

Emissions associated with purchased goods and services

I - Presentation of emission source

GHG emissions linked to purchased products and services cover all emissions linked to the company's purchases of goods and services :

- This includes the purchase of raw materials for processing and the purchase of ready-to-use manufactured goods, including assets capitalised on the balance sheet;
- This also includes purchases of goods and services necessary for the general running of the business (IT equipment, paper, furniture, insurance policies, etc.).

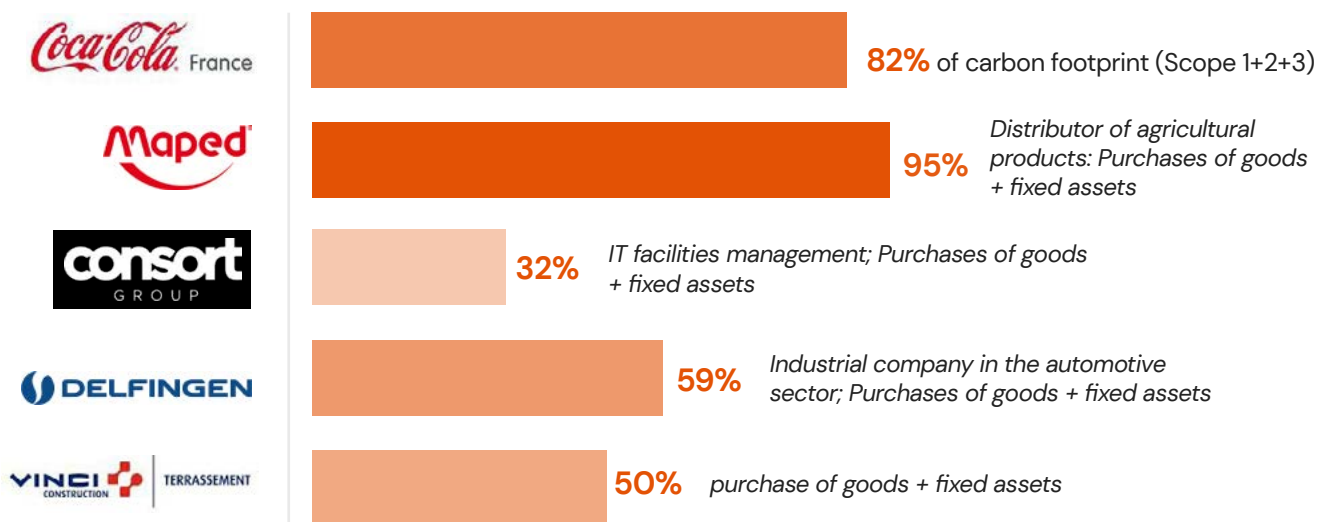
Depending on the sector of activity, this category of GHG emissions accounts for a greater or lesser proportion of the total. This category is generally larger for companies that sell goods rather than services, as purchasing is a more significant item of expenditure.

The materiality of this category of GHG emissions also depends on the carbon intensity of the products and services purchased. When it comes to purchasing raw materials, mineral, metal and plastic materials often have a significant carbon impact, given the amount of energy required to make them available. Although organic raw materials are generally less carbon-intensive, we must nevertheless be careful about their impact on changes in land use: soya derived from the deforestation of the Amazon rainforest, for example, has a significant carbon impact.

Reducing emissions in this category requires a cross-disciplinary mobilisation of all the company's functions in order to implement effective means of action, and not just the purchasing function.

Calculating emissions in this category is often complicated for companies, particularly when their purchasing monitoring procedures are not adapted to carbon accounting. A recurring pitfall is the lack of tracking of purchases in physical data (in kg, m3 etc.), which means that calculations are made using monetary emission factors, the uncertainty of which is inherently high.

Purchases of goods + fixed assets (in %)



Purchasing generally represents
50%
of a company's turnover

II - Presentation of levers and best practices

Levers in **green** are easy to implement and offer significant gains in terms of GHG emissions, while the **orange** levers are more difficult to implement, but offer significant gains in GHG emissions, and the **blue** levers are easy to implement, but offer lower GHG emission gains.

