Climate Action
Accelerator

Public webinar

Simplifying LCA findings for procurement and operations in the humanitarian sector

Part 2 | 20 October 2026 | 12:30–13:30 CEST



Agenda

PROGRAMME

12:30	|	Welcome & introduction
12:40	|	Methodology
12:45	|	Results per product categories
13:10	|	Resources
13:20	|	Final remarks & Q/A

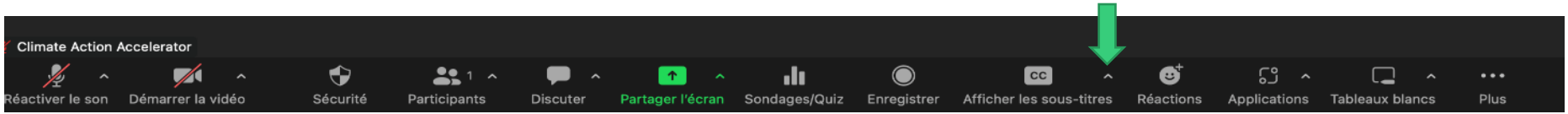
- This webinar is **recorded** and will be made available on **replay** on our website and YouTube channel.
- **Your audio and video is off by default.**
- To ask a question, please **write in the Q&A** section. The moderator will read out questions during the Q&A sessions.
- **Translation** to French is available via Zoom.

Link to webinar page:
climateactionaccelerator.org/events_and_webinars/

Translation

How to activate subtitles on Zoom?

1) Click on “Show captions” in the bottom bar (small arrow to the right).



2) Select the spoken language and the language you want to translate into.



Who we are

The **Climate Action Accelerator** is a non-profit initiative based in Geneva that aims to mobilise a critical mass of high-social trust organisations around the world to scale up implementation of climate solutions within planetary boundaries, keep global warming well below 2°C and avoid the risk of dangerous drift.

The goal is to help move the aid, health and higher education sectors towards greater resilience and a radical transformation of their practices, pursuing emission reduction targets (-50% by 2030) and a 'net zero' trajectory, in line with the Paris Agreement.



AID



HEALTH



HIGHER EDUCATION & RESEARCH

Our pillars

EMPOWER

Empower organisations to at least halve their emissions by 2030 and prepare for greater resilience through a hub of expertise and resources.

CHAMPION

Transform them into ambassadors of change within their networks, capable of influencing their peers.

COMMUNITY

Build a global community of action, sharing climate solutions as a universal common good, to scale up their deployment.

+50 partners onboard



Today's speakers



Paolo Sevègnes

Climate Analytics Officer,
Climate Action Accelerator



Pauline Dupuy

Junior Climate Analytics Officer,
Climate Action Accelerator

Background

Avec la participation de

MINISTÈRE DE L'EUROPE ET DES AFFAIRES ÉTRANGÈRES
Liberté
Égalité
Fraternité

Greening humanitarian supply chains: LCA-based recommendations for practitioners on reducing the most significant environmental impacts of key humanitarian products.

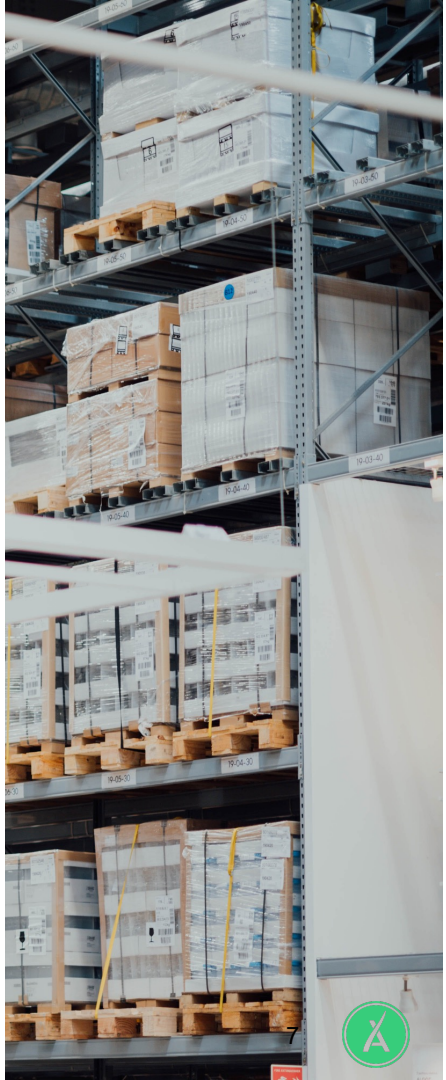
Develop a methodology for identifying environmental and human health hotspots across the sector's highest-impact product categories.

Conduct hotspot assessments for five product groups.

Transform the findings into concrete, actionable recommendations for operational teams and buyers.

Develop a harmonised sectoral LCA framework

Project duration:
Nov 2025 – Dec 2026



Methodology

To enable action

Running a full LCA requires **significant time**, **budget**, and expertise.

The sector **already holds many completed LCAs: a foundation** ready to build on.

