Corporate Climate Checker

An analysis of 150 major Swedish companies' climate reporting 2023

Klimatkollen

2050

Summary

2023 was the warmest year on record, making the negative consequences of climate change evident. Greenhouse gas (GHG) emissions from activities everywhere must now rapidly drop towards zero – in perhaps humanity's most critical race.

To succeed, we need to know where emissions come from, the quantity emitted, and what is being done to decrease them. Both large and small companies need to – transparently and openly – explain how they are accelerating the climate transition and delivering emission reductions.

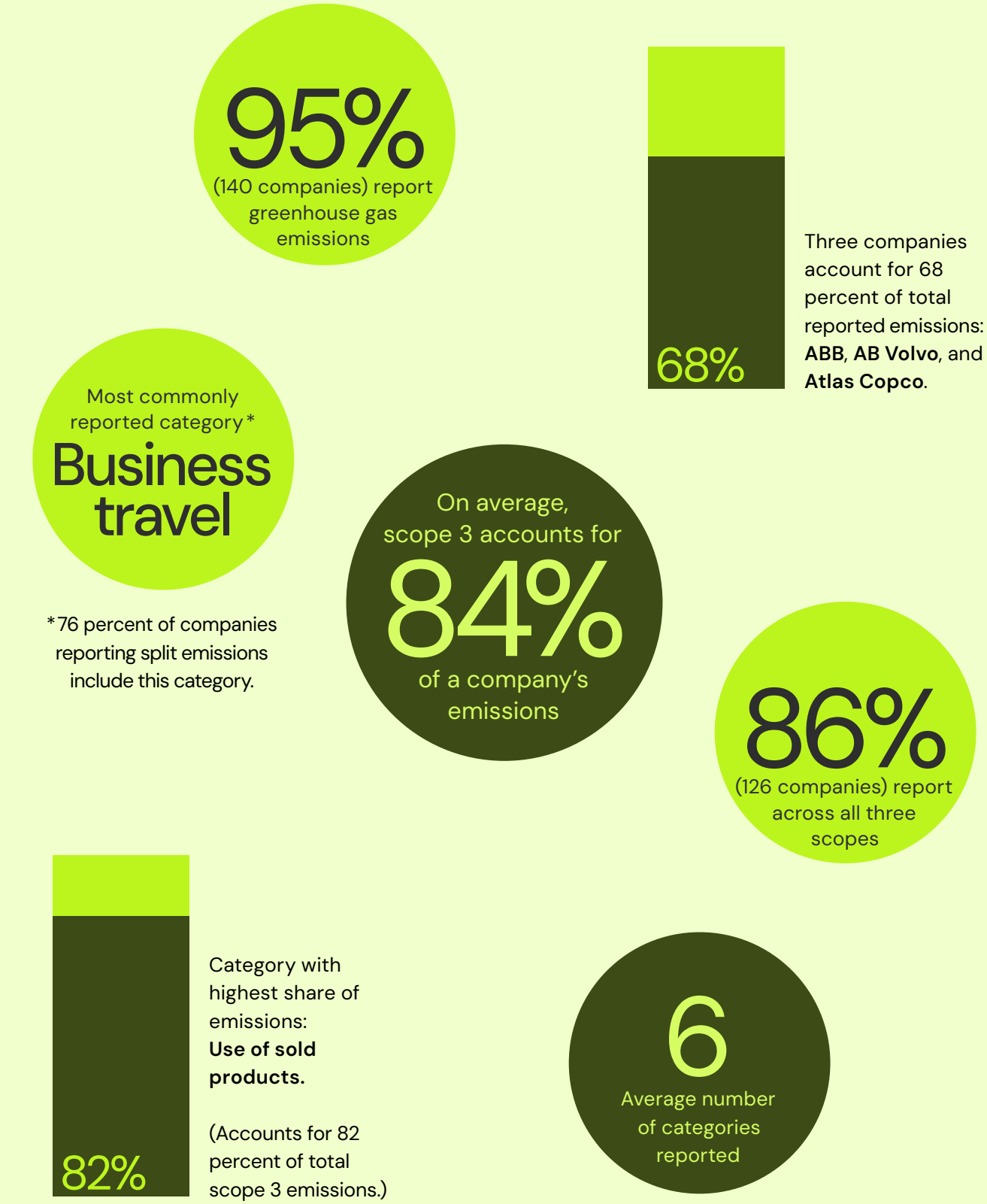
In order to reverse the trend of increasing global greenhouse gas emissions, new EU directives such as the Corporate Sustainability Reporting Directive (CSRD) impose stricter requirements on companies' climate impact reporting, starting in 2024.

To see how well-prepared large companies are for the implementation of the CSRD, and to increase transparency around GHG emissions, Klimatkollen has compiled emissions data from the latest sustainability reports of 150 major Swedish companies and reviewed these together with 2050 Consulting.

The analysis shows that although nearly all companies, 95 percent, report greenhouse gas emissions in some form, the reporting is often incomplete. 86 percent of companies report emissions in all three so-called scopes (emissions from their own operations as well as their value chain), but the quality of scope 3 reporting, which concerns the companies' value chains, varies significantly. There is also a lack of clarity about which scope 3 categories are excluded in the reporting, and why, as well as occurrences of self-defined categories and formatting issues. All of this combined limits the transparency, understanding and comparability of companies' climate impact.

This report provides clear recommendations about how companies can enhance their climate impact reporting to meet CSRD requirements.

Figure 1: *Analysis of 150 large companies' climate reporting.*



A fast-changing landscape

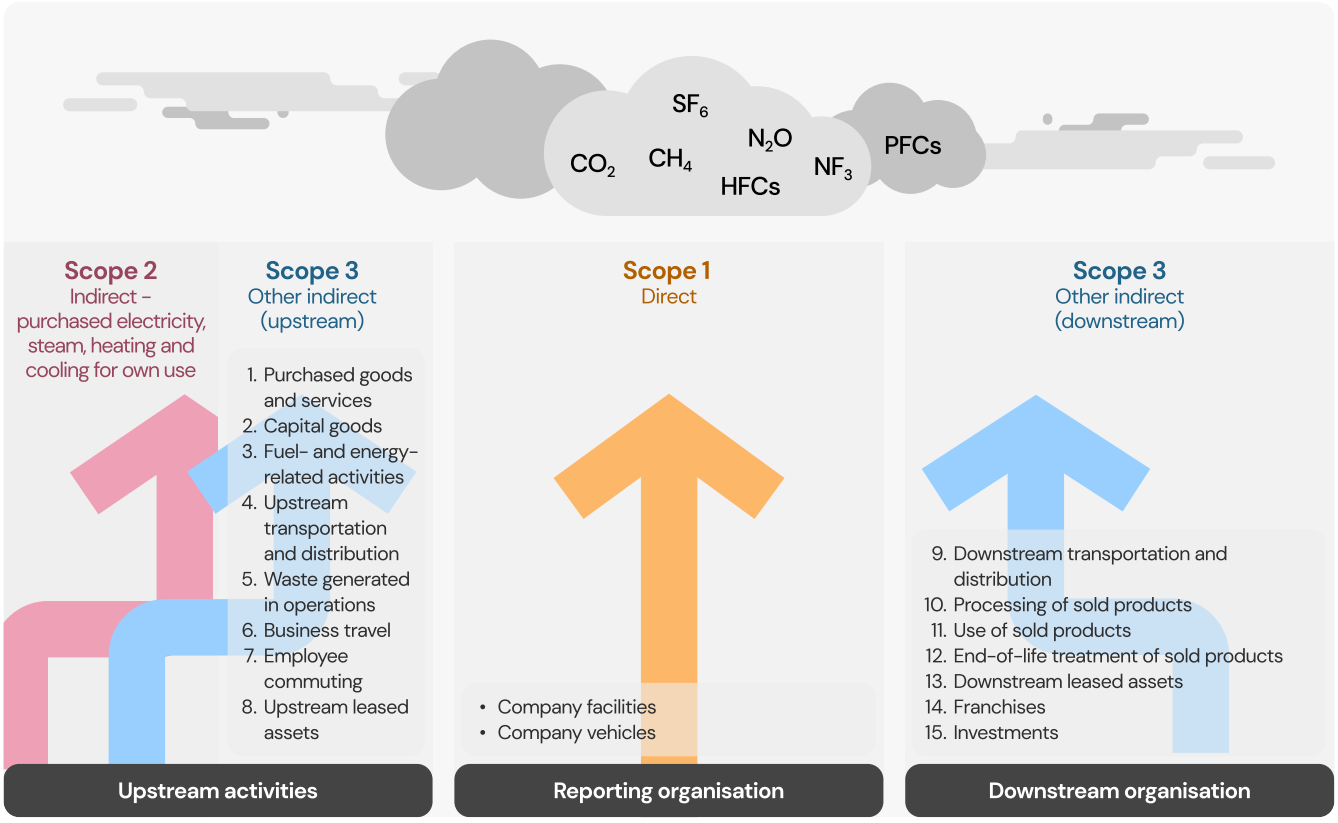
Beginning next year, around 50,000 companies across the EU will need to report how sustainable their operations are according to CSRD requirements. The directive aims to increase corporate transparency, as companies must report on all topics where the company is considered to have a material impact on the world. Climate stands out within the CSRD as the only area where companies that *do not* deem it as material in their reporting are required to justify *why* it is not relevant.

Emissions reporting must adhere to the European Sustainability Reporting Standards (ESRS), which among other disclosures requires reporting of greenhouse gas emissions within scopes 1, 2, 3 as well as total emissions, according to the Greenhouse Gas Protocol (GHG Protocol).

The GHG Protocol is the established standard for reporting greenhouse gas emissions. The framework is designed to be used by all companies and has a general structure where emissions are divided into three scopes. Scope 1 refers to direct emissions from a company's own operations, scope 2 covers indirect emissions from purchased energy, and scope 3 covers all emissions that occur in the value chain, both upstream and downstream. Scope 3 is divided into 15 categories, see figure 2.

The setup may seem simple, but the implementation of the protocol, and the rigour with which it

Figure 2: *Overview of GHG Protocol scopes and emissions across the value chain (based on Greenhouse Gas Protocol, Corporate Value Chain (Scope 3) Standard).*



is followed, varies greatly. It is difficult to measure and report emissions from an organisation, leading to large reporting differences from one company to another. One reason for this is varying access to reliable data, but it can also be due to lack of knowledge or that the framework is not being followed correctly.

The GHG Protocol is based on five guiding principles:

1. Relevance
2. Completeness
3. Consistency
4. Transparency
5. Accuracy

The principles are intended to ensure that the result of calculating and reporting GHG emissions provides an accurate picture of the organization's climate impact across the entire value chain and can be used as a basis for decision making.

A rapidly changing world

The business sector is facing major changes. On the one hand, many companies' operations are affected by increasing climate-related risks, particularly across their value chains. On the other hand, significant legal changes are being implemented to address companies' negative impact on people and the environment.

The responsibility for companies' sustainability work has moved into the boardroom, where sustainability key performance indicators need to gain the same status as financial figures, as these will also be reviewed by third parties. The fact that more large companies need to gain better control of emissions across their value chains, also means that small and medium-sized enterprises need to be able to report their climate impact and other key numbers.

One of the most important changes facing the business sector is that high greenhouse gas emissions are increasingly seen as a critical business risk. Negative climate impact causes devastation for people, ecosystems and companies' own operations. In the double materiality analysis that companies need to conduct, it will be difficult to argue that greenhouse gas emissions are not relevant to report. Even if companies are not yet obligated to report greenhouse gas emissions, many have begun this work, especially large companies with international operations.

It is not yet possible to compare companies' greenhouse gas emissions in the same way as key economic numbers, where figures are presented in the same way and concepts like "profit" and "turnover" are clearly defined. For this to happen, reporting needs to become clearer, more transparent and standardised.

Klimatkollen's open data

Klimatkollen has gathered sustainability reports from 150 large Swedish companies as part of the organisation's efforts to create more transparency around corporate climate impact. Emissions data has been extracted from these reports and is now presented openly on Klimatkollen. The data is for 2023 or the latest available calculation year.

The selection includes companies on the OMX Stockholm Large Cap list, the 15 largest state-owned companies, the five largest economic associations, and the unlisted companies IKEA and ICA Gruppen. Full list can be found on klimatkollen.se.

Data show significant challenges in scope 3 reporting

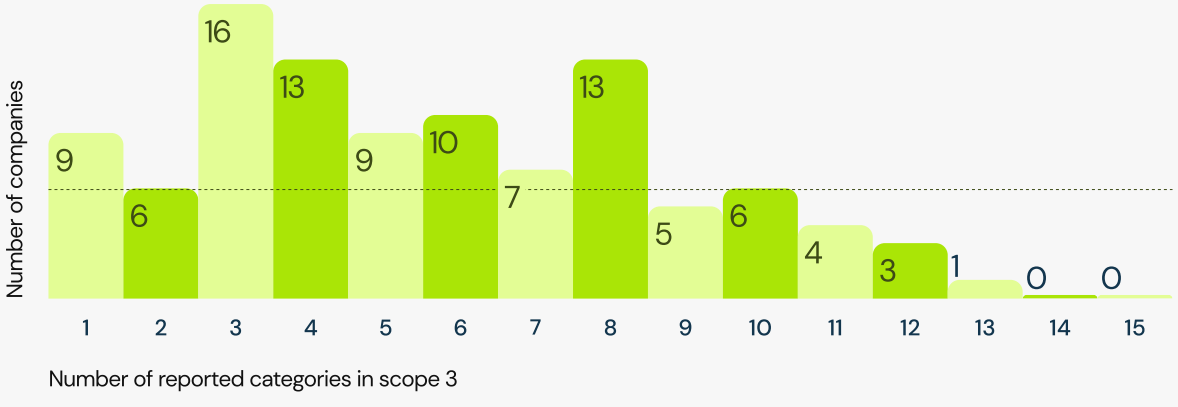
Of the 150 selected companies, 147 had published their sustainability reports for 2023 at the time this report was finalised in June 2024. 140 of the 147 companies (95 percent) reported greenhouse gas emissions. 126 companies (86 percent) report emissions in all three scopes.

Further analysis shows that 102 of the companies (69 percent) report scope 3 emissions broken down by category. The GHG Protocol has a total of 15 categories in scope 3, of which eight are upstream (e.g., *Purchased goods and services*, and *Waste generated in operations*) and seven are downstream (e.g., *Use of sold products*).

Our analysis is hindered by companies rarely presenting their emissions fully in line with the GHG Protocol's guidelines and principles. We have therefore made some careful interpretations to allow for an overall picture of the reporting.

Companies that report scope 3 emissions broken down by category, report on average six categories. However, the number of categories each company needs to report on to be considered comprehensive varies significantly depending on the operations and structure of the business. Among the five companies that report the highest total emissions, the number of reported categories (in descending order) is 12, 1, 4, 10, and 10. Thus, it is not the number of categories that is crucial, but *which* categories are included.

Figure 3: *Number of scope 3 categories reported by companies. On average, companies report six categories.*



The most common category to report on is *Business travel*, reported by 78 companies. This is a relatively simple category to measure and one where most companies have at least some emissions.

The five most reported categories are:
- *Business travel*: 78 companies
- *Purchased goods and services*: 74 companies
- *Fuel- and energy-related activities*: 67 companies
- *Upstream transportation and distribution*: 58 companies
- *Waste generated in operations*: 55 companies

However, it is not possible to determine how complete the reporting is in each category. For example, regarding category 1, *Purchased goods and services*, some reports only cover one material or type of product. It is then impossible to tell whether this accounts for 10, 50 or 95 percent of emissions in that category. Some companies do report coverage in the categories, but this should be regarded as an estimate.

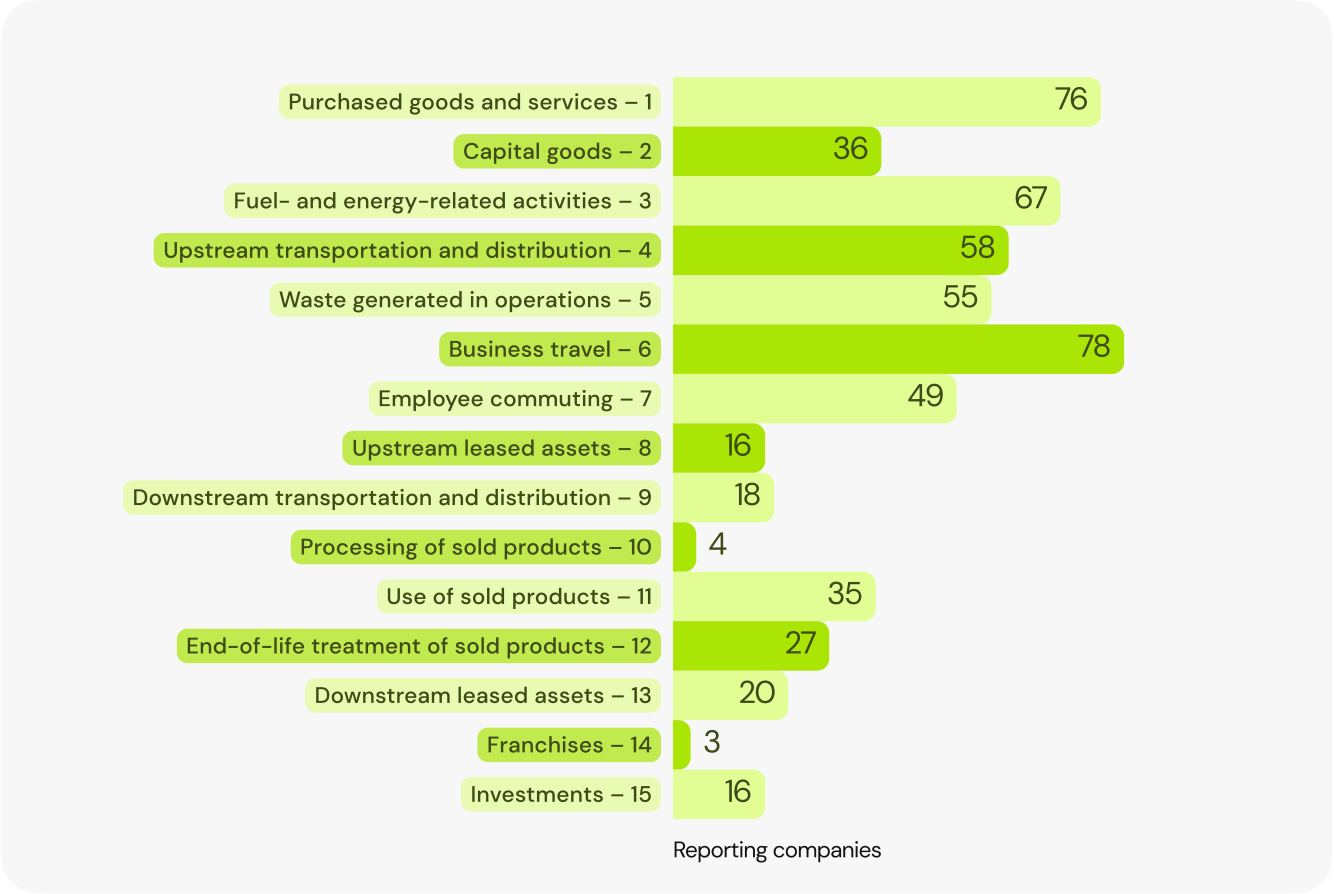
Example: A company that sells beverages only reports emissions from packaging in category 1, *Purchased goods and services*. Considering the business, it can be implicitly understood that for example ingredients, bags, employees' workwear and electronics in stores are missing.

Emissions occur in the use phase

Scope 3 emissions are unevenly distributed across the 15 categories. For the selected companies in this analysis, 82 percent of their aggregated reported emissions per category occur within category 11: *Use of sold products*, 11 percent in category 1: *Purchased goods and services* and 5 percent in category 15: *Investments*. No other category exceeds 1 percent.

Three companies account for 68 percent of total reported emissions. Of their emissions, 97 percent are in the *Use of sold products* category.

Figure 4: *Number of reporting companies by category.*



Companies with the highest emissions in this category are manufacturers of vehicles or electronic equipment, especially those with global sales.

If these three quite exceptional companies are excluded from the analysis, 43 percent of the remaining companies' reported scope 3 emissions still come from *Use of sold products*, 33 percent from *Purchased goods and services* and 15 percent from *Investments*. No other category exceeds 2 percent.

Of the ten companies that report the highest emissions in scopes 1 and 2, only half of them report emissions in scope 3. For all the companies for which we have data, scope 3 accounts for, on average, 84 percent of emissions. Therefore, we can assume that there are large unreported emissions in the value chain for companies that do not report scope 3. However, these ten companies are generally high up in the supply chain, which means there is a higher proportion of direct emissions and thus a smaller proportion of emissions in scope 3 (as is the case for e.g. heavy industry, providers of transport services and energy producers).

Double counting and underreporting at the same time

In total, the reviewed companies report 1.3 billion tonnes of GHG emissions in scope 3. However, this comes with a major caveat: all emissions reported in scope 3 are to some degree doubly counted – and it is difficult to determine how much.

> Example: A vehicle manufacturer reports emissions from *Use of sold products* in scope 3. A logistics company that owns the vehicle reports emissions from fuel combustion in scope 1, and emissions from fuel production in scope 3. Another company that purchases transportation for its products reports the same emissions for scope 3 in the *Upstream transportation and distribution* category.

This is a consequence of the GHG Protocol's design. According to the GHG Protocol, large companies with subsidiaries should perform what is referred to as 'a consolidation'. This means that emissions reported by multiple subsidiaries (because the companies' value chains overlap) should not be reported twice in the parent company's carbon accounting. Such consolidation has not been possible for the companies covered by this report. Theoretically, all emissions would be calculated if complete reporting of scope 1 could be ensured – but given a global economy this is not practically feasible. The point of scope 3 is to attribute responsibility to all stakeholders involved, which highlights the opportunities of everyone to reduce emissions.

Even though it is implicit that scope 3 is doubly counted, there are also emissions that are not being reported at all. In some cases, companies state that the reporting is incomplete, because they have not been able to collect enough data for a full calculation. In other cases, an analysis may show that there are missing categories or emission sources. For example, a company selling groceries not reporting emissions from food production, or a construction company not reporting end-of-life treatment of sold products. Comparing reporting between companies in the same industry is an opportunity to detect incomplete reporting and highlights the importance of reporting according to the same framework.

Eight recommendations for better climate reporting

In 2025, a large proportion of the companies included in this analysis will do their sustainability reporting in accordance with the CSRD for the 2024 fiscal year. To meet the requirements of the new legislation and increase the accessibility and transparency of GHG emissions data, we offer the following recommendations:

1 Report emissions – Follow standards

Seven of the assessed companies (5 percent) do not report comparable GHG emissions. Four of these do not report emissions at all, while three companies report emissions in a way that does not follow practice. One example is a railway company that only reports a measure of emissions intensity (CO_2e) per passenger kilometre, an airport company that reports emissions per business unit (airport), and an investment company that states that they 'review and address' emissions from their portfolio companies, but said emissions are not included in the report. Not reporting any emissions data from your operations indicates an immature sustainability practice and is a liability for the company, especially with upcoming EU directives.

Recommendation: *Report greenhouse gas emissions according to the GHG Protocol standard.*

2 Make the information available

Sustainability reports are released in conjunction with the companies' annual reports, often in the same document. This has many advantages, as it simplifies data handling and analysis. Six companies apply a different reporting period (fiscal year) than calendar year, making data comparisons more difficult. Klimatkollen has chosen to include their data as the 'latest calculation period.'

A few companies separate their emission data reporting from the sustainability reporting. This applies to two (out of five) large banks, which report financed emissions in a separate report, as well as one clothing company. Not reporting all GHG emissions in the sustainability report makes it harder to collect, review and compare the information.

Some companies hinder accessibility by using digital reading tools or other restrictions that prevent downloading and machine reading.

Recommendation: *Create a combined annual and sustainability report that reports all GHG emissions associated with the business. The document should be downloadable and machine-readable.*

3 Report emissions in the value chain

Many companies start by reporting emissions from their own operations, and later include the value chain. Comprehensive reporting can be complex and resource-intensive, and access to reliable data on value chain emissions is often lacking. Therefore, a so-called 'scope 3 screening' is often carried out as a first step, consisting of an overview assessment of the distribution of emissions among scope 3 categories. This facilitates prioritisation of resources in the more detailed calculation process.

14 companies (10 percent) only report emissions in scopes 1 and 2. This is an indication that calculating and reporting emissions have not been prioritised, as many other companies still manage to do it. As long as there is no data on value chain emissions, it is not possible to track whether total emissions are increasing or decreasing. This delays the transition and complicates transparency and analysis.

Recommendation: *Calculate and report emissions from the value chain (scope 3). If a scope 3 screening has been carried out, the company should indicate which emission categories are the most relevant.*

4 Improve scope 3 reporting

To understand how complete a company's reporting of scope 3 is, the reporting must clarify which categories are included. It is not uncommon for companies to only report a value for scope 3 without stating which categories have been calculated, or how the emissions are distributed between them. Thus, it becomes impossible to determine whether the reporting covers the entire scope 3, or just parts – and if so, which parts. The reporting must also specify which categories are excluded due to the company having no emissions in those areas – and if any category is excluded for other reasons, such as lack of data. It should also be stated if a category is incompletely calculated.

Recommendation: *Clarify which of the categories in scope 3 are included, which are excluded and for what reason, which could not be calculated (and why), and if any category is incompletely calculated. It is also desirable for the company to state the main emission sources within each scope 3 category, and to break down the emissions by each emission source.*

The GHG Protocol's format is not optimal for all companies. However, in order to interpret and compare data between companies, it is still crucial that everyone adheres to this standard. Stating emissions in self-defined categories may be relevant for internal understanding, but it makes external analysis more difficult.

> Example: A forestry company lists '*Roads*' as an emission category. Without knowing how the roads lead to emissions, it is difficult for an external stakeholder to categorise this according to the GHG Protocol.

Recommendation: *Report emissions according to the categories in the GHG Protocol. If self-defined emission sources are part of the reporting, explain how these relate to the Protocol categories.*

5 Ensure coherent formatting

To allow for external stakeholders to get an accurate understanding of the company's emissions, the information needs to be easy to read and presented in one place. In many cases, companies choose to split up emissions and report scopes 1 and 2 in one table and scope 3 in another. In some cases, emissions from investments are reported separately, in another table or on another page. This means that the reader needs to look in several different places and thus risks overlooking emissions.

> Exampel: One of the major banks reports internal emissions on one page, emissions from financial investments on a second page, and emissions from listed shares and corporate bonds on a third page. In addition, one needs to check against the information in a footnote on a fourth page, in order not to double count emissions between asset owners and asset managers.

***Recommendation**: Report all emissions in the same place in the report in a clear, machine-readable table.*

Some companies present emissions broken down by emission source and category, for example number of tonnes CO_2e) from *Air travel* and number of tonnes CO_2e) from *Hotel nights*. To avoid mistakes in data interpretation, it is important that the companies themselves sum these up and present emissions per category – in our example, total emissions in category 6, *Business travel*. To further prevent misinterpretation, it is important to total up the categories and present total emissions per scope, especially in scope 3. This prevents the reader of the report from accidentally double counting or excluding any part. We have also seen reports where the sum of reported emissions per category does not give the same result as the stated totals.

***Recommendation:** Report emissions summarised per scope and per category.*

6 Report historical data

To understand how emissions have changed over time, it is important to report historical emissions data. This is preferably done by presenting multi-year data in the same table.

Many companies report emissions from their stated base year, but then exclude emissions for the years between the base year and the most recently calculated year in the report. It then becomes impossible to discern what the company's emissions were during the period. If there have been recalculations of the historical emissions, for example due to updated emission factors or other adjustments, it becomes unclear whether data from previous years' reports is comparable. This can happen for many different reasons, and if the reader has to rely on previous reports to compile a complete historical record of emissions, there is a risk of inaccuracies or misinterpretations.

***Recommendation:** Report historical emissions from all previous years in the same table.*

It is common, and desirable, for companies' emissions calculations to improve over time. This is of course a positive development but can make historical comparisons more difficult. Therefore, it is important to retroactively adjust the calculations to take into account factors such as updated emission factors, acquisition of companies, or increased scope of data. If it is not possible to retroactively harmonise the data, it must be clearly stated that emissions are not comparable, or a new base year may need to be established. This must be clearly presented, so the reader does not get an incorrect picture of historical emissions. The GHG Protocol underscores the importance of this in order to comply with the principle of consistency.

> Example: A biomedical company states 2021 as the base year, but only reports data from 2022 and 2023. They also state that data coverage has increased so much that emissions are not comparable between 2022 and 2023. This makes it impossible for the reader to follow the development of emissions.

***Recommendation:** Revise base year calculation and subsequent years, so that the emissions data presented is complete, accurate and comparable. Follow up and disclose how much of the emissions calculation is based on specific data in relation to estimates and defaults.*

7 Disclose methodological choices and base year

There are a number of components needed to ensure a correct comparison of emissions data. One of these is the base year. The base year is often the first year that emissions were calculated, but in cases where reporting is not comparable between years (for example due to major improvements in data availability), it is important to clarify which is the relevant base year that all data can be compared with. Some companies apply one base year for scope 1 and scope 2, and another for scope 3. This must then be clearly stated, so that the reader does not make incorrect comparisons and analyses.

Recommendation: *Present the base year and be clear about which scopes and categories are referred to.*

A methodological choice that can be significant, is whether a market-based or location-based method is used for scope 2 calculations. In about 10 percent of the reports, it is not clear which calculation method has been used. Many others, however, are very clear and state, in line with the GHG Protocol, the calculated outcome of scope 2 with both methods. This is important in order to understand the company's ability to influence emissions in scope 2.

Recommendation: *State whether a market-based or location-based method has been used to calculate emissions in scope 2 and report the outcome if scope 2 had been calculated with the other method.*

Correct terminology is also important for comparability. For example, one company reports their emissions as "Direct emissions" and "Indirect emissions", which makes it unclear whether the latter refers to scope 2, scope 3 or both.

Recommendation: *Use the GHG Protocol's terminology.*

8 Include a descriptive methodology

To enable a more in-depth analysis, it is of great help if companies explain how they calculated their emissions. The GHG Protocol's principle of transparency states that the company should *'Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used'*. This helps the reader to understand both how much emissions have been calculated, but also how close to the truth the company managed to get.

In some cases, so-called 'spend-based calculations' are used, where the company's procurement costs are allocated to different categories and cost-oriented emission factors are used. This gives a rough estimate of emissions for procurement-related categories and can be used if more detailed data is lacking. In other cases, template data can be used, for example, *employees' commuting* can be estimated based on an assumption of emissions per employee. Since this type of rough estimate can only provide answers about orders of magnitude and should not be used to provide answers about the company's development, it is important that the report clearly states which emissions have been calculated with specific or measured data and how much is roughly estimated. Some companies are transparent in reporting which specific emission factors they have used and where these come from.

Recommendation: *Account for how the calculations were made in a descriptive methodology and with what accuracy they were calculated, by indicating whether the emissions are specific or estimated.*

Since the GHG Protocol has a generic setup, supplementary calculation guides have been developed. A Swedish example is the guide *Reporting of emissions in scope 3 for property owners*, produced by the industry association Fastighetsägarna. An international initiative is the Partnership for Carbon Accounting Financials (PCAF), which provides guidance to financial institutions for calculating category 15: *Financial investments*.

Recommendation: *Use existing guidelines to facilitate boundaries and calculation methods. Clearly state which guide has been used.*

Comparison with the Transparency Index Report from 2050 Consulting

The latest Transparency Index Report (2023) from 2050 Consulting focused on the emissions reporting in the value chains of 133 companies on the Swedish Large Cap list. Roughly the same companies were examined as in this report, which is why it is relevant to compare conclusions, especially as the Transparency Index Report is based on sustainability reporting from 2022.

The conclusions correspond to those in this report. The transparency and clarity regarding data quality and reported categories in scope 3 need to be improved by a majority of companies in order for them to meet the upcoming reporting requirements in the CSRD. When comparing 2022 and 2023, albeit with a slightly larger number of companies for 2023, a positive development is seen in terms of scope 3 reporting, where for example the proportion of companies that do not report scope 3 at all has decreased from 17 percent to 10 percent. Companies are also reporting more categories, with an increase from 40 to 47 percent reporting four or more categories, and from 14 to 25 percent reporting seven or more categories.

The Transparency Index Report showed that there is room for improvement regarding clarity of companies' description of what data is used and the assumptions made for each scope 3 category. As many as 70 percent of the companies did not provide any information at all, or very uncertain information, related to data in the supply chains for the 2022 reporting year. For only 16 percent of the companies, this information is clearly stated. According to Klimatkollen's collected data for 2023, this type of shortcoming remains.

Concluding remarks

With this report, we hope that companies will be able to improve their sustainability reporting for the upcoming years by being inspired by each other and avoiding known pitfalls. With less than a year left until many companies need to report according to the CSRD, it is worrying that so many of the largest companies have not adapted their reporting to upcoming legal requirements. The GHG Protocol has existed for a long time, but it is only through large-scale implementation that we can learn from each other's strengths and move from theory to practice.

Companies' value chains are intertwined, with one being a supplier to another who in turn buys products from a third party, and so on. Therefore, it is a shared success factor if more companies report their carbon footprint transparently. This makes it easier for all stakeholders to assess the company's climate impact. By increasing the quality of the calculations, it also becomes possible to follow up on the effect of emission reduction measures. This means greater engagement and clarity, both internally, and in relation to suppliers and customers. Hence, the potential increases for a successful climate transition.

About Klimatkollen

Klimatkollen is a citizen platform that makes climate data accessible and builds support for reduced emissions in line with the Paris Agreement. Klimatkollen is run by the non-profit Klimatbyrån. During 2024–2025, Klimatkollen is financially supported by Google.org as a recipient of the Google.org Impact Challenge: Tech for Social Good, to collect and visualise emissions data from companies using AI, both in Sweden and internationally.

About 2050 Consulting

2050 Consulting is a company with the vision of *Good Business on a Balanced Planet*. Through analysis, communication and business development, we help clients achieve climate transition faster by reducing climate impact and engaging in active sustainability work – while together strengthening societal benefits. 2050 Consulting has over 70 employees and offices in Stockholm, Linköping, Gothenburg and Malmö.

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Thanks

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