1. Initiate an eco-design approach

2. Reduce purchasing-related emissions

2.1 Reduce emissions linked to the purchase of raw materials

2.2 Reduce emissions linked to the purchase of manufactured goods

2.3 Lease equipment rather than buy it, whenever possible

3. Organisational levers for reducing purchasing-related emissions

3.1 Develop tools to monitor GHG emissions linked to purchasing

3.2 Develop partnerships with suppliers to reduce GHG emissions

1. Initiate an eco-design approach

- The ISO 14006 standard defines **eco-design** as a methodical approach that takes into account the **environmental impacts** of the design and development process with the aim of **reducing** negative environmental impacts throughout the **life cycle** of a product;
- Ecodesign involves rethinking the products or services we sell to take action at every stage of their life cycle: design, manufacture, use(s), service life and end of life.
- Carrying out a life cycle analysis (LCA) is generally the first step in an eco-design approach;
- **LCA** is an approach that enables the environmental impact of a product or service to be studied in a comprehensive, multi-criteria way. Applying this analysis to our products enables us to measure the **environmental impacts** (on the climate, but also on pollution, biodiversity, resource consumption or toxicity) associated with all stages of the life cycle and therefore to identify **ways of reducing these impacts**;
- While the full process is relatively long and costly, there are simplified LCA methods and tools.

UA comparative LCA study has compared the impact of low-energy lamps and LEDs with that of incandescent lamps : they offer energy savings of around 80%. Source: LCA study carried out by lamp manufacturer ORSAM

2. Reduce purchasing-related emissions

2.1 REDUCE EMISSIONS LINKED TO THE PURCHASE OF RAW MATERIALS

- **The quantity of raw materials** needed to produce a product or service is a primary lever for reducing GHG emissions;
- Changing the raw materials used for materials with a lower carbon impact is another major lever;
- **PLEASE NOTE** : biobased and low-carbon are not always equivalent (see ADEME's guide to [sustainable biobased](#))

One tonne of new aluminium emits an average of 7,800 kg CO₂e, while one tonne of timber (hardwood) emits an average of 1,110 kg CO₂e. Source: ADEME footprint database

▣ Changing the place where raw materials are sourced can also help reduce these emissions ;

▣ Preferring **recycled raw materials** is another way of reducing GHG emissions ;

Thanks to low-carbon electricity, primary aluminium produced in France has a carbon footprint around 6 times smaller than primary aluminium produced in China. Source : [Aluminium Sector Transition Plan](#)

One tonne of new aluminium emits an average of 7,800 kg CO₂e, while one tonne of recycled aluminium emits an average of 562 kg CO₂e. Similarly, on average, new plastic emits 2380 kg CO₂e per tonne, compared with 202 kg CO₂e per tonne for recycled plastic.. Source : Base empreinte de l'ADEME

2.2 REDUCE EMISSIONS LINKED TO THE PURCHASE OF MANUFACTURED GOODS

▣ Prefer long-life goods that are easy to maintain and repair;

▣ Buying **reconditioned or second-hand** goods saves GHG emissions.

Buying a refurbished smartphone can reduce greenhouse gas emissions by up to 92% over its service life compared with a conventional smartphone. Source : [ADEME Study](#)

2.3 LEASE EQUIPMENT RATHER THAN BUY IT, WHENEVER POSSIBLE

▣ Preferring **leasing** helps to align the interests of the supplier and the purchaser (longer service life, optimised maintenance, better reparability, etc.) : this is one way of encouraging the transition to the **functional economy**.

3. Organisational levers for reducing purchasing-related emissions

3.1 DEVELOP TOOLS TO MONITOR GHG EMISSIONS LINKED TO PURCHASING

▣ Reducing purchasing-related GHG emissions also requires **reliable monitoring**;

▣ Adapt the company's internal tools to the requirements of **carbon accounting** (tracking physical data, classifying purchases according to carbon impact, etc.);

▣ Train purchasing teams in climate issues, carbon accounting and responsible purchasing;

▣ Make the carbon impact of purchasing a binding and systematic criterion, and create **procedures** for incorporating this factor into calls for tenders, specifications and decision-making.