Grouping products together allows using results of **existing LCAs to extract impact hotspots and main reduction levers.**

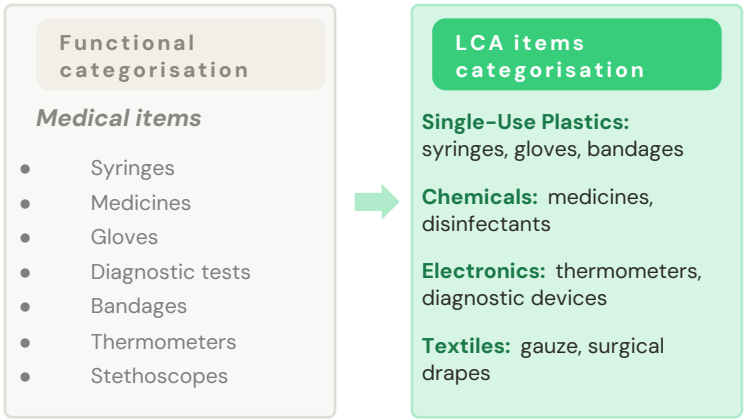
Methodology

1. Grouping individual products according to shared impact profiles
2. Analysis of life cycle impacts (climate change and human health) based on existing LCAs
3. Identification of main reduction levers per category



Outcomes

15 categories reflecting **shared impact profiles**, each with actionable leverage points.



The 15 product categories

Clarity and relevance driven adoption

1. Plant-based foods and bio-based textiles

2. Animal-based foods and textiles

3. Non-cold-chain pharmaceuticals and hygiene products

4. Cold-chain pharmaceuticals

5. Bulky liquids and infusions (non-hazardous)

6. Hazardous chemicals and products

7. Single-use synthetics and plastics

8. Reusable synthetics and plastics

9. Electrical and electronic equipment

10. Combustion-powered equipment

11. Metal structures and non-powered equipment

12. Glass and mineral materials

13. Electric vehicles

14. Combustion-powered vehicles

15. Vehicle equipment

Decision Tree to navigate the categories

Purpose

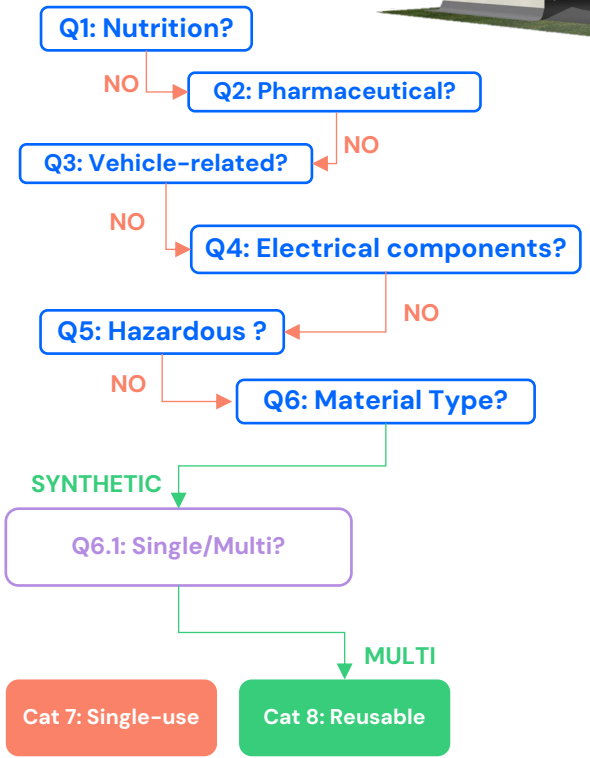
Help users identify which category applies to their items, using a step-by-step decision tree.

Structure

Questions flow from broad categories (e.g., "Is it a nutritional product?") to specific material and process details.

Example: Shelter Tent





Product categories

Sustainable procurement factsh

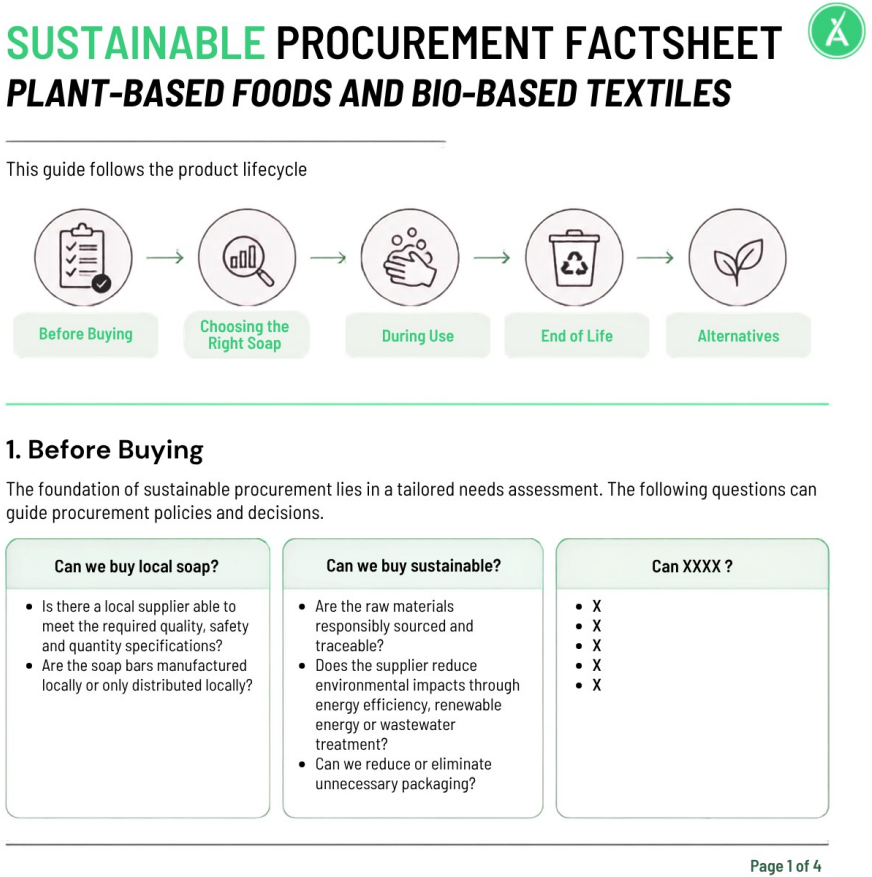
Structure & Content

Before buying	Questions to help you only buy what is needed
Choosing the right product	List of criteria and sustainability guidance
During use	Use the product in a more sustainable way
End of life	Specificities for the categor
Alternatives	Potential alternative products, if available

