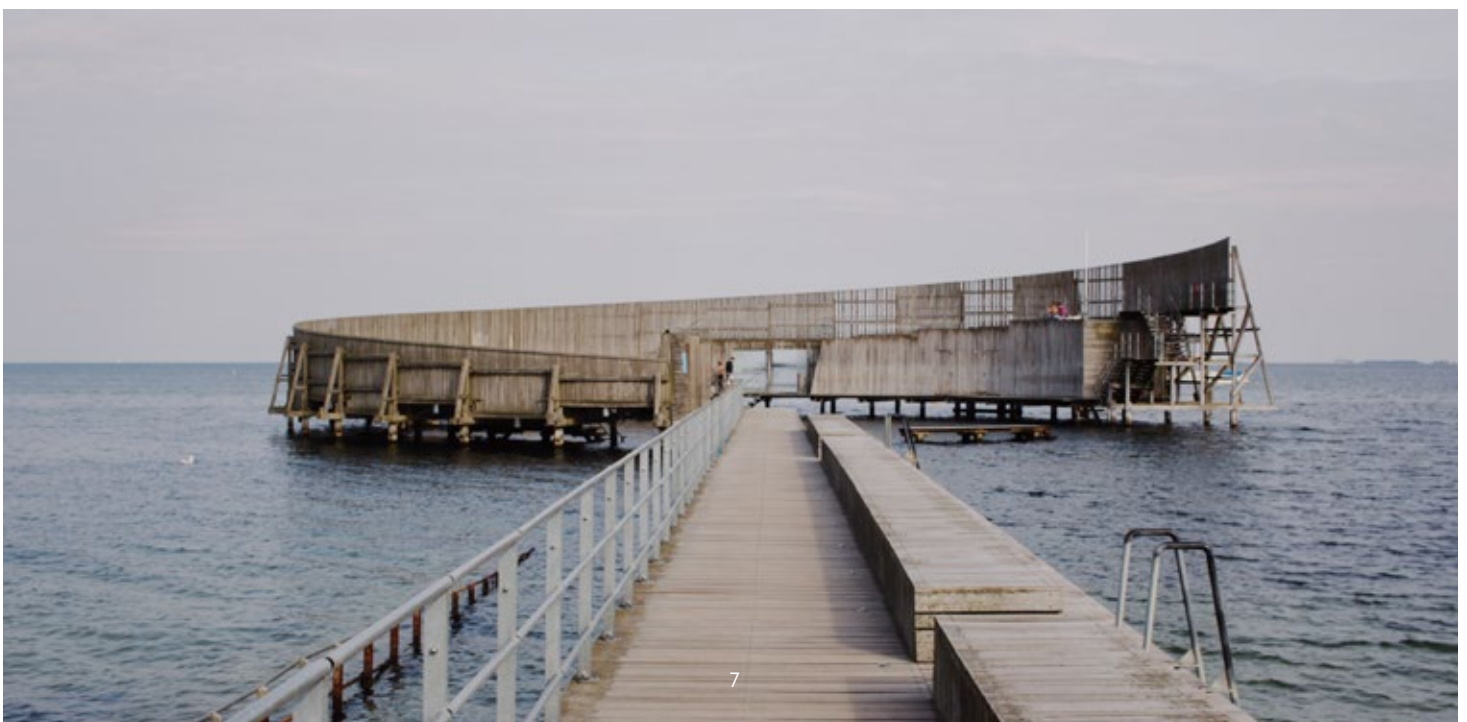
## **1. Accounting for consumption-based emissions**

Traditional climate-related policies focus on territorial emissions, which do not account for the emissions from imported goods. Accurate measurement and standardization of consumption-based emissions are needed to ensure a fair representation of a country's total environmental impact.

## **2.Reducing consumption-based emissions**

Lack of political prioritization and targets: There is a need for political commitment and clear targets to reduce consumption-based emissions. Balancing systemic and individual actions. Effective reduction strategies require a combination of systemic changes (like regulatory reforms) and encouraging individual behavioural changes.