3.2 DEVELOP PARTNERSHIPS WITH SUPPLIERS TO REDUCE GHG EMISSIONS

▣ A **collaborative approach with suppliers** is essential to achieve a reduction in purchasing-related GHG emissions: both to ensure that purchasing-related **GHG emissions** are properly **monitored** and because suppliers' efforts to

reduce carbon emissions are reflected in the carbon footprint of their customers ;

- ▣ Integrate the sharing of data on GHG emissions into the customer-supplier relationship ;
- ▣ Ask suppliers for prove of the environmental performance of their products (GHG emission factor) ;
- ▣ Support suppliers in their commitment to decarbonisation.

Operational KPIs :

| | |
|--|-------|
| Percentage of purchases for which the company has an environmental impact profile (LCA, eco-profile, etc.) | ..... |
| Share of eco-designed products/services | ..... |
| Monitor consumption of carbon-intensive raw materials | ..... |
| Monitor the raw material intensity of products sold | ..... |
| Share of recycled raw materials in total raw materials consumption and by product | ..... |
| Percentage of equipment purchased reconditioned/second-hand | ..... |
| Change in the average service life of equipment purchased | ..... |
| Monitor supplier labels/certifications | ..... |
| Monitor the proportion of purchases/calls for tenders incorporating environmental criteria | ..... |
| Percentage of suppliers with whom a dialogue on CSR is underway | ..... |
| Trend in equipment leasing as a proportion of total purchases | ..... |

III - Case study



MAPED is the n°1 worldwide in school accessories. Eco-design is a central pillar of the brand's decarbonisation strategy, which aims to reduce its emissions by 30% by 2026 (compared with 2018) and is committed to pursuing an SBTi approach by 2050. All subsidiaries (in particular its production sites in France, Mexico and China) work together to implement the Group's best practices in terms of materials, manufacturing processes and energy, packaging and transport.

The eco-design approach is organised around **life-cycle analysis software** shared by product designers and a "CSR and eco-design" **rating tool** that enables Maped to give a score to each product and to **direct its purchasing policy**. By way of illustration, the Group is aiming for 100% eco-design of its new products by 2026, with packaging made entirely from recycled and recyclable materials.

IV - Opening to other environmental issues

Reducing the GHG emissions associated with purchasing can have **co-benefits** in terms of other environmental impacts, just as it may also **shift the carbon impact** to another environmental problem. That's why we encourage taking an eco-design approach and using life-cycle analysis tools to identify the levers for action that will reduce the product's overall environmental impact, using a **multi-criteria analysis**.

V - Further information

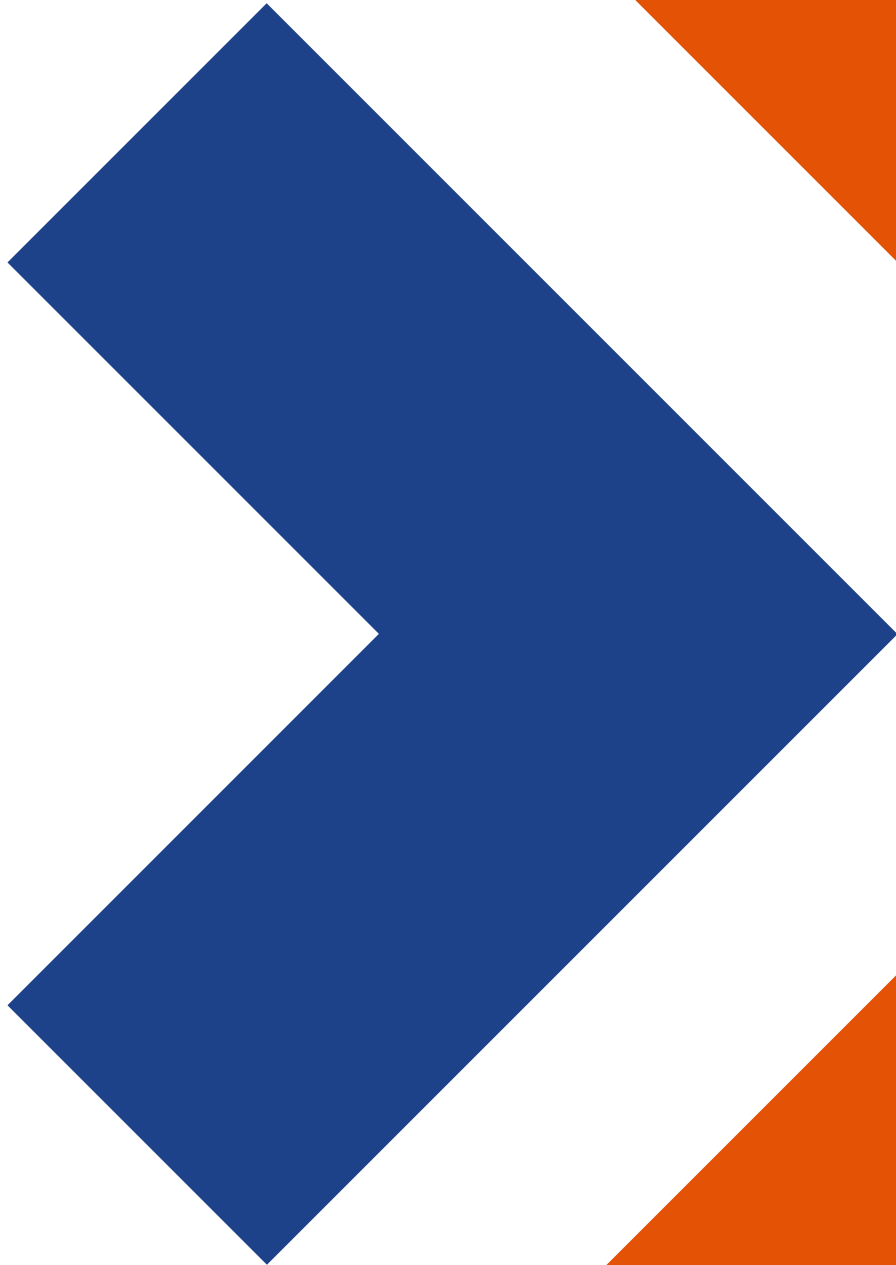
Here are a few resources to explore the issue of emissions linked to the products and services purchased:

- The association's resource library [Eco-design cluster](#) ;
- The [resources of the Observatoire des Achats Responsables](#) (Obsar)
- The [responsible purchasing guides from TopTen](#) ;
- A wide range of ADEME resources :
 - [Short guide](#) on eco-design;
 - Studies on the economic benefits of ecodesign for businesses : [2022](#) and [2017](#) ;
 - Responsible purchasing [Toolbox](#) ;
 - Study on the [implementation of a responsible purchasing policy in 20 SMEs](#) ;
 - Analysis of [100 environmental labels](#) ;
- The [resources](#) of the Institut Européen de l'Economie de la fonctionnalité et de la coopération (IE-EFC), including a [compilation of company trajectories](#) towards the functional economy.

VI - Appendice

| Regulatory method version 5 | Item | GHG Protocol | Category |
|--|---|---|---|
| Category | | Scope | |
| 1. Direct GHG emissions | Emissions from direct and mobile combustion sources, non-energy processes, etc. | Scope 1 (direct) | Emissions from direct and mobile combustion sources, non-energy processes, etc. |
| 2. Indirect emissions associated with energy | Indirect emissions linked to electricity consumption and others | Scope 2 (indirect) Generation of energy consumed | Indirect emissions from electricity and other consumption |
| 3. Indirect emissions associated with transport | Goods transport, commuting, etc. | Scope 3 (indirect) | Goods transport, commuting, etc. |
| 4. Indirect emissions associated with products purchased | 4.1 Purchase of goods | | 1. Products and services purchased |
| | 4.2 Fixed assets | | 3. Energy and fuel-related activities |
| | 4.3 Waste management | | 2. Fixed assets |
| | 4.4 Upstream leasing assets | | 5. Waste generated by operations |
| | 4.5 Purchases of services | | 8. Upstream leasing assets |
| 5. Indirect emissions associated with products sold | Use and end-of-life of products sold, investments, etc. | | 1. Products and services purchased |
| 6. Other indirect emissions | 6.1 Other indirect emissions | | Transformation, use and end-of-life of products sold, investments, etc. |

Emissions item concerned by the sheet
 Emissions item not concerned by sheet
 Emissions item does not exist



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