This **factsheet was created in collaboration with hulo**.

hulo x

Available online In 2027



SUSTAINABLE PROCUREMENT FACTSHEET

PLANT-BASED FOODS AND BIO-BASED TEXTILES

This guide follows the product lifecycle

Before Buying → Choosing the Right Soap → During Use → End of Life → Alternatives

1. Before Buying

The foundation of sustainable procurement lies in a tailored needs assessment. The following questions can guide procurement policies and decisions.

Can we buy local soap?

- Is there a local supplier able to meet the required quality, safety and quantity specifications?
- Are the soap bars manufactured locally or only distributed locally?

Can we buy sustainable?

- Are the raw materials responsibly sourced and traceable?
- Does the supplier reduce environmental impacts through energy efficiency, renewable energy or wastewater treatment?
- Can we reduce or eliminate unnecessary packaging?

Can XXXX ?

- X
- X
- X
- X
- X

Page 1 of 4

Product categories

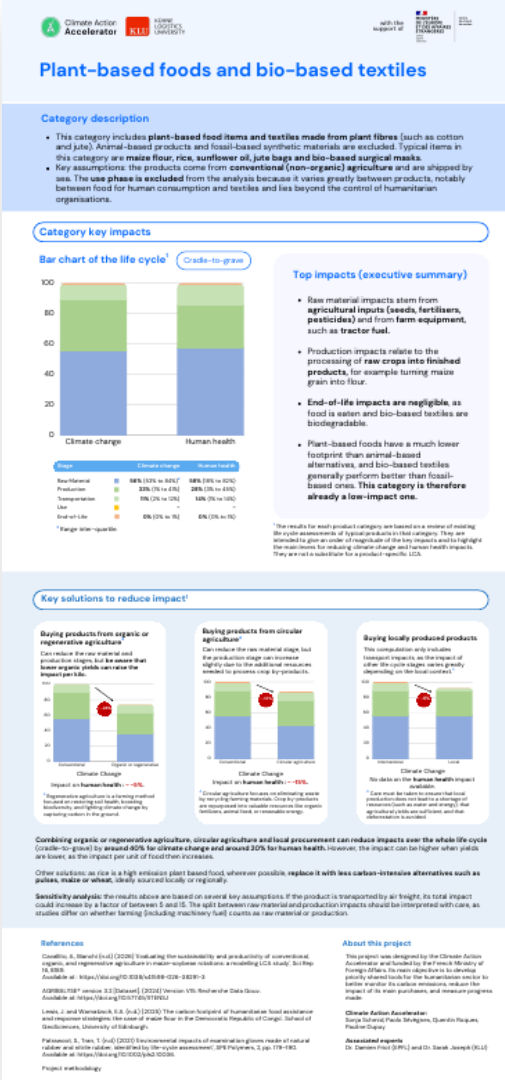
Analytical One-Pager

Available online
Early November

Structure & Content

Category description	Key hypothesis and items
Key impacts	Bar chart and summary
Key solutions	With the reduction potential linked
References	Data sources and methodologies

The results for each product category **are based on a review of existing life cycle assessments of typical products in that category**. They are intended to **give an order of magnitude of the key impacts and to highlight the main levers** for reducing climate change and human health impacts. They are not a substitute for a product-specific LCA.

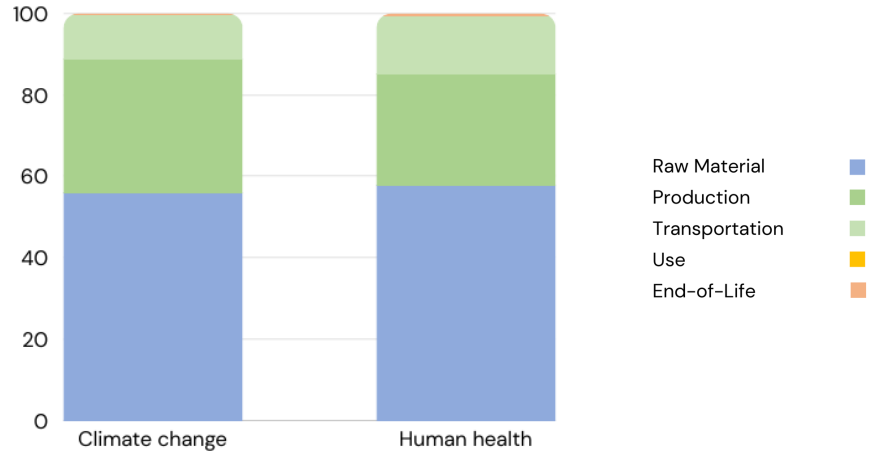


Category key impacts

Plant-based food items and textiles made from plant fibres (such as cotton and jute). Typical items in this category are **maize flour, rice, sunflower oil, jute bags** and bio-based surgical masks.

Bar chart of the life cycle[1]

Cradle-to-grave



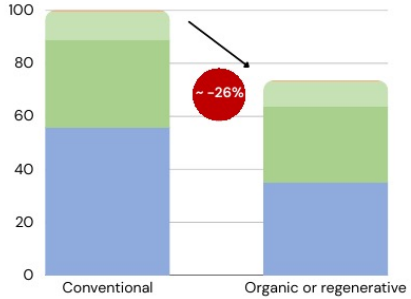
Top impacts (executive summary)

- Raw material impacts stem from **agricultural inputs (seeds, fertilisers, pesticides)** and from **farm equipment**, such as **tractor fuel.**
- Production impacts relate to the processing of **raw crops into finished products,** for example turning maize grain into flour.
- **End-of-life impacts are negligible**, as food is eaten and bio-based textiles are biodegradable.
- Plant-based foods have a much lower footprint than animal-based alternatives, and bio-based textiles generally perform better than fossil-based ones. **This category is therefore already a low-impact one.**

Key solutions to reduce impact[1]

Buying products from organic or regenerative agriculture[3]

Can reduce the raw material and production stages, but **be aware that lower organic yields can raise the impact per kilo.**



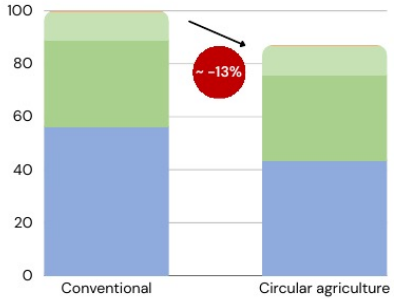
Climate Change

Impact on **human health : ~ -5%.**

[3] Regenerative agriculture is a farming method focused on restoring soil health, boosting biodiversity, and fighting climate change by capturing carbon in the ground.

Buying products from circular agriculture[4]

Can reduce the raw material stage, but the production stage can increase slightly due to the additional resources needed to process crop by-products.



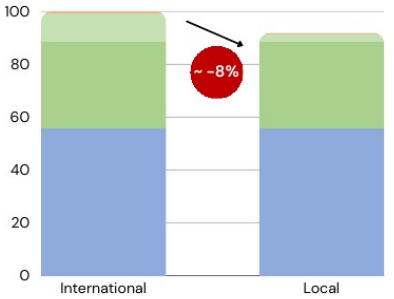
Climate Change

Impact on **human health : ~ -15%.**

[4] Circular agriculture focuses on eliminating waste by recycling farming materials. Crop by-products are repurposed into valuable resources like organic fertilizers, animal feed, or renewable energy.

Buying locally produced products

This computation only includes transport impacts, as the impact of other life cycle stages varies greatly depending on the local context.[5]



Climate Change

No data on the **human health** impact available.

[5] Care must be taken to ensure that local production does not lead to a shortage of resources (such as water and energy), that agricultural yields are sufficient, and that deforestation is avoided.

Combining **organic or regenerative agriculture, circular agriculture and local procurement can reduce impacts over the whole life cycle by around 40% for climate change and around 20% for human health.**

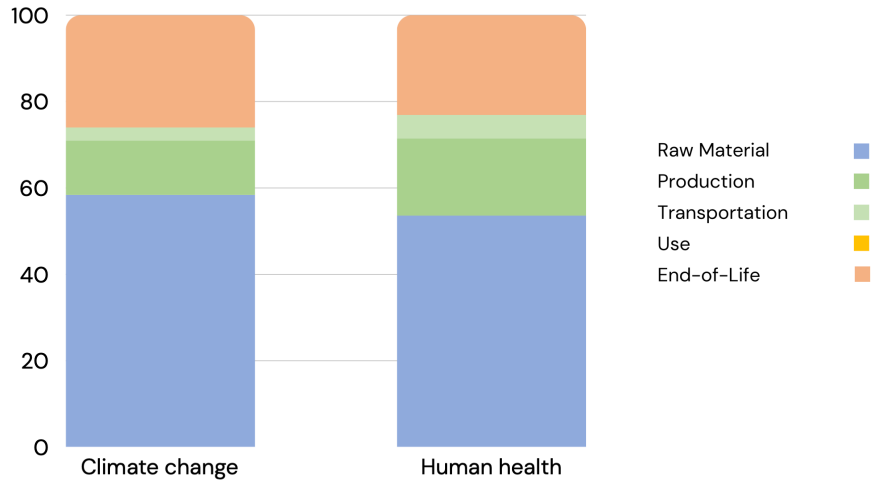
Raw Material
Production
Transportation
Use
End-of-Life

Category key impacts

Single-use (disposable) plastic or synthetic items that are neither electrical nor electronic. For example: **gloves, syringes, coveralls**, etc.

Bar chart of the life cycle[1]

Cradle-to-grave



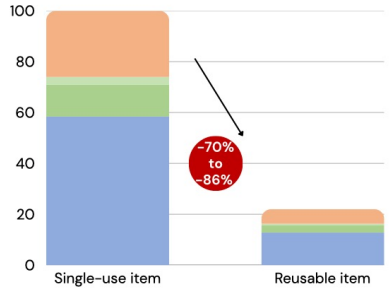
Top impacts (executive summary)

- **Plastic is produced from oil**, the extraction of which generates high levels of emissions and is harmful to human health.
- Plastic **manufacturing processes require a large amount of energy** to convert raw materials into polymers and to manufacture the end products.
- The transport of plastic has a negligible environmental impact due to its very low weight and the type of freight transport used (maritime).
- The impact of these products during the use phase has not been calculated (see key assumptions above).
- The **incineration of plastic releases dioxins, heavy metals, black carbon and toxic fine particles**.

Key solutions to reduce impact[1]

Replacing a single-use with a reusable item

Using a reusable item instead of a single-use one spreads its impact over many uses, so each use carries only a small share of the total impact

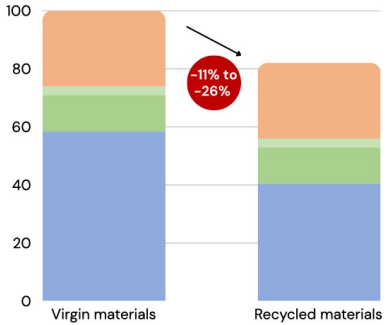


Climate Change

Impact on **human health : -42% to -79%.**

Using recycled materials

Using 66% recycled materials for products reduces the raw material impact by 19-41%.

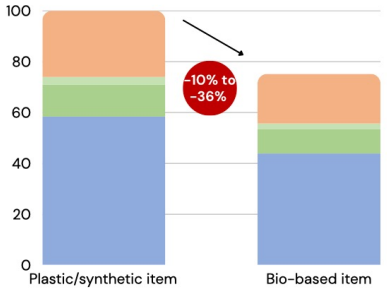


Climate Change

Impact on **human health : -2 to -26%.**

Using bio-based raw materials

Avoids oil extraction and refining, which release greenhouse gases, air pollutants and fine particles. It also reduces end of life stage.



Climate Change

Impact on **human health : -10% to -29%.**

Combining **the use of a reusable item and recycled materials can reduce impacts over the whole life cycle by 73 to 90% for climate change and by 43 to 84% for human health.**

Without transitioning to reusable or bio-based alternatives, other improvements provide only marginal impact reductions for single-use plastic items, proving insufficient to substantially decrease climate change and human health impacts.

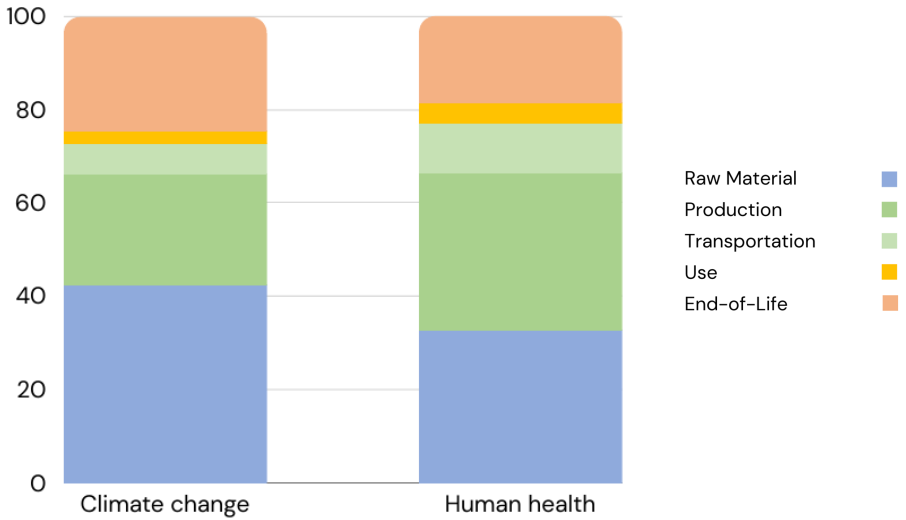
Raw Material
Production
Transportation
Use
End-of-Life

Category key impacts

Reusable synthetic and plastic items that are neither electrical nor electronic. For example: mosquito nets, mattress, blanket, tarpaulin, etc.

Bar chart of the life cycle[1]

Cradle-to-grave



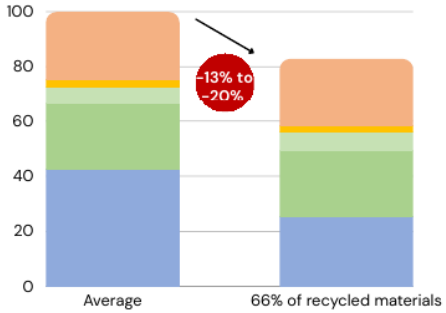
Top impacts (executive summary)

- **Plastic is produced from oil,** the extraction of which generates high levels of emissions and is harmful to human health.
- Plastic **manufacturing processes require a large amount of energy** to convert raw materials into polymers and to manufacture the end products.
- The transport of plastic has a negligible environmental impact due to its very low weight and the type of freight transport used (maritime).
- The impact of these products during the use phase is low as there is little consumption of natural resources (water, oil, etc.) or electricity.
- The **incineration of plastic releases dioxins, heavy metals, black carbon and toxic fine particles**.

Key solutions to reduce impact[1]

Using recycled materials

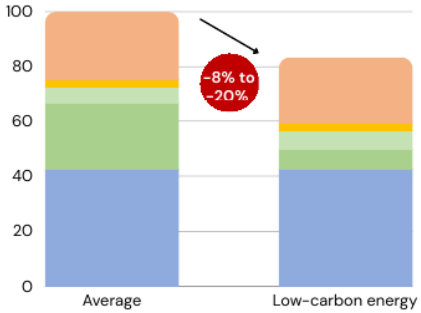
Using 66% recycled materials for products reduces the raw material impact by 31-47%.



Climate Change
Impact on **human health : -2% to -11% .**

Using low-carbon energy in the production process

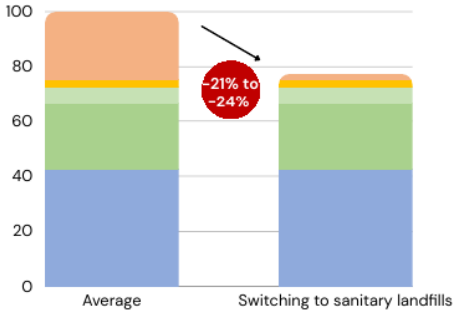
Using 100% low-carbon energy for electricity & heat reduces the production impact by 35-84%.



Climate Change
Impact on **human health : -1% to -23%.**

Switching to sanitary landfills

A moist infiltration class (sanitary) landfill reduces the end-of-life impact by 84-96%.



Climate Change
Impact on **human health : -17% to -19%.**

Combining **66% recycled materials, low-carbon energy and a switch to sanitary landfills reduces impacts over the whole life cycle by 42 to 64% for climate change and by 21 to 53% for human health.**

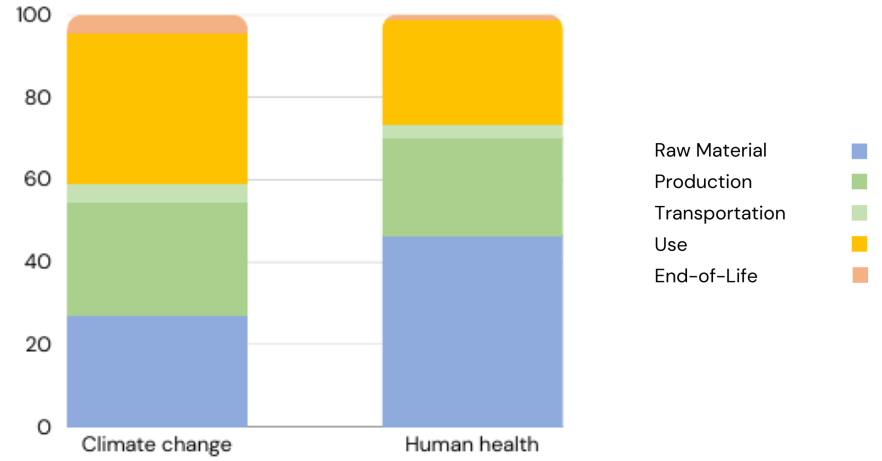
Raw Material
Production
Transportation
Use
End-of-Life

Category key impacts

Electrical and electronic items used in humanitarian operations. Examples include laptops, lamps, washing machines and electric water pumps.

Bar chart of the life cycle[1]

Cradle-to-grave



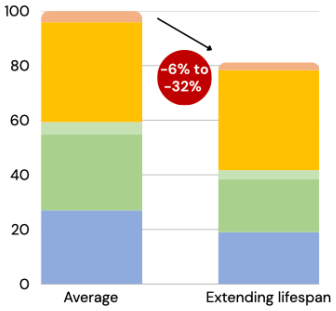
Top impacts (executive summary)

- The **extraction of rare earth elements and metals** (cobalt, gold, copper) generates toxic emissions that are harmful to human health.
- For electronics, the **manufacture of integrated circuits and displays** drives production impacts, as semiconductor and glass processing require a large amount of energy.
- For many devices, the **use phase** dominates the life cycle because of the **electricity consumed during use**.
- The **incineration of electronic waste releases dioxins,** heavy metals and toxic fine particles. Proper recycling or controlled disposal significantly reduces health impacts.

Key solutions to reduce impact[1]

Extending the device's lifespan

Fewer devices need to be purchased for the same use, which proportionally reduces the overall impact (excluding the use phase).

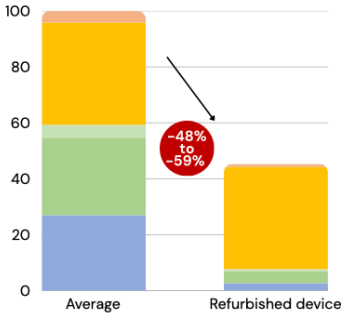


Climate Change

Impact on **human health : -11% to -37%.**

Purchasing refurbished devices

A refurbished device of equivalent functionality replaces a new one, avoiding most raw material, production and transport impacts.

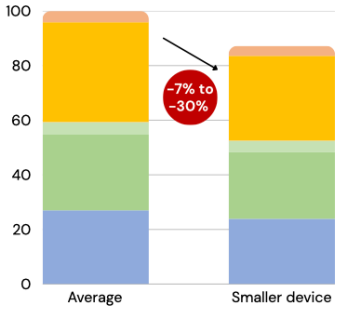


Climate Change

Impact on **human health : -56%.**

Adapting the size of the device to meet demand

Computation made by considering a 30–40% reduction in device size and mass.

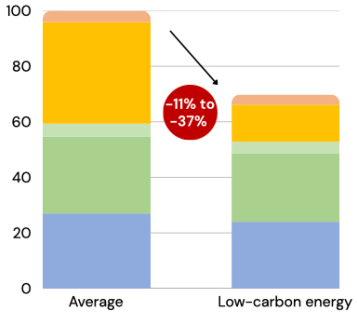


Climate Change

Impact on **human health : -30%.**

Using renewable energy for use

Computation made by considering low-carbon electricity during the use phase.



Climate Change

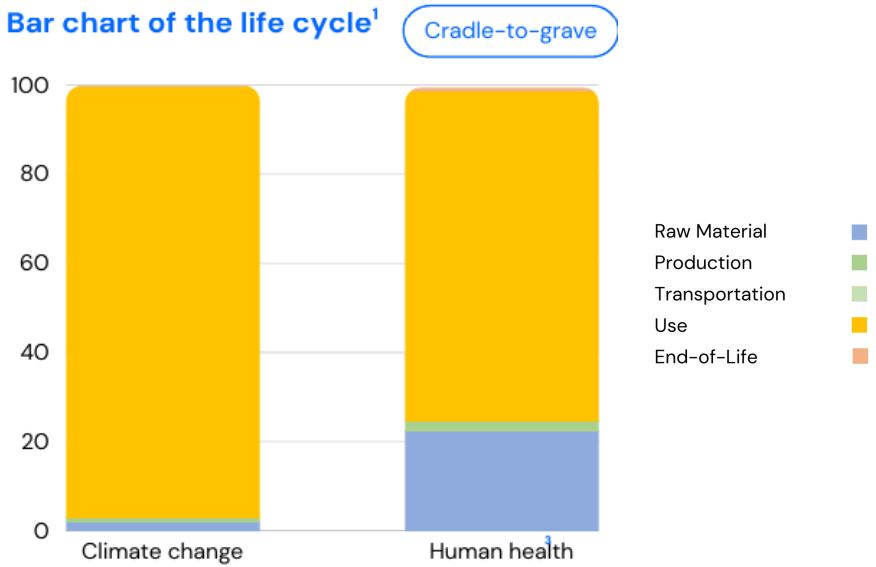
Impact on **human health : -8% to -31%.**

For the products for which it is possible, combining the four solutions reduces impacts over the whole life cycle (cradle-to-grave) by 58–94% for climate change and 73–94% for human health.

Raw Material
Production
Transportation
Use
End-of-Life

Category key impacts

Fuel-dependent equipment excluding automobiles and motorised transport. For example: cooking stoves, thermic water pumps, and electrical generators, etc.



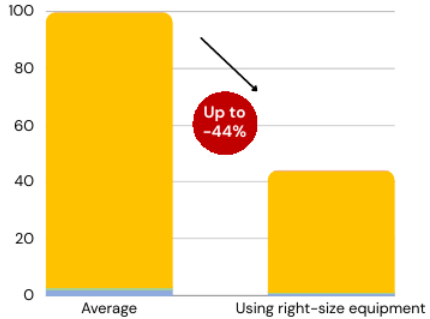
Top impacts (executive summary)

- The **operational use phase** represents the overwhelming majority of life-cycle environmental impacts, **notably accounting for greater than 95 % of greenhouse gas emissions.** This predominance is unsurprising given the combustion-based nature of this category and the **inherently substantial environmental burden associated with conventional fuel utilisation**.
- The massive quantities of fuel consumed during operational deployment fundamentally **outweigh all other life-cycle stages combined.**
- In contrast, the manufacturing, transportation, and end-of-life disposal phases remain negligible when evaluated against the operational phase's significance.

Key solutions to reduce impact[1]

Right-sizing systems to match operational requirements

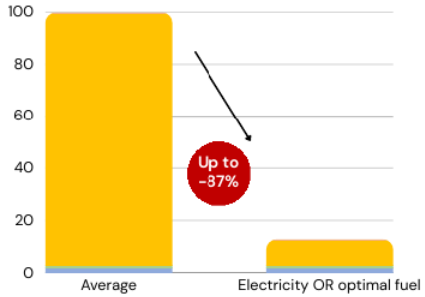
Reduces mostly the use phase as the device runs closer to its optimal load so combustion is most efficient.



Impact on **human health : up to -44%.**

Transitioning to electrification OR selecting strategically optimal fuel sources[4]

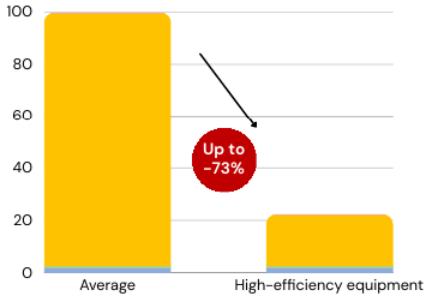
Reduces the use phase as switching to a cleaner fuel or electricity releases less CO2 and fine particles per unit of energy.



Impact on **human health : up to -65%.**

Prioritising high-efficiency equipment

Reduces the use phase as a more efficient machine extracts more useful work from each litre of fuel, so less fuel is burnt.



Impact on **human health : up to -58%.**

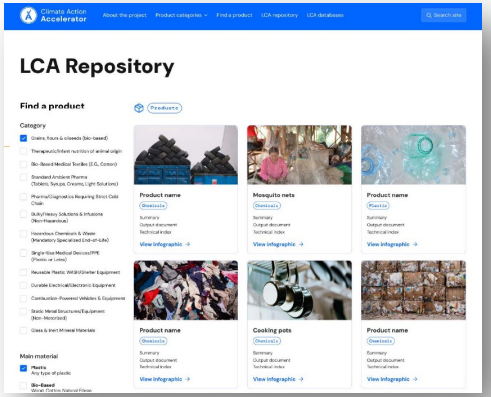
Application of these solutions is highly context and equipment specific, making broad generalisation difficult. Technology maturity levels significantly influence performance: established systems perform differently compared to emerging or legacy technologies. Given the extreme heterogeneity of equipment types, fuel sources, and operational contexts, results warrant cautious interpretation!

Raw Material
Production
Transportation
Use
End-of-Life

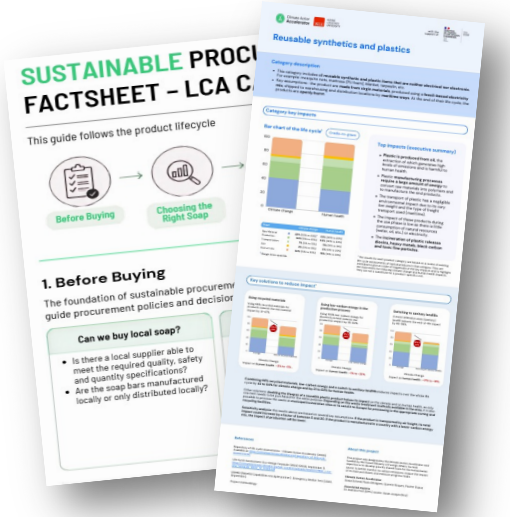
Project outcomes

Available documents and resources

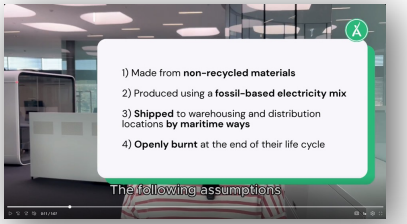
LCA Repository
to find, share, reuse data on products



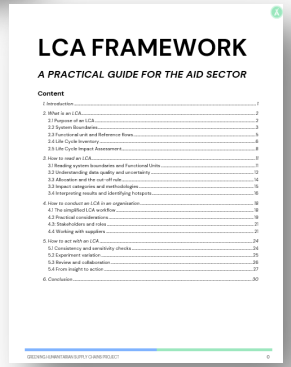
One Pagers
to dive into the categories

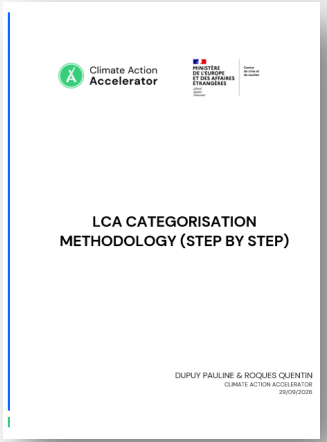


Short videos
to present the keys results



LCA Framework
to encourage aligned practices among the sector

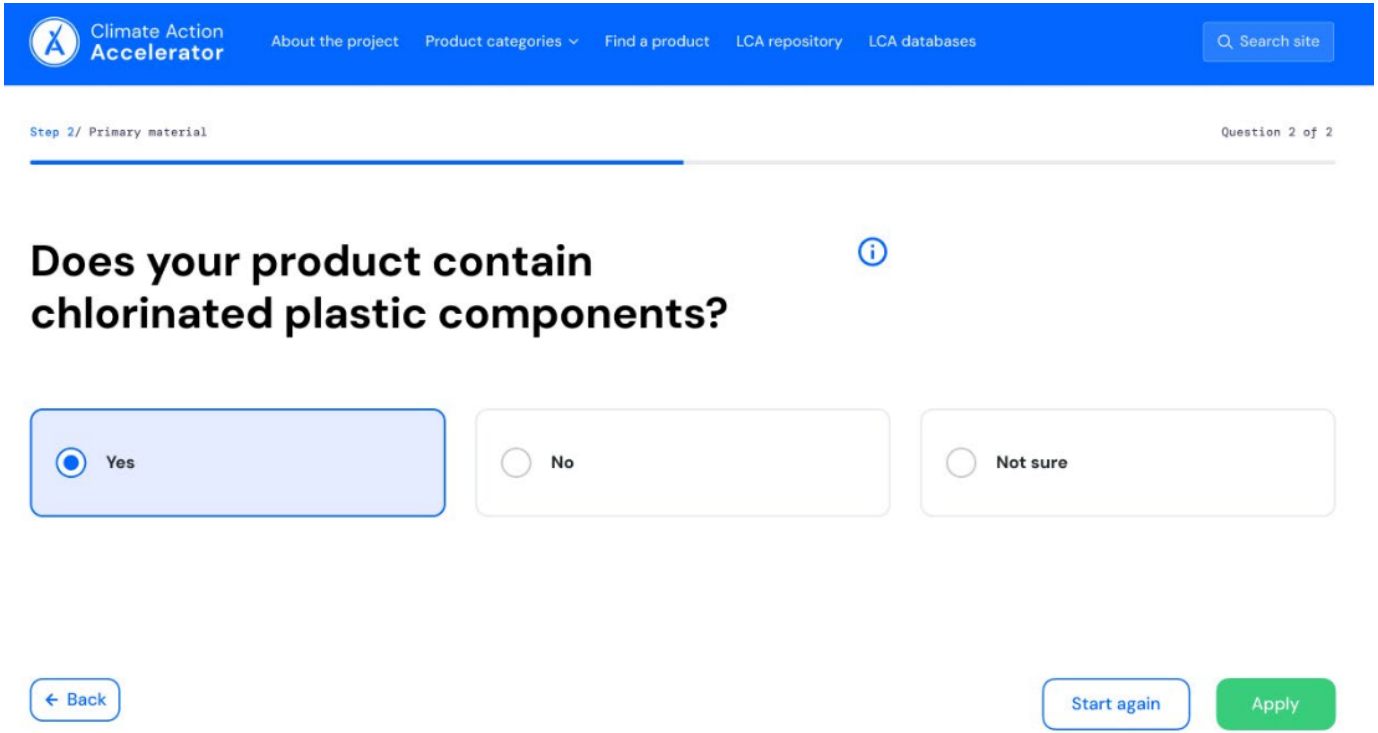