The policy brief mentions four overarching opportunities to increase collaboration in the Nordic: 1. Development of standardised accounting methods that can offer comparability across the countries, 2. Setting clear political targets to reduce consumption-based emissions, 3. Support alternatives for alternatives to emission-intensive goods and services, and 4. Leverage the purchasing power of public procurement to drive demand for low-emissions goods and services.



## How can Nordic businesses address consumption-based emissions?

The Nordic countries are globally recognized for their commitment to sustainability, yet they face challenges in managing consumption-based emissions—emissions that result from the production and transportation of goods and services consumed by their populations. As these emissions are often higher than territorial emissions, it is essential for Nordic businesses to play a pivotal role in reducing them.

Companies can address the broader consumption-based emissions challenge in the Nordics, by enabling consumers (households and public sector) to lower their emissions, through offering alternative solutions as well as guiding their consumption behaviour.

Companies themselves are consumers through their own value chain. These emissions are usually referred to as upstream scope 3 emissions, that is the emissions generated through the production of a company's product or service (e.g. material acquisition)<sup>7</sup>. The report will not technically dive into the rather complex discussions around scope 3 emission accounting, but rather apply the concept of consumption-based emissions as a thought framework for societal actors, and more specifically businesses, to consider the emissions they generate through their operations/ consumption. There is already an ongoing international process that addresses scope 3 emissions and value chain emission mitigation in companies.

### Strengthen sustainable Nordic value chains with co-benefits

Nordic businesses can significantly reduce consumption-based emissions by ensuring that their supply chains are sustainable. Many of the goods consumed in Nordic countries are produced abroad, where environmental standards may not be as stringent. Companies can mitigate this by working closely with suppliers to reduce emissions at every stage of production. This could involve setting strict environmental criteria for suppliers, investing in renewable energy for production processes, and reducing the carbon footprint of transportation. There is great potential to increase value chain cooperation with circular business solutions within the Nordic region, especially within food, metals and rare earth minerals and renewable energy<sup>8</sup>. This does not only hold the potential to decrease production based emissions in the Nordics, but also consumption based emissions where the Nordic countries increase independence on import, and where there is a higher degree of circularity. This in turn also reduces geopolitical risks and increases resilience within the Nordic region, especially in the three mentioned sectors which are all of strategic importance in the green sustainable transition.

<sup>7</sup> Greenhouse Gas Protocol (2011). Corporate Value Chain (Scope 3) Accounting and Reporting Standard

<sup>8</sup> Haga Initiative (2022). Circular business models – Nordic opportunities and challenges in the new geopolitical landscape.

<sup>9</sup> Nordic Council of Ministers (2022). Towards sustainable consumption in the Nordic Region.

## Design and implement circular business models

The circular business solutions, which focus on reusing, repairing, refurbishing, and recycling materials, offers significant potential to reduce consumption-based emissions. Nordic companies can lead by example in adopting circular economy practices, which reduce the demand for new materials and the energy required to produce them.

IKEA, a Swedish furniture giant, is a prime example of how businesses can integrate circular economy principles into their operations. IKEA has committed to becoming fully circular by 2030, which includes designing products that can be reused, refurbished, or recycled, and offering services that help customers prolong the life of their products. This approach reduces the need for new resources and cuts down on emissions associated with the production and disposal of goods<sup>9</sup>.

Another example is Stora Enso, a Finnish paper and packaging company that is transitioning from fossil-based materials to renewable and recyclable materials, thus promoting a circular economy in the packaging industry. By focusing on the life cycle of products and encouraging recycling, these companies can significantly reduce the overall carbon footprint of their products<sup>10</sup>.

## Advocate for sustainable consumption patterns amongst customers

Companies also have a unique influence on consumer behaviour and can help shift consumption patterns toward sustainability. By promoting eco-friendly products and services, as well as educating consumers on the environmental impact of their choices, businesses can drive demand for lower-emission products.

For instance, the Swedish denim brand Nudie Jeans, which offers a range of services and information regarding how their customers can reduce their emissions by considering their transportation to physical stores (walk, bike or public transport), how they should maintain and wash their jeans with a low impact to last longer and even offer repair shops where the products can be fixed<sup>11</sup>.

Furthermore, businesses can use labeling and certifications to inform consumers about the environmental impact of their purchases. This transparency allows consumers to make more informed choices, contributing to the reduction of consumption-based emissions.

<sup>10</sup> Stora Enso (2024). Packaging a cleaner future. Available at: <https://www.storaenso.com/en/products/paperboard-materials/packaging-eco-evolution>

<sup>11</sup> Nudie Jeans (2024). Climate - But what can you do to decrease the climate impact while still enjoying Nudie Jeans garments?. Available at: <https://www.nudiejeans.com/blog/climate> (2024-09-25)

<sup>12</sup> Nordic Council of Ministers (2022). Towards sustainable consumption in the Nordic Region.

<sup>15</sup> VTT (2018). Carbon handprint: New environmental indicator for evaluating the positive climate impacts of products. Available here: <https://www.vttresearch.com/en/news-and-ideas/carbon-handprint-new-environmental-indicator-evaluating-positive-climate-impacts>

### Invest in green technologies

Investing in green technologies is another crucial way Nordic businesses can help reduce consumption-based emissions. Technologies that improve energy efficiency, reduce waste, and enable the use of renewable energy can significantly lower the carbon footprint of both production processes and products.

Northvolt, a Swedish battery manufacturer, is an example of a company investing heavily in green technology. Northvolt is building factories powered by renewable energy to produce batteries that are crucial for the transition to electric vehicles and renewable energy storage. By focusing on clean energy solutions, Northvolt is contributing to the reduction of emissions not only within its operations but also in the broader economy by supporting the shift away from fossil fuels<sup>12</sup>.

Similarly, Norsk Hydro, a Norwegian aluminum company, is investing in low-carbon aluminum production methods that utilize renewable energy. The company's efforts to produce aluminum with a lower carbon footprint demonstrate how industrial companies can leverage green technology to reduce the emissions associated with their products.

Although the policy recommendations in the previous chapter may be overarching and aimed at policy makers, there are several ways in which Nordic businesses can help drive the implementation of them. For instance, the recommendation around support research and innovation for alternatives, could be advanced through companies applying the Carbon Handprint methodology. It is a framework developed by the Finnish VTT and LUT University alongside with Finnish companies as a way to evaluate and communicate the carbon handprint of products. In essence, the carbon handprint is the inverse of carbon footprint and measure the positive climate impact. Several large Nordic businesses including Nokia, Neste and Preem have used the methodology. If Nordic businesses earmark resources to apply the Carbon Handprint method or a similar framework and offer a quantification of the positive impact of their product vis-à-vis more emission-intensive goods this could help guide both public procurement processes as well as inform households on their consumer choices. For the later, of course it demands that more companies in retail consumer goods close to households also adopts it.

This could also help identify further research and innovation into how to scale up products and solutions that already exists. In this way, Nordic businesses could work together with research to increase supply of low-carbon alternatives then available for public procurement and household consumption.



## New regulatory development increases value chain accountability for businesses

In a report from the Nordic Global Compact Networks from 2023<sup>14</sup>, it is highlighted that there is a pressure from stakeholders including investors, customers and employees to ensure that companies offer responsible products and services through sustainable global value chains. Nordic companies have a large degree of production sourcing and offshoring around the global. There are challenges pertaining to especially value chain sustainability, not least given that 89% of companies report that they lack influence to change behaviour throughout the value chain.

The fairly new EU regulatory directive Corporate Social Responsibility Directive (CSRD), entered into force in 2023, where the largest companies will start reporting next year. The overarching idea is to guide financial actors and other stakeholders and offer transparent information about the impact a companies have on people, environment and climate as well as assessing financial risks and opportunities pertaining to climate change and sustainability at large<sup>15</sup>. CSRD together with the Corporate Sustainability Due Diligence Directive (CSDDD) – which is a legislation around supply chain audit pertaining to environmental and human rights standards – will increase transparency and accountability of companies, including the Nordic countries in the EU. In CSRD companies' suppliers will also have to provide information pertaining to environmental, climate and ethics impact in reporting, and in CSDDD the focus is on due diligence procedures.



Figure 1: How the CSRD and CS3D complement each other.

Källa: Circularise (2024)

Both of them will hopefully serve to increase reporting and due diligence in Nordic companies' value chains and inform decision-making at the corporate level, such as, which suppliers do we want to work with – and in this context, which suppliers to we want to be “customers” to in the upstream value chain.

The idea of companies becoming more invested in showcasing and communicating that their alternative is less emission-intensive, could potentially further drive a healthy competition to develop more sustainable products which in turn can help users reduce their consumption-based emissions. Now, the caveat is that is cannot be used as a greenwashing tool. Against the backdrop of EU:s new Green Claims directive, this will be more stringently regulated and hopefully filter out any unserious business actors attempting to use such communication in their favour. At least it will serve as a way to reduce incentives to greenwash.

<sup>14</sup> Accenture et al. (2023). The Path Towards 2050: Nordic Corporate Sustainability Stocktake.

<sup>15</sup> European Commission (2024). New rules on corporate sustainability reporting: The Corporate Sustainability Reporting Directive. Available at: [https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting\\_en](https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en)

## Consumption-based emissions on a societal level needs to be more present in public debate

As stated in the beginning of this report, the consumption-based emissions are not usually the centre in a lot of public debates around how to reduce climate impact, especially not amongst policy makers whom are mostly focused on targeting territorial emissions. More common is that the issue is raised amongst civil society actors and private individuals who take measures to reduce their own impacts. One can argue that from a political standpoint there a certain “political risks” involved with raising issues with consumption as it requires putting pressure on households, organisations and public procurement to do things differently. It might not be very popular for policy makers, with their need for public support to stay in office. Nevertheless, it is a policy area which is an important for the Nordic countries to care about their consumption-based emissions for several key reasons:

### The Nordic countries should care about consumption-based emissions – they are amongst the highest in the world

Nordic countries, despite their relatively small populations, are among the wealthiest and have high standards of living. As a result, their per capita consumption of goods and services is significantly higher than the global average. When goods are imported from countries with less stringent environmental regulations, the associated emissions often occur abroad. By focusing only on territorial emissions, the Nordic countries would overlook the full environmental impact of their consumption patterns, effectively “outsourcing” their carbon footprint.

### The global economy requires a holistic approach to emission reductions even in the Nordics

Most national emissions inventories focus on production-based emissions, which reflect only the emissions generated within a country's borders. However, the true carbon footprint of a country includes both emissions from production and the emissions embedded in the goods and services consumed, no matter where they were produced. Caring about consumption-based emissions allows for a more comprehensive approach to climate action, helping to identify the hidden emissions in the global supply chain. By raising the awareness around the scope of consumption-based emissions in the public debate, stakeholders, including companies, can put pressure on regulatory development which in turn will require shifts to take place faster.

### Important to take global leadership role and not shift burden

Many of the goods consumed in wealthier Nordic nations are produced in developing countries, where the environmental and social costs of production are often higher. By recognizing and addressing their consumption-based emissions, Nordic countries take responsibility for their imported emissions, ensuring they don't shift the burden of climate impacts onto poorer nations that may suffer disproportionately from climate change.

Nordic countries are seen as leaders in sustainability and climate policy. By taking responsibility for their consumption-based emissions, they can influence global supply chains, encouraging more sustainable production methods in countries that export goods to the Nordics. This leadership can promote a shift towards greener consumption habits worldwide and help raise global climate ambition.

### SDG 12 - let's not forget about it

The UN's SDGs call for responsible consumption and production (Goal 12). By addressing their consumption-based emissions, Nordic countries contribute to this goal, fostering a more sustainable and equitable global economy. A report from the Nordic Global Compact Networks about the path towards 2030, it is stated that the Nordic private sector can bridge the gap where the Nordics face lagging performance specifically SDGs 12 around responsible consumption and production, which is one of the goals where the Nordic countries are lagging behind<sup>16</sup>.

<sup>16</sup> Accenture (2023). The Path Towards 2030: Nordic Corporate Sustainability Stocktake



A photograph of a metal shopping cart with a wooden handle and red accents, abandoned in a dense forest. The cart is empty and sits on a bed of dry leaves and twigs. The background is filled with green foliage, some with small holes, suggesting insect activity. The lighting is natural, with dappled sunlight filtering through the trees.

# THE ROLE OF BUSINESSES TO HELP REDUCE CONSUMPTION-BASED EMISSIONS IN THE NORDICS

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