



Supplier

Sustainability Manual



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1. Introduction

1.1 Manual Purpose

This manual helps suppliers understand what sustainability means in daily operations and what actions have the largest impact. It summarizes the most important areas: emissions, energy, materials, waste, chemicals, transport, governance, and traceability. It shows how each one connects to regulations such as the GHG Protocol, CSRD, CSDDD, CBAM, REACH, RoHS, EUDR, and PPWR.

Each section follows a simple structure to make the manual easy to use:

- What the topic is about
- Why it matters for suppliers
- Practical actions you can take now
- A concrete example from real operations
- Related SDGs that your actions support

You can read the manual straight through or focus only on the topics most relevant to your operations. The practical examples show how improvements can be implemented even in small or medium-sized factories, and the SDG links help you understand the broader impact of your actions.

The manual also aligns with Bufab's Sustainable Supplier Engagement Program (SSEP). The actions described here directly support compliance, efficiency, lower emissions, and stronger long-term collaboration across the supply chain.

This guide is meant to be a practical tool. Use it to identify where you stand today and choose the next steps that best fit your company's sustainability journey.

2. Sustainability Standards, Frameworks & Regulations



2.1 Greenhouse Gas Protocol (GHG Protocol)

The Greenhouse Gas Protocol provides the global standard for measuring and reporting greenhouse gas (GHG) emissions.

Greenhouse gases are substances that trap heat in the Earth's atmosphere, contributing to global warming and ecosystem damage. While **carbon dioxide (CO₂)** is the most common and abundant, other gases such as **methane (CH₄)**, **nitrous oxide (N₂O)**, and **fluorinated gases (HFCs, PFCs, SF₆, and NF₃)** also play major roles in climate change due to their strong heat-trapping properties.

Each of these gases affects the environment in different ways. To compare their impacts, every greenhouse gas is assigned a **Global Warming Potential (GWP)** value, which indicates how much heat the gas traps in the atmosphere relative to CO₂.

A higher GWP means a stronger warming effect. Using GWP values, emissions of different gases are converted into a single common unit called **carbon dioxide equivalent (CO₂e)**. This allows companies to report all emissions on the same scale, regardless of which gases they come from.

The key feature of the GHG Protocol is that it categorizes emissions into 3 scopes. This is done to facilitate the understanding of where each emission can come from and how much control does a company have over them.

Scope 1:
Direct emissions from owned or controlled sources. (e.g., fuel combustion, company vehicles).

Scope 2:
Indirect emissions from purchased energy. (e.g., electricity, steam, heating, and cooling).

Scope 3:
Other indirect emissions in a company's value chain. Including emissions from suppliers, waste, business travels, and more.

Example:
A bolt manufacturer measures its emissions using the GHG Protocol and finds that its emissions come from:

Scope 1 (direct fuel use): about 2–5%

Scope 2 (purchased electricity): about 5–15%

Scope 3 (supply chain and materials): about 80–90%

In the fasteners industry most emissions come from Scope 3, mainly from steel production and transportation, guiding the company to focus its reduction efforts in these areas.

2.2 Science-based targets initiative (SBTi)

SBTi is a partnership which started in 2015 between different organizations (CDP, UN Global Compact, WRI, WWF) to enable private companies like Bufab to account for and reduce their greenhouse gas (GHG) emissions to prevent the worst effects of climate change.

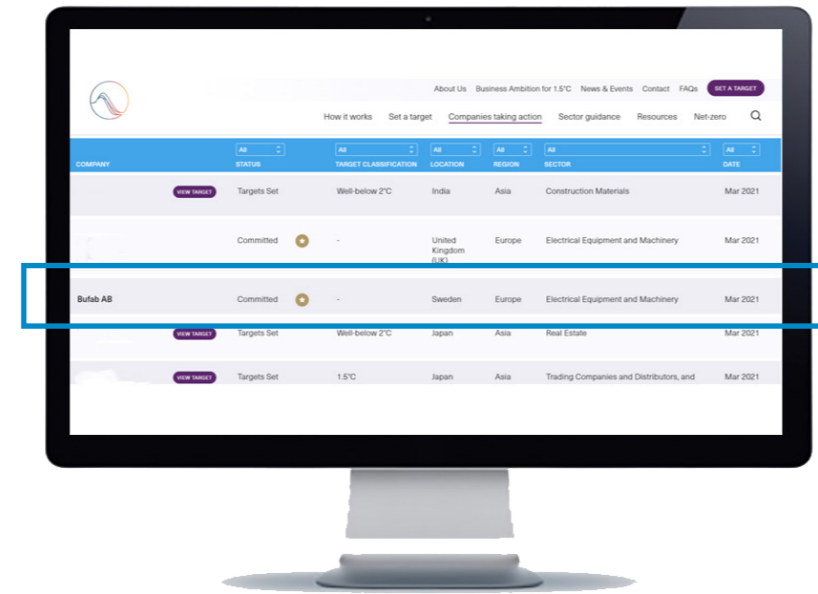


SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



Bufab has committed to the Science-Based Targets initiative (SBTi)



Bufab's targets

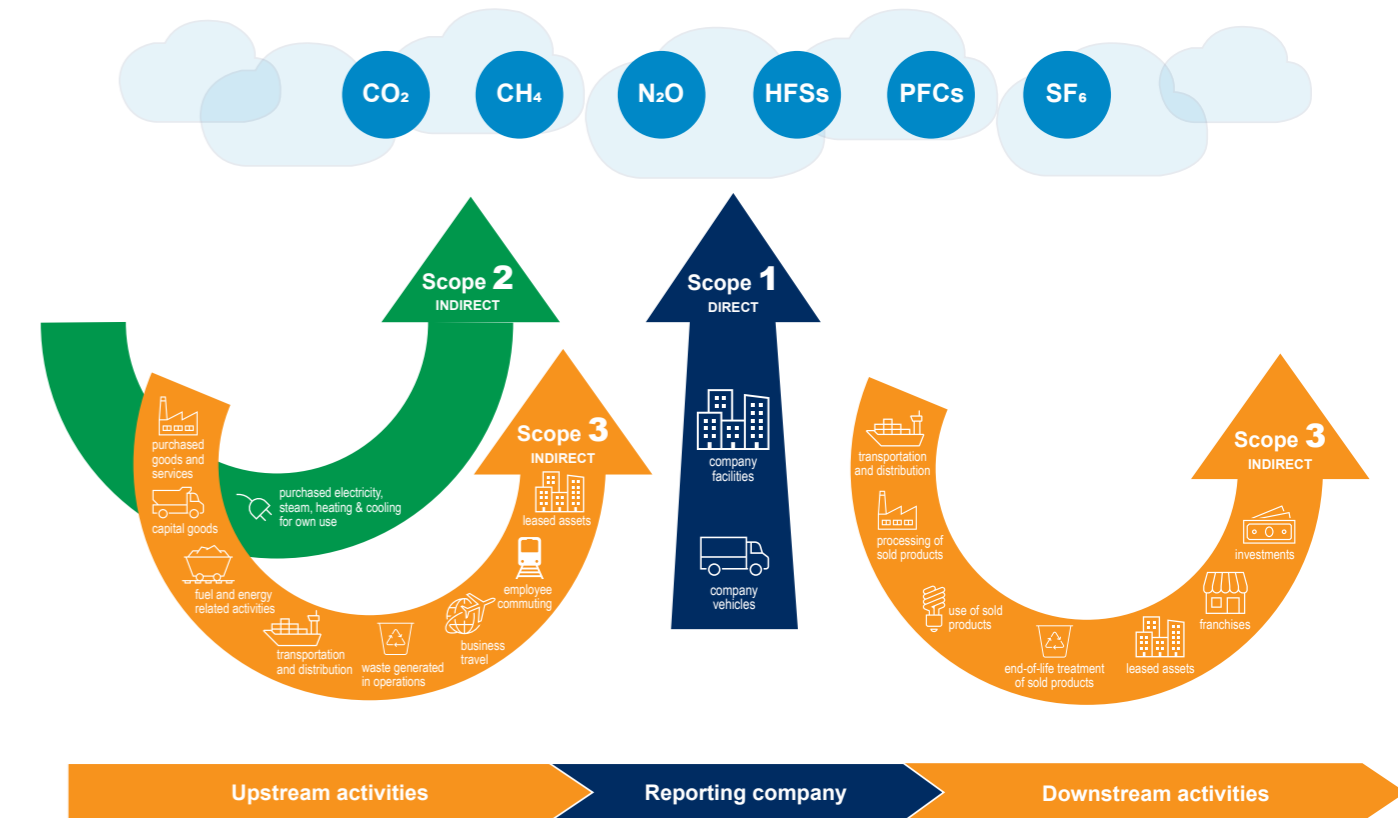
Scope 1 and 2:

- Target in place to be climate neutral by **2030**

Scope 3:

- Target in place to reduce by **55%** by **2031**
- Sustainability audit completed on **80%** of spend

Scope 1,2 and 3 targets



2.3 Global Reporting Initiative (GRI)

GRI is a global sustainability reporting framework that helps companies measure and communicate their environmental, social, and governance impacts in a transparent and consistent way.

For suppliers, GRI provides a practical structure for improving transparency. Using GRI principles can help in:

- Identify your most important sustainability impacts (materiality).
- Organize data in a consistent way for customers and auditors.
- Strengthen transparency toward regulations and the GHG Protocol.
- Demonstrate alignment with global sustainability expectations.



2.4 Sustainable Development Goals (SDGs)

The UN's Agenda 2030 is a binding global commitment adopted by all Member States in 2015. Its 17 Sustainable Development Goals (SDGs) provide a shared framework for protecting the planet, improving social well-being, and promoting responsible production and consumption. Governments, companies, and supply chains are expected to align their actions with these goals.



Sustainable development goals (SDGs)

Based on Bufab's identified material topics we have analysed its impact on the UN Sustainable Development Goals and determined the most relevant SDGs related to our business and where our business activities can have the biggest positive impacts.

The most relevant goals for Bufab are:

- **#3** Good health and well-being
- **#5** Gender equality
- **#8** Decent work and economic growth
- **#9** Industry innovation and infrastructure
- **#12** Responsible consumption and production
- **#13** Climate action
- **#16** Peace, justice and strong institutions
- **#17** Partnership for the goals in 2021 Bufab have increased efforts regarding the sustainable development goals.



2.5 Carbon Disclosure Project (CDP)

CDP is a not-for-profit charity that operates a global environmental disclosure platform used by investors, companies, cities, and regions to report and manage their environmental impacts. Bufab reports its environmental, social, and governance (ESG) information through CDP to ensure transparency and meet customer expectations.

Bufab's CDP score depends partly on the sustainability data and improvements from our suppliers, and large companies increasingly assess suppliers on climate action, emissions, energy use, water management, and responsible sourcing; areas directly linked to CDP requirements.



2.6 EcoVadis

EcoVadis serves as an independent service that rates sustainability. Each year, we fill out a self-assessment questionnaire, providing documented evidence for each response.

This documentation can include anything from our policies to specific work procedures.

Bufab has earned a silver medal annually since 2014, which places us among the top 25% of companies evaluated by EcoVadis. In 2023, Bufab moved up to the top 6%, and by 2025, we reached EcoVadis Platinum status, ranking us within the top 1%.

Even if Bufab's suppliers don't complete an EcoVadis assessment, our overall score is still influenced by their practices and documentation.

Customers often request our EcoVadis rating so they can better understand our sustainability achievements.





2.7 Corporate Sustainability Reporting Directive (CSRD)

The Corporate Sustainability Reporting Directive (CSRD) is an EU legislation requiring all large companies to publish regular reports on their environmental and social impact activities. Companies will fall under CSRD if they meet at least two out of the three following criteria:

- **250** or more employees
- **40** million in turnover
- **20** million in assets

CSRD modernises and strengthens the rules about the social and environmental information that companies have to report. It aims to ensure that companies publicly disclose adequate information about the risks, opportunities and impacts of their activities on people and the environment.

CSRD requires companies to report detailed sustainability data, much of it coming from their supply chain. Suppliers that can provide reliable data and show good sustainability practices will remain competitive and easier to work with under CSRD requirements.



2.8 Corporate Sustainability Due Diligence Directive (CSDDD)

The CSDDD requires large companies to identify, prevent, and address human rights and environmental risks across their operations and supply chains, making Human Rights Due Diligence (HRDD) a legal obligation.

HRDD involves assessing risks, taking action, monitoring results, communicating progress, and remediating violations such as child labour, forced labour, unsafe conditions, and discrimination.

Suppliers are crucial, as their practices directly impact compliance. The directive builds on the OECD Guidelines, UN Guiding Principles, and ILO Conventions, supporting social sustainability, human rights protection, and long-term business integrity.

Example:

A European fastener manufacturer ensures CSDDD compliance by:

- Mapping its full supply chain to identify high-risk regions and suppliers.
- Requiring all suppliers to sign a Code of Conduct covering human rights and environmental standards.
- Conducting regular sustainability assessments and audits.
- Requesting corrective action plans where risks or violations are found.
- Reporting progress publicly.

2.9 REACH and RoHS

Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) is a regulation of the EU, adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals, while enhancing the competitiveness of the EU chemicals industry.

Restriction of Hazardous Substances Directive (RoHS) aims to prevent the risks posed to human health and the environment related to the management of electronic and electrical waste.

Other legislation on chemicals in different countries include Prop 65 in California and China RoHS.

Example:

A C-part manufacturer ensures compliance with REACH and RoHS by:

- Reviewing all raw materials and coatings to confirm they do not contain restricted substances (e.g., lead, cadmium, or hexavalent chromium).
- Requesting supplier declarations and Safety Data Sheets (SDS) for all chemicals used in production.
- Substituting any hazardous substances with approved, safer alternatives.
- Keeping records to meet EU and customer requirements, including California Prop 65 and China RoHS when exporting.



2.10 Conflict minerals regulation

In politically unstable areas, the extraction and trade of minerals can be used to finance armed groups, fuel forced labour and other human rights abuses, and support corruption and money laundering.

Conflict minerals such as tin, tungsten, tantalum and gold, also referred to as 3TG, can be used in everyday products such as mobile phones and cars or in jewellery. More recently talks about including cobalt and other minerals as conflict minerals are starting to emerge.

At Bufab we ask relevant suppliers to fill in a Conflict Minerals Reporting Template (CMRT) and its extended version (EMRT) to ensure our materials are free from conflict minerals.

Example:

A C-part manufacturer ensures responsible sourcing of minerals by:

- Requesting all relevant suppliers to complete the Conflict Minerals Reporting Template (CMRT) or Extended Minerals Reporting Template (EMRT).
- Verifying that supplied materials are free from conflict minerals such as tin, tungsten, tantalum, and gold (3TG).
- Tracing the origin of metals used in coatings and components to approved smelters or refiners.
- Monitoring updates on potential additions like cobalt to maintain compliance with evolving regulations.



2.11 EU taxonomy regulation

The European Union (EU) taxonomy is a classification system, establishing a list of environmentally sustainable activities.

The EU taxonomy provides companies, investors and policy-makers with appropriate definitions for which economic activities can be considered environmentally sustainable.

The EU taxonomy covers the following six categories:

1. Climate change mitigation
2. Climate change adaptation
3. The sustainable use and protection of water and marine resources
4. The transition to a circular economy
5. Pollution prevention and control
6. The protection and restoration of biodiversity and ecosystems and marine resources

2.12 The EU Emission Trading System (ETS)

Introduced in 2005, ETS covers large industrial and electricity plants.

The system follows a “Cap and Trade” principle, establishing the maximum permitted number of annual emissions. Within this limit, companies can buy or sell “allowances” that must correspond to the number of emissions produced in the previous year.

As these free allowances are removed the cost of producing certain goods in the EU may increase, risking that the production of those goods is moved to countries where there are no charges on the GHG emissions produced, what is known as “carbon leakage”.

The EU decided to introduce the **Carbon Border Adjustment Mechanism (CBAM)** on imported goods, similarly to the ETS system, corresponds to the emissions caused in the production of those goods outside the EU.



2.13 Carbon Border Adjustment Mechanism (CBAM)

CBAM is an EU regulation designed to prevent carbon leakage by applying the same carbon price to certain imported goods as to products made within the EU. It currently covers steel, aluminium, cement, electricity, fertilizers, and hydrogen, with full implementation beginning in January 2026.

Under the regulation, importers must report verified embedded emissions of these products and purchase CBAM certificates. This makes accurate reporting and strong supplier cooperation essential to avoid added costs.

Example:

A non-EU steel supplier supports CBAM compliance by:

- Identifying the correct CN codes for covered products.
- Providing verified CO₂ emissions data linked to each CN code.
- Sharing energy use, recycled content, and production details with Bufab.
- Increasing recycled content and energy efficiency to stay competitive.



2.14 The European Union Deforestation Regulation (EUDR)

The EUDR tackles deforestation as a major driver of biodiversity loss and climate change. It targets commodities like soy, palm oil, cattle, coffee, timber, and their derivatives, requiring full traceability to the plot of land of origin.

Companies must conduct due diligence to ensure products are legally produced and not linked to deforestation, whether they operate inside or outside the EU.

EUDR reinforces environmental due diligence by aligning with CSDDD and CSRD, demanding reporting on deforestation risks, impacts, and mitigation. It supports broader EU goals on climate adaptation, biodiversity protection, and compliance with the EU Taxonomy.

Example:

A natural rubber supplier outside the EU supports EUDR compliance by:

- Ensuring traceability to the plantation or plot of land where the rubber is sourced.
- Providing geolocation data and proof of legal production to EU customers.
- Verifying that rubber is not linked to deforestation or ecosystem conversion.
- Keeping transparent records of suppliers and sourcing practices.
- Strengthening traceability systems to align with CSDDD and CSRD requirements.

SDG connection



2.15 Packaging and Packaging Waste Regulation (PPWR)

The PPWR addresses the EU's growing concern over packaging, which makes up 36% of municipal waste.

It targets pollution, emissions, and resource use by setting EU-wide mandatory requirements. Key measures include reuse targets, design for recyclability, bans on single-use plastics, recycled content mandates, stronger labeling, and per capita waste reduction goals.

PPWR is integrated into the **CSRD**, requiring companies to report packaging use, waste, and circularity performance. It also aligns with the **EU Taxonomy**, reinforcing circular economy practices through sustainable packaging and secondary material use.

Example:

An EU supplier supports PPWR compliance by:

- Using recyclable or minimal packaging for EU shipments.
- Avoiding single-use plastics and meeting recycled content rules.
- Sharing packaging data with EU customers to support CSRD and EU Taxonomy reporting.

SDG connection



2.16 The Ecodesign for Sustainable Products Regulation (ESPR)

The Ecodesign for Sustainable Products Regulation (ESPR) is a major legislative tool within the European Green Deal, aiming to make sustainable products the norm on the EU market and strengthen the circular economy.

A key instrument introduced under the ESPR is the **Digital Product Passport (DPP)**, a digital record containing detailed information about a product's composition, origin, environmental impact, and instructions for repair or recycling. The DPP is accessible electronically, enabling consumers, businesses, and authorities to make informed decisions and ensuring compliance with sustainability standards.



2.17 The carbon footprint of a C-part

<1%

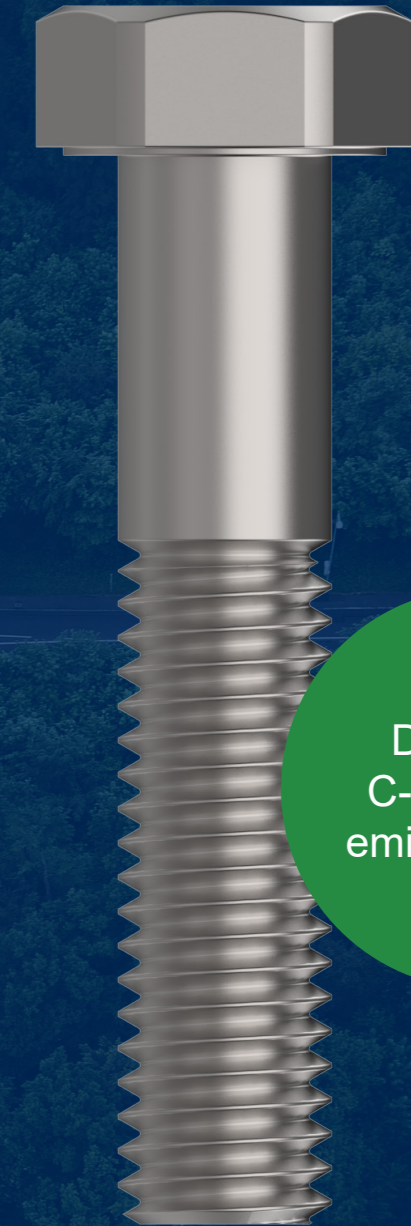
Bufab scope 1 and 2 Targets in place to reduce to ~ 0%

19%

Manufacturing/transport SBTi commitment means working with partner suppliers on moving to green energy sources

80%

Bufab, our customers, and the steel industry need to work together to transition to recycled and eco-friendly steel. There are positive signs from recent investments and customer demands, but we still have a long way to go



Delivered
C-part GHG
emissions (%)

2.18 Biodiversity

Biodiversity is the variety of life that keeps ecosystems stable and productive. It supports clean water, fertile soils, pollination, and natural climate regulation. When biodiversity declines, supply chains face higher risks and costs (e.g., food, materials, disasters). Measuring impacts and restoring nature helps ensure long-term resilience for people and business.

Example: A C-part manufacturer screens biodiversity-related risk and finds it mainly comes from:

- **Own sites (permits, local water rules):** ~5–10%
- **Energy supply (price/availability shifts):** ~5–15%
- **Supply chain (mining + water stress + protected areas):** ~75–90%



Note!
Remember to be up-to.date with
Bufab Policies and related
requirements for our suppliers.

Quick Reference for Suppliers

GHG Protocol

- Measure and report Scope 1, 2, and 3 emissions using recognized methods.
- Identify and document main emission sources across operations and logistics.
- Ensure data accuracy and consistency with customer reporting needs.

SBTi (Science Based Targets initiative)

- Set emission reduction targets aligned with the Paris Agreement.
- Develop a clear roadmap for reducing emissions within operations and supply chains.
- Track and report progress regularly to customers and partners.

CSDDD – Due Diligence

- Identify risks related to human rights, labour, and the environment.
- Keep documentation of due diligence and corrective actions.
- Collaborate with customers to ensure traceability and transparent reporting.

REACH & RoHS – Chemicals and Materials

- Verify that products do not contain restricted substances.
- Provide Safety Data Sheets (SDS) and material declarations.
- Replace hazardous substances with approved alternatives.

Conflict Minerals (3TG)

- Complete and submit CMRT/EMRT templates when required.
- Source metals only from approved smelters or refiners.
- Stay informed about additional materials (e.g., cobalt) covered by new rules.

CBAM – Carbon Border Adjustment Mechanism

- Identify correct CN codes for exported products.
- Provide verified CO₂e emissions data and energy source details.
- Increase recycled content and improve energy efficiency to reduce carbon costs.

EUDR – EU Deforestation Regulation

- Ensure traceability to the plantation or plot of origin.
- Provide geolocation and legality evidence for all sourced materials.
- Avoid raw materials linked to deforestation or ecosystem conversion.

PPWR – Packaging and Packaging Waste Regulation

- Use recyclable or minimal packaging for EU shipments.
- Avoid single-use plastics and meet recycled content requirements.
- Share packaging data with customers to support their compliance and sustainability reporting.



3. Sustainability Focal Areas – Emissions

3.1 Sustainability Focal Areas – Emissions

The GHG Protocol divides emissions into three scopes, each with specific subcategories.

Scope 1: Direct emissions from owned or controlled sources

- *Stationary Combustion:* Burning fossil fuels at stationary sources.
- *Mobile Combustion:* Burning fossil fuels in vehicles/mobile sources.
- *Fugitive Emissions:* Leaks and unintended releases.
- *Process Emissions:* Industrial processes cement, glass, steel).

Scope 2: Indirect emissions from purchased energy

- *Location-Based:* Based on average grid emissions.
- *Market-Based:* Based on specific purchased energy, including green contracts. (Suppliers should calculate both for accuracy.)

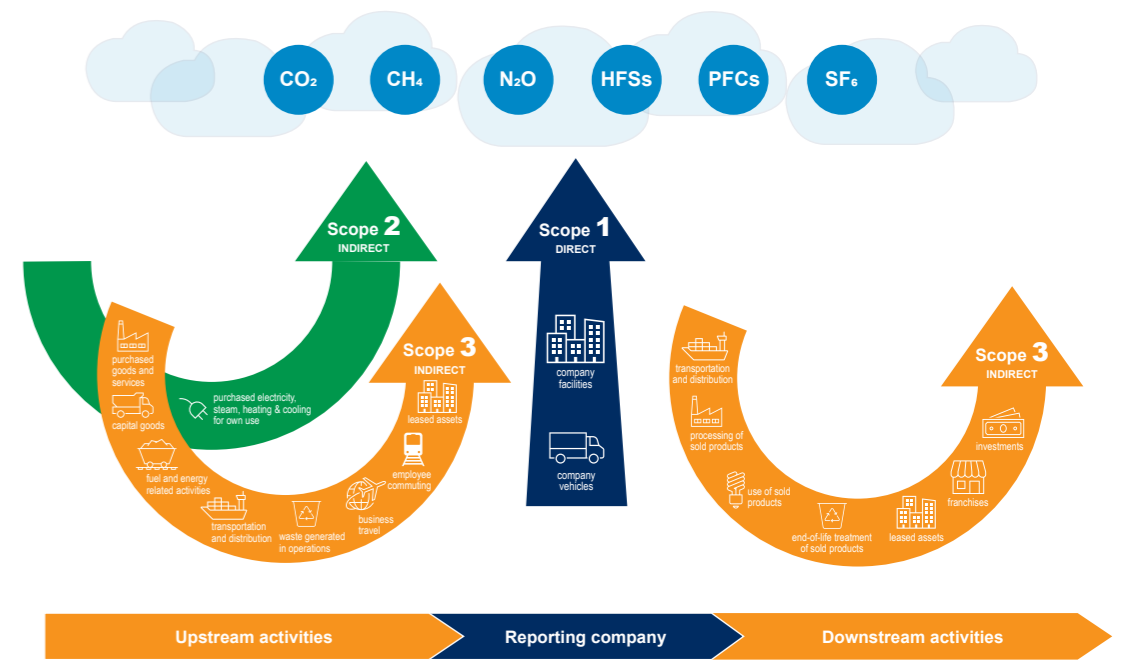
Scope 3: Other indirect emissions in the value chain

- Upstream*
1. Purchased Goods and Services
 2. Capital Goods
 3. Fuel and Energy-related Activities
 4. Transportation and Distribution
 5. Waste Generated in Operations
 6. Business Travel
 7. Employee Commuting
 8. Leased Assets

Downstream

9. Transportation and Distribution
10. Processing of Sold Products
11. Use of Sold Products
12. End-of-life Treatment of Sold Products
13. Leased Assets
14. Franchises
15. Investments

Scope 3 is usually the largest contributor and key for SBTi, especially categories like purchased goods, transport, and product end-of-life.



3.2 Emission Factors

Emission factors are conversion values used to calculate GHG emissions from an activity, resulting in **CO₂e (carbon dioxide equivalent)**.

Scope 1: Translate fuel use or chemical processes into emissions (e.g., liters of diesel × emission factor).

Scope 2: Convert electricity, heating, and cooling into emissions using either location-based (grid average) or market-based (supplier-specific) factors.

Scope 3: More complex, relying on sector averages, spend-based factors, or material-specific data.

Example:

- 500 liters of diesel × 3 kg CO₂e/liter = **1,500 kg CO₂e.**
- 10,000 kWh electricity × 0.5 kg CO₂e/kWh = **5,000 kg CO₂e.**



Bufab focuses on 7 key Scope 3 categories most relevant to its operations:

Category Relevant to Bufab	Description
1 – Purchased goods and services	Emissions from the production of goods and services that your company buys. (Usually the largest share of Scope 3)
3 – Fuel and energy related activities	Upstream emissions from fuel and electricity.
4 – Upstream transportation and distribution	Emissions from transporting goods between suppliers and your company. (Includes the use of 3PLs)
5 – Waste generated in operations	Emissions from waste disposal and treatment of operational waste.
9 – Downstream transportation and distribution	Emissions from delivering products to customers. (Includes the use of 3PLs)
10 – Processing of sold products	Emissions from customer or other actors transforming your products before use.
12 – End-of-life treatment of sold products	Emissions from disposal, recycling, incineration, or landfill of products sold.

3.3 Resource Consumption

Resource consumption for example of **energy and water** are key sustainability areas that vary by industry and offers opportunities for cost savings through efficiency.

Energy consumption

Suppliers can use **Power Purchase Agreements (PPAs)** or **Energy Attribute Certificates (EACs)** to reduce their carbon footprint and implement ISO 50001.

Water consumption efficiency is equally important, helping reduce strain on local water supplies while lowering operational costs.

Example: Improving Efficiency and Sustainability

A metal components manufacturer reviews its operations to identify sustainability improvements and cost savings.

Energy efficiency: Replaces old lighting with LEDs and upgrades to high-efficiency compressors and machinery, cutting electricity use by 20%.

Energy sourcing: Installs solar panels on the factory roof and signs a Power Purchase Agreement (PPA) for renewable electricity. As a result, Scope 2 emissions drop by over 70%.

Water efficiency: Introduces a closed-loop cooling system, reducing water consumption by 30% and lowering utility costs.

Management systems: Implements ISO 50001 energy management practices to continuously monitor and improve energy use.

SDG connection



3.4 Waste Management

Better **waste management** starts with reducing waste at the source through efficiency and quality improvements, which can also cut costs.

Material recovery via reuse and recycling lowers impact, supported by external partners and guided by the waste hierarchy: refuse, reduce, reuse, repair, recycle, and dispose as a last resort.

Hazardous waste requires special attention due to its toxic, flammable, or corrosive nature, and must always be disposed of through proper, certified channels. Onsite **waste segregation** and employee awareness are key to effective waste management.

Compliance with frameworks like **CSRD, CSDDD, EcoVadis, REACH, and RoHS** makes structured waste management essential for suppliers.

Example: Waste Reduction and Management in Practice

A bolt manufacturer improves its waste management to reduce environmental impact and comply with EU standards.

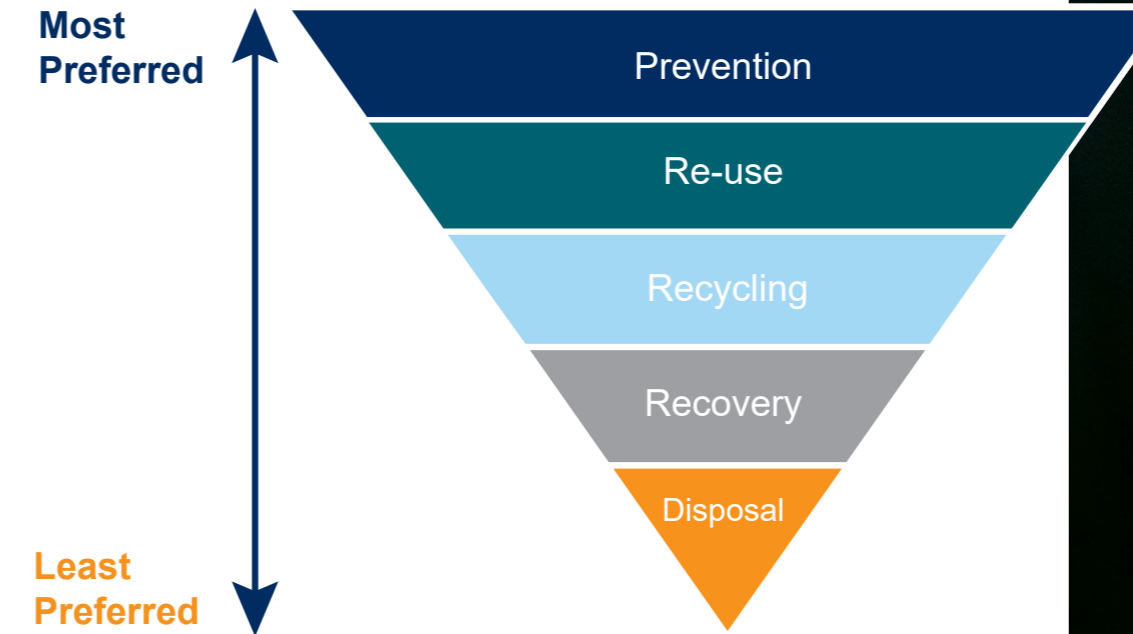
Source reduction: Optimizes cutting and machining processes, reducing scrap metal waste by 15%.

Material recovery: Collects and sells steel shavings for recycling, turning waste into revenue.

Segregation: Sets up clearly labeled waste bins for metal, paper, plastic, and hazardous materials.

Hazardous waste: Disposes of oils, solvents, and paints through certified waste contractors.

Awareness: Trains employees on the waste hierarchy — refuse, reduce, reuse, repair, recycle, and dispose.



SDG connection



3.5 Corporate Social Responsibility (CSR)

CSR has evolved from a marketing concept into a strategic necessity, driven by global expectations on labor, safety, and ethics. It involves integrating social, environmental, and ethical practices into daily operations—internally (e.g., fair labor, transparency, emissions reduction) and externally (e.g., community engagement, education).

Suppliers are encouraged to report CSR activities using frameworks like the GRI and UN Global Compact, which improve transparency and alignment with customer expectations.

Although CSR remains voluntary, new EU laws such as CSRD and CSDDD are making sustainability reporting and due diligence mandatory, cascading to suppliers. Active CSR engagement strengthens sustainability performance, improves EcoVadis/CDP ratings, and ensures readiness for future compliance.

SDG connection



3.6 Governance

Governance in business refers to the systems, policies, and processes that guide decision-making and accountability.

In sustainability, good governance ensures that environmental and social goals are integrated into core business practices, supported by frameworks like the **UN Global Compact, GRI Standards, CSRD, and CSDDD**. To put governance into practice, companies must focus on key areas such as anti-corruption, ethics, and transparency.

Anti-corruption is critical since bribery, fraud, and unfair procurement undermine trust, economic development, and compliance; suppliers are expected to have clear anti-corruption policies and avoid even the appearance of misconduct.

Ethics go beyond legal compliance, requiring companies to uphold human rights, fair labor, non-discrimination, and to avoid practices like child labor or greenwashing. Ethics should be embedded in company culture and extended throughout the value chain by ensuring responsible business partners.

Transparency has become a core expectation, meaning open communication on policies, risks, performance, and impacts. Even when reporting is voluntary, adopting transparent governance strengthens reputation, trust, and market competitiveness.

SDG connection





3.7 Transportation

Transportation is a key part of global supply chains but also a significant source of GHG emissions, mainly reported under **Scope 3**.

Sustainable transport improves environmental performance, reduces costs, and strengthens competitiveness in procurement processes.

Strategies include maximizing load efficiency, optimizing routes, and partnering with logistics providers that prioritize sustainability. In terms of modes, **air transport has the highest emissions and should be minimized**, while **rail and sea are the most sustainable**, with road transport acceptable if efficiency measures are applied.

To meet **CSRD, GHG Protocol, and SBTi** requirements, suppliers must measure, manage, and report transportation emissions.

Example: Sustainable Transportation in Practice

A bolt manufacturer reviews its logistics to reduce Scope 3 transport emissions and improve efficiency.

- **Route optimization:** Work with logistics partners to consolidate shipments and avoid half-empty trucks, cutting fuel use by 15%.
- **Mode shift:** Move long-distance deliveries from road to rail, reducing transport emissions by up to 70%.
- **Efficiency tracking:** Monitor fuel data from carriers to report under CSRD, GHG Protocol, and SBTi requirements.
- **Supplier collaboration:** Choose transport partners that use low-emission vehicles and eco-driving practices.

SDG connection

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES
	



3.8 Materials

Materials are a major driver of supply chain emissions, typically reported as **Scope 3**, with steel, aluminium, and packaging being key contributors.

Steel production via blast furnaces/basic oxygen furnaces using virgin ore is highly carbon-intensive and energy inefficient. Alternatives like **Electric Arc Furnaces (EAFs)**, especially when using recycled steel, can cut emissions by 50–70% depending on processes and regional energy mix.

Aluminum production also has high emissions when using virgin raw materials, but shifting to recycled inputs can reduce emissions by up to **94%**.

Packaging often creates unnecessary waste and should be minimized when it does not add value. Sustainable packaging strategies include recyclable materials, bioplastics, lightweight/non-bulky designs, and circular systems such as reuse or reverse logistics.

Example: Sustainable Materials and Packaging in Practice

A metal fastener supplier reviews material sourcing and packaging to reduce Scope 3 emissions.

- **Steel sourcing:** Switches from blast furnace steel to Electric Arc Furnace (EAF) steel made with 70% recycled content, reducing steel-related emissions by about 60%.
- **Aluminum use:** Chooses suppliers using recycled aluminum, cutting emissions by up to 90% compared to virgin production.
- **Packaging optimization:** Replaces single-use packaging with reusable crates and lightweight recyclable materials, lowering waste and costs.
- **Compliance:** Aligns practices with PPWR and CSRD to ensure traceability, recyclability, and circularity in packaging and material flows.

SDG connection





76% OF OUR OPERATIONAL ENERGY IS RENEWABLE,
WITH 5% GENERATED ON-SITE

THE PICTURE SHOWS THE SOLAR PANELS ON THE
ROOF OF BUFAB SWEDEN

3.9 Green buildings

Green Buildings are increasingly important due to urbanization, climate change, and the need for responsible energy, water, and material use. While requiring higher upfront investment, they lower long-term operating costs, improve resilience to climate risks, and enhance employee well-being through better indoor conditions. Traditional buildings consume excessive resources and contribute significantly to **Scope 1 and 2 emissions** via heating, cooling, and electricity use, whereas green buildings prioritize efficiency and sustainability.

The **EU Taxonomy** defines criteria for sustainable building activities, reinforcing alignment with **CSRD** and **GRI** reporting. This also strengthens performance in **CDP** and **EcoVadis** assessments.

AREA	FEATURES
Energy Efficiency	Passive design, insulation, renewable energy sources, smart systems (motion sensors).
Water Efficiency	Low-flow fixtures, rainwater harvesting, greywater reuse.
Material Use	Recycled, low-impact, certified sustainable materials.
Waste Management	Efficient processes and waste diversion, recycling bins.
Indoor Environment	Improved air quality, natural lighting, thermal comfort.

SDG connection





3.10 Traceability

Traceability is becoming essential as global supply chains grow more complex, often leaving companies blind beyond their first-tier suppliers. This lack of visibility creates risks of human rights violations, environmental harm, false claims, and non-compliance.

Traceability means tracking a product or material’s origin and every supplier involved to ensure it was sourced ethically and sustainably. While suppliers may hesitate to share business-sensitive information, a balance must be struck between protecting trade secrets and enabling transparency.

Strong traceability supports compliance with **CSDDD**, **CSRD**, **CBAM**, and **EUDR**, ensures accurate **Scope 3 emission reporting**, and strengthens performance in sustainability standards and certifications.

Example: Supplier Traceability in Practice

A supplier strengthens traceability to meet customer and EU sustainability requirements under CSDDD, CSRD, CBAM, and EUDR.

Map your supply chain: Identify all material sources and sub-suppliers (tier 1–3) to ensure ethical and legal sourcing.

Collect documentation: Keep mill certificates, batch numbers, and country-of-origin data for all materials supplied.

Maintain digital records: Store and share traceability data so each shipment can be linked to its origin and production site.

Ensure transparency: Provide customers with verified sustainability and origin data while protecting sensitive business information.

SDG connection





4. BuFab's Role in Supplier Sustainability

4.1 BuFab's Role in Supplier Sustainability

BuFab supports suppliers in meeting sustainability standards such as CSRD, CBAM, SBTi, and EUDR, promoting circular and responsible practices across the supply chain. Stronger supplier sustainability leads directly to BuFab achieving its own goals.

In 2022 we launched our Sustainable Supplier Engagement Program (SSEP) to support our suppliers with their Sustainability journey.

Sustainable Supplier Engagement Program (SSEP)

Key Areas of Engagement

- **GHG Emissions** – Track, report, and reduce in line with climate goals.
- **Renewable Energy** – Transition operations to renewables.
- **Material & Energy Efficiency** – Reduce waste, optimize energy use.
- **Water & Waste Management** – Promote reduction, recycling, and proper handling.
- **SDGs Alignment** – Focus on social and environmental sustainability goals.

Collaboration & Support

BuFab works in partnership with suppliers, providing **guidance, tools, training, workshops, and data-sharing** to improve sustainability performance.

Carbon Reduction Targets

- Suppliers must cut **Scope 1–3 emissions by 55% by 2031** (35% interim reduction acceptable with plans to increase).

SSEP Benefits

- **Sustainable sourcing incentives:** More business for top performers.
- **Simplified sustainability:** Knowledge-sharing, stronger communication, and reputation gains.
- **Regulatory readiness:** Compliance with **CBAM, supply chain due diligence, conflict minerals**.
- **Operational benefits:** Cost savings from energy efficiency, recycling, better technologies, and progress toward **ISO 14001 & 50001** certification.

4.2 Data quality

Under the SSEP, data collection extends not only to our direct suppliers but also to the suppliers of our suppliers.

We therefore request your support in providing item-level data for the following data points:

Category	Data Point	Purpose
Corporate Emissions	Scope 1, 2, and 3 emissions (GHG Protocol)	To measure and track GHG performance across the supply chain
Product Emissions	Carbon footprint (ISO 14067) or LCA/EPD (ISO 14040/44, 14025)	To assess environmental impact at the product level
Energy	Share of renewable or low-carbon energy (PPAs, GoOs, RECs, I-RECs)	To verify renewable energy use in operations
Water	Total water consumption, efficiency measures, recycling/reuse practices	To manage water use sustainably and reduce operational risks
Materials	Recycled content (%) in products	To encourage circular economy practices
Chemicals	Compliance with REACH, RoHS, and conflict minerals (CMRT/EMRT)	To ensure regulatory and responsible sourcing compliance
Traceability	Material certificates, mill test certificates, country of origin, batch numbers	To meet EU regulations (e.g., CBAM, EUDR)
Transparency	Methodologies, emission factors, carbon pricing/tariffs	To validate and standardize emissions reporting

4.3 Data Requirements for Suppliers

To support sustainability reporting and compliance with EU and international frameworks (CSRD, CSDDD, CBAM, EUDR, PPWR, GHG Protocol, SBTi), suppliers are expected to provide verified data on the following areas annually. This information enables transparency, risk management, and continuous improvement across the supply chain.

- Corporate Emissions:**
 Scope 1, 2 & 3 GHG emissions (per GHG Protocol). Track and report total carbon footprint across operations and supply chain.
- Product Emissions:**
 Product carbon footprint (ISO 14067) or LCA/EPD (ISO 14040/44, 14025). Assess environmental impact at the product level and support customer reporting.
- Energy:**
 Share of renewable or low-carbon energy (PPAs, GOs, RECs, I-RECs). Verify renewable energy use and progress toward decarbonization.
- Water:**
 Total water use, efficiency measures, recycling or reuse practices Manage water sustainably and reduce local resource risks.
- Materials:**
 Recycled content (%) in raw materials. Promote circular economy and reduce material-related emissions.
- Chemicals & Substances:**
 Compliance with REACH, RoHS, and conflict minerals templates (CMRT/EMRT). Ensure responsible sourcing and chemical safety compliance.
- Traceability:**
 Material or mill certificates, batch numbers, and country of origin. Demonstrate supply-chain transparency and meet CBAM and EUDR requirements.
- Transparency & Methods:**
 Emission factors, calculation methodology, internal carbon price (if used). Validate reported data and ensure comparability between suppliers.

5. References

5.1 Core Frameworks, Standards & Guidelines

GHG Protocol – Greenhouse Gas Accounting Standard

<https://ghgprotocol.org/>

UN Global Compact (UNGC)

<https://unglobalcompact.org/>

GRI – Global Reporting Initiative

<https://www.globalreporting.org/>

OECD Guidelines for Multinational Enterprises

(Due Diligence Guidance)

<https://www.oecd.org/>

ILO – International Labour Organization Core Conventions

<https://www.ilo.org/>

SDGs – The 17 Sustainable Development Goals

<https://sdgs.un.org/goals>

Science Based Targets initiative (SBTi)

<https://sciencebasedtargets.org/>

CDP – Environmental Disclosure Platform

<https://www.cdp.net/en>

EcoVadis – Sustainability Rating Platform

<https://ecovadis.com/>

CSRD – Corporate Sustainability Reporting Directive

https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en

CSDDD – Corporate Sustainability Due Diligence Directive

https://finance.ec.europa.eu/sustainable-finance/corporate-sustainability-due-diligence_en

OHCHR – Human Rights Due Diligence Resources

<https://www.ohchr.org/>

REACH – EU Chemicals Regulation

https://environment.ec.europa.eu/topics/chemicals/reach-regulation_en

RoHS – Restriction of Hazardous Substances Directive

https://environment.ec.europa.eu/topics/waste-and-recycling/rohs-directive_en

EU Taxonomy – Official Page

https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en

CBAM – Carbon Border Adjustment Mechanism

https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en

EUDR – EU Deforestation Regulation

https://environment.ec.europa.eu/topics/forests/deforestation/regulation-deforestation-free-products_en

PPWR – Packaging and Packaging Waste Regulation

https://environment.ec.europa.eu/topics/waste-and-recycling/packaging-waste_en

Find the latest information on Bufab's sustainability work here:

www.bufab.com
www.bufabgroup.com
SolutioNet
Annual Report