OUR METHODOLOGY

STICA requires that its members follow the methodology and recommendations of the GHG Protocol standard when reporting GHG emissions. To ensure quality, robustness, and consistency, companies are required to follow the guidelines and support documents outlining the reporting requirements within STICA, including guidance on emissions factor sources and how to handle scope, exclusions, assumptions, and estimates made. STICA also performs quality checks on a select group of companies' reports each year to ensure their quality and to provide additional guidance.

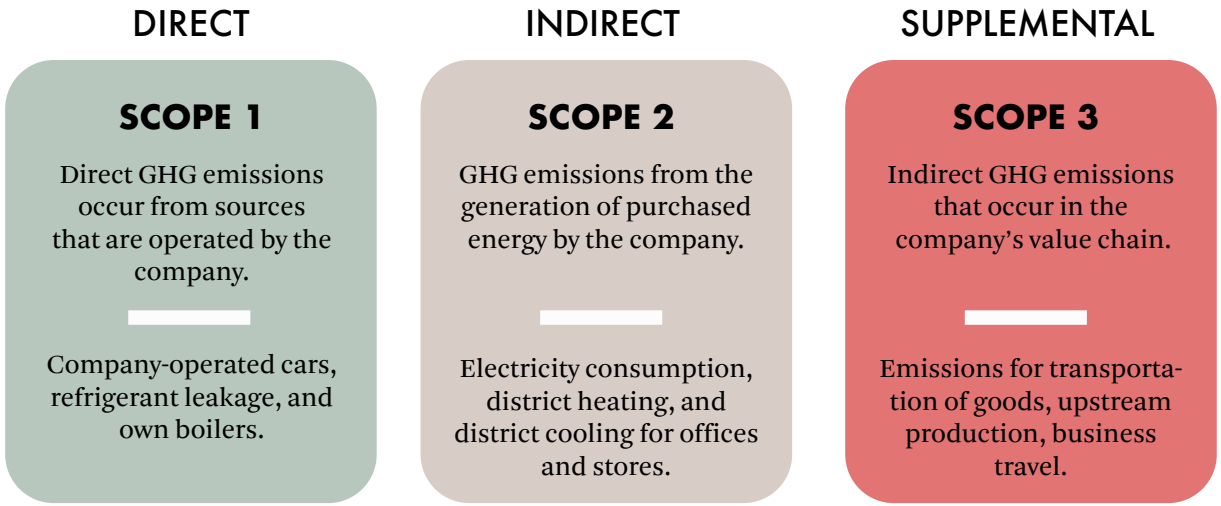
Under the STICA reporting, companies are required to disclose emissions within Scope 1, Scope 2, and selected categories from Scope 3. These categories cover purchased goods and services (relating to the production of sold goods, i.e., excluding office supplies and store interior and the like), upstream and downstream transportation and distribution, and finally, fuel- and energy-related activities. In addition to these required categories, many companies also choose to disclose emissions from the recommended categories: business travel, use of sold products, and the excluded parts of purchased goods and services.

The required scope of reporting is based on a combination of the relative size of these categories in terms of emissions, and the allowance from the Science Based Targets initiative, to exclude up to one-third of Scope 3 emissions excluding the indirect use phase, such as washing and drying. Generally, the categories included in the STICA scope cover the most significant emissions sources—i.e., two-thirds of Scope 3 emissions—for companies in the apparel and footwear sector. Should member companies have significant emissions sources elsewhere, they are strongly recommended to include these as well. STICA requires that its members apply the operational control approach and the market-based method, as described in the GHG Protocol. For target-setting, STICA requires companies to align with a set of criteria, and to set targets in the near term, toward 2025–2030. These criteria are available here.

When calculating GHG emissions, companies use a variety of data sources and estimated values. For production of purchased products, most members use a combination of primary data from suppliers and estimated values for the parts of the supply chain where primary data is not yet available.

IF YOU DON'T MEASURE YOUR EMISSIONS, YOU CAN'T MANAGE THEM

The first step in decreasing emissions is mapping and measuring them. The GHG Protocol was established in the late 1990s and is the global standard for accounting and reporting emissions from private and public sector operations, value chains, and climate actions. The standard is divided into three scopes:



THE STRENGTHS AND LIMITATIONS OF THE CURRENT STICA METHODOLOGY

When reviewing and interpreting the results reported for each STICA member company, it is important to keep in mind both the strengths and limitations of the methods used for calculations and reporting. In this section, we specifically address some of these under the following headings: 1) The strengths and limitations of the GHG Protocol; 2) The STICA scope; 3) Accounting for product quality and longevity; 4) Data quality and uncertainty; and 5) Target-setting methods.

THE STRENGTHS AND LIMITATIONS OF THE GHG PROTOCOL

Firstly, the STICA method is based on the GHG Protocol. Few frameworks within sustainability have reached the same widespread use and level of acceptance as the GHG Protocol. All major reporting initiatives and frameworks, including the Corporate Sustainability Reporting Directive (CSRD), rely on these rules and requirements for consistency over time. However, the GHG Protocol also has some limitations, such as:

- **Inclusion criteria** for Scope 3 are not specifically outlined in the GHG Protocol, meaning that the activities included in disclosures may vary significantly. To counter this, STICA has defined the minimum parts of the members' businesses to be included, informed by the SBTi guidance for apparel and footwear as well as screenings made by individual companies.

- **Comparability** between companies is not an explicit objective of the GHG Protocol. Many actors, however, still use the results in this way. But the activities included in company disclosures may differ between STICA members. For instance, some members measure the impact of business travel, for example, while others do not. This means that the data presented may not be comparable. STICA is aware that this can lead to misleading conclusions, but also sees value in presenting company results together, to help inspire and challenge STICA members. The reader is advised to consider this when reviewing the information presented.

- **Land-related emissions** from the production of natural fibers, as well as biogenic emissions, are partially addressed in the current version of the GHG Protocol—but while they have never been explicitly excluded, methodologies for calculating these have varied between different sources. An addition focusing on land-related emissions is under development to clarify what emissions to include and how to calculate them, and this will become a required part of GHG accounting in the future. This will illustrate the required level of detail and, in some cases, account for additional emission sources, thereby affecting data collection and reporting work. As this addition will have an impact on textile companies' reporting, STICA is currently monitoring the developments of the GHG Protocol's Land Sector and Removals Guidance, but has not yet developed guidance for member companies on how to address this.

STICA, along with most other initiatives, has chosen the GHG Protocol for accounting and reporting, as this is currently the best available option. We feel comfortable that we have mitigated the main drawbacks of the current protocol and how it is applied to the apparel and textile sector. STICA continuously monitors the development of frameworks and accounting rules to ensure we are using the most robust and relevant standards.

THE STICA SCOPE

As mentioned in the methodology section, STICA member companies are required to report emissions from selected parts of their value chains in addition to Scopes 1 and 2. STICA's Scope 3 requirements are informed by SBTi's inclusion criteria stating that two-thirds of emissions in Scope 3—excluding, for example, the indirect use phase emissions—should be included. Based on screenings of several global apparel and footwear companies, the categories listed below meet the inclusion criteria for apparel and footwear companies, although this can potentially vary for individual companies in the industry. Therefore, individual members are not required to perform complete Scope 3 screenings, which would be a requirement for companies having their targets validated by the SBTi. The justification for the STICA scope is described in more depth in STICA's Reporting Guidelines. These requirements are described briefly below, together with the reasons why they are required:

- **Scope 3 Category 1: Purchased goods and services (relating to the production of sold goods)** include emissions from producing the products that the companies sell, from production of raw materials through to a finished product and packaging. In most cases, this is by far the most significant emission source for textile brands and retailers, and on average may represent 80% or more of their emissions and should thus be a crucial part of any textile company's reporting.

- **Scope 3 Category 3: Fuel- and energy-related activities** such as production and distribution of fuels used in Scope 1 and 2 activities are often a small part of the overall Scope 3 emissions for apparel and footwear companies. However, these emissions are included in the accounting as this category is considered an extension of the Scope 1 and 2 emissions and thus close to the companies' own operations.

- **Scope 3 Category 4 and Category 9: Upstream and downstream transportation and distribution** that companies use is also a significant source of emissions from trucking, air freight, and maritime shipping. These emissions are accessible for companies both in terms of data and reduction opportunities, and are thus natural to include in emissions accounting.

In addition to these, STICA offers some support for measuring and reporting emissions from optional Scope 3 categories, briefly described below:

- **Scope 3 Category 1: Purchased goods and services (not sold by the company)** cover emissions from store interiors, hangers, office equipment, purchased services etc. that are not sold by the company. This category is optional to decrease the reporting burden on companies and help them focus on major emissions sources instead.

- **Scope 3 Category 6: Business travel** is often included in company accounting, even though it may, in many cases, be a fraction of the overall emissions. This is generally because companies have direct control over how employees travel, and this data is readily available. STICA has opted not to require this, again to reduce the reporting burden and to focus on major emissions sources. However, a number of companies still report emissions in this category.

- **Scope 3 Category 9 and Category 11: The use of sold products and downstream transportation and distribution** are not required for inclusion in the reporting. The emissions from the use phase—e.g. from washing and drying of garments—are a significant category in terms of emissions for apparel and footwear companies, but are outside the minimum boundary defined by the GHG Protocol and thus not required for inclusion in companies' inventories and targets. The SBTi does encourage apparel and footwear companies to consider separate use phase targets, though. STICA currently does not require companies to measure emissions from the use phase but is actively reviewing this. This is primarily because of the uncertainty in the underlying data, as consumers' use and transportation are very difficult to measure credibly and any emissions reductions can be hard to substantiate. The Product Environmental Footprint Rules Guidance for the apparel and footwear industry, which is currently under development, will offer guidance to companies in this matter, although it will not directly solve all data-related challenges in the use phase.

Member companies are therefore encouraged to investigate their use phase emissions to understand the relative size of these emissions and which parameters impact them.

The following section further highlights the challenges when measuring the use phase impact.

ACCOUNTING FOR PRODUCT QUALITY AND LONGEVITY

It is important to highlight the issue of product quality and thus product longevity, and the role this can—and should—play in the accounting of a company's emissions and its emissions-reduction strategies. The theoretical discussion on longevity is as follows: even if one high-quality product has larger GHG emissions in the production phase than another, if the high-quality product is used many more times because of its better quality, this could result in lower GHG emissions overall. This is because the higher-quality product would, in theory, be used more, thus decreasing the need for the customer to buy an additional or replacement product. As a result, this can help decrease the total amount of GHG emissions when comparing the total emissions of using one (higher-quality) product versus many with the same purpose.

While this can be true in theory, it can be hard for a company in reality to know whether the emissions actually decrease, because:

- It can be difficult to prove how much a customer **actually** uses a product. In theory, a customer could buy a better product that lasts longer, but still not use it more. This is because customers often underutilize high-quality products.
- Customers also tend to overconsume products due to factors like fashion trends, low prices, and procurement policies, leading to the purchasing of more products than needed.
- If a lower-quality product creates **significantly lower GHG emissions** than a high-quality product, the benefits of buying and using the higher-quality product might no longer be sufficiently significant to offset the production emissions. For example, the added emissions from two lower-quality products may still be less than those of one higher-quality product. Lower-quality products, however, could lead to other problems, such as increased waste, or lower wages for workers if the products are cheaper. These issues are not accounted for if the focus is on GHG emissions alone.

When accounting for emissions in a company-wide perspective, quality and longevity can be included in performance tracking and targets by including them in the KPIs associated with the number of uses that their products have, such as "total GHG emissions"/"number of uses," which should be as close to zero as possible. This allows companies to use longevity and quality improvements as a direct measure in reducing emissions, given that they do not produce and sell more new products. Increasing the number of uses per product sold should thus be in the apparel and footwear industry's interest. This introduces demands on circular business models like repairs, reselling, etc. to prolong the lifetime of the products and generate new income streams for the companies.

For economic-based KPIs like emissions per revenue, quality and/or longevity increases are included in economic terms, as a higher-quality product would fetch a higher price. For example, a company that offers a repair service for its products can take a higher product price while prolonging the life of the product. As we have seen, the actual number of uses is very difficult to measure, so measurements of any such targets and KPIs must be clearly defined and justified and will need to be considered credible by STICA. We are following the progress of the EU's Product Environmental Footprint closely, as this methodology can potentially include a way to measure product longevity.

DATA QUALITY AND UNCERTAINTY

When surveyed, many STICA members cite data collection and quality as a significant challenge. Data availability, quality, representativeness, and the sheer volume of data raise challenges for truly understanding a company's impact and options for emissions reductions. Like many of the world's commodities, textile value chains are complex and span much of the globe today. From the cotton field to the finished pair of jeans, a large number of companies can handle, process, resell, launder, and pack the product. This makes it challenging for an individual company to collect data from all these actors—the goal that STICA member companies are working toward. This is why many companies combine average data from parts of the value chain with primary data from others. Currently, and for the foreseeable future, this is the reality in the industry.

Using average data and emissions factors carries some uncertainty, especially when used on a general level. For example, many companies use weights of different materials and a global average for producing the fabric required. Consequently, information such as the processes or energy sources used, or even which countries of origin are relevant, is unknown to a large degree.[23] Even when these are known, there is still a need for emissions factors representing the specific processes, energy sources, or geographies involved, which are often difficult to track down or do not exist.

Currently, STICA recommends using the emissions factors from the HIGG Material Sustainability Index (MSI) when working with average data. STICA has been following the recent criticism of the MSI closely and acknowledges the critique. This refers to consumer marketing claims using factors from the MSI, but also to the validity and representativeness of the factors. From STICA's perspective, the Higg MSI is currently one of the most widely used databases for working with average data and emission factors in the industry.

In summary, we see three aspects driving this uncertainty: 1) the company's own data and the level of detail; 2) the availability and representativeness of emissions factors or average data; and 3) the quality of the data in these emissions factors. We will elaborate on the latter below.

[23] Stridsland, Thomas, et al. "No-one left behind: An open access approach to estimating the carbon footprint of a Danish clothing company." Journal of Cleaner Production 426 (2023): 139126.

- **Data accuracy** is a problem when the data the emissions factor is based on is lacking. The data can be old, non-representative of processes or geography, or have other limitations in the specifics of its use. The accuracy of the data in an emissions factor relates to how it is applied. For example, a global average cotton production factor for 2023 is a poor indicator for cotton produced in Egypt using irrigation agriculture in 2009, but could be useful to represent a market mix. This is often the case with all types of emissions factors, and the MSI is no exception.

- **Method accuracy issues** occur when the method applied is not representative of the reality of a production system or market or is used for comparisons between materials. An example of this is allocation methods: in a wool production system, where both meat and wool are produced together, this is apparent. The emissions from this system can be allocated to these two products, for example, by using economic terms, such as the share of the income generated by each, or by physical terms like protein content. Depending on the choices made when creating the factor, the different methods can provide very different emissions outcomes. This issue was also highlighted in a recent KPMG review of the Higg MSI. The experts participating in the review argued that: *"Higg MSI, used as a stand-alone tool and incorrectly, could be prone to misinterpretation as the tool does not integrate a proper functional unit definition, as "per kg" is currently used but has clear limitations. For example, a certain material "A" could have a lower environmental impact per kg than another material "B". However, material "A" could require more weight than material "B" to deploy the same function, potentially leading to higher impacts if material "A" is selected instead of material "B". This example illustrates how the Higg MSI could be prone to misinterpretation due to its functional unit."*[24]

- **System-wide impacts, or marginal issues**, reflect the fact that using emissions factors when making decisions on fiber choice, for example, can change the representativeness of the emissions factor. For example, if companies move from using conventional to recycled polyester, they will create additional demand for recycled polyester that may be produced in a new way and that does not reflect the data we have for the global average of recycled polyester production, such as if the new factory producing recycled polyester uses coal-fired boilers.

- **Data ownership and bias**, combined with a **lack of transparency**, is also problematic. Most available average data is owned by private companies, hindering users from disclosing more details on their impacts. Much of the available data is also difficult to access in a practical manner, since it is often fixed values for GHG emissions, rather than more useful energy consumption figures. A significant share of global average data is also produced by business networks and industry organizations, which causes concerns about the built-in biases in some of the data points. For example, LCA impacts for individual fiber types, such as cotton or polyester, are often produced by cotton or plastics industry associations.

- **Not accounting for all impact categories** is another perspective that companies must provide a rationale for. Today, STICA only requires members to report their climate impact, but this should not be the only parameter member companies account for when setting their fiber strategies. Biodiversity and microplastics are other important aspects to consider, and ones the MSI currently does not account for—as pointed out in the KPMG report. Although STICA does not require members to report on biodiversity or microplastics today, members are recommended to account for potential synergies or target conflicts between climate impact, biodiversity, microplastics, and other impact categories when developing and implementing fiber strategies.

The uncertainty in the average data outlined above could also lead to questionable conclusions regarding material or process choices, and STICA recommends that our members carefully consider this uncertainty when choosing a reduction strategy.

STICA acknowledges that using some average data is an absolute necessity for the foreseeable future, and there will always be uncertainty and inaccuracy in this way of working. For the time being, average data can help companies to understand their emissions hotspots and emissions trajectories. STICA is, however, actively working to improve the way we work with the data, and together with member companies, we aim to significantly increase the amount of primary data and improve the quality of the available average data.

[24] KPMG, Technical review of the Higg MSI and Higg PM tools (2023)

That said, to ensure credibility in the STICA reporting, companies are required to substantiate any reported emissions reductions by justifying, with transparency, any changes in their emissions. Should any changes stem from adjustments to organizational or operational boundaries, the methodology used, or other inorganic changes, members are required to recalculate their base years to ensure comparability over time. For instance, if a company starts replacing average data with primary data and sees a significant emissions reduction based on this methodological change, it should consider recalculating its base year inventory.

TARGET-SETTING METHODS

To stay below 1.5°C warming by the end of the century requires a drastic reduction in emissions. The SBTi has translated this into a requirement for all companies to cut their emissions by at least 42% every decade and to achieve Net Zero by no later than 2050. This is based on the carbon budgets set by the IPCC for keeping warming in line with 1.5°C.

A number of methods are available to guide companies in setting GHG emissions targets. Generally speaking, these are: absolute reduction targets; intensity targets based on either physical or economic intensities; sectoral or product emission targets, such as the sectoral decarbonization approaches (SDAs) from the SBTi (note that there is no SDA for apparel and footwear companies), or the One Planet Plate from WWF; and supplier engagement targets. The absolute reduction method is often considered the most ambitious and credible approach, as it ensures that a company reduces its total emissions. In other words, this approach effectively caps a company's emissions. This is why STICA strongly recommends that its members set absolute reduction targets.

However, setting targets in this way does not account for some unique challenges or situations:

- An absolute target implies that because a company has emitted large amounts of GHGs historically, **it should be entitled to a larger share** emissions budget. For example, if Company A emitted twice the amount of Company B in their base years, then Company A's absolute target would allow it to emit twice the amount of Company B by the target year.

- **New entrants** to the market or small companies typically have very low emissions from the start. In this case, an absolute target requiring them to halve their emissions by 2030 can be difficult to achieve because their emissions budget is particularly small to begin with. This would be the case even if they had products that, on average, incurred a fraction of the emissions of established companies.

- **High-performing** companies that have already taken significant action to reduce their emissions are also required to halve their emissions, the same as those who have not yet started. They will, to some extent, find it harder to reach the target, as they have already picked the lowest-hanging fruit of their emissions reductions.

- A variant of the above is companies **aiming to take market** share in a slowly expanding sector. In this case, an absolute cap on a company's emissions could, in theory, be at odds with the goal of reducing the total emissions of an industry sector. For example, a company that produces products with a relatively lower GHG profile could out-compete companies with worse-performing products. As this company grows, its products could replace those from companies with higher GHGs, thereby reducing the overall emissions of the sector. But, through its growth, the company's overall emissions would increase, while the sector's overall emissions would decrease. Moreover, as the apparel and footwear sector has expanded steadily in recent years—and is expected by some to continue doing so—can we feel confident that the absolute emissions are not increasing? This is the theory, but it is based on many assumptions and is difficult to substantiate.

Aware of these challenges, STICA thus temporarily allows companies to use other target types while requiring transparency as to how these targets influence their absolute emissions. You can read more about our current target-setting requirements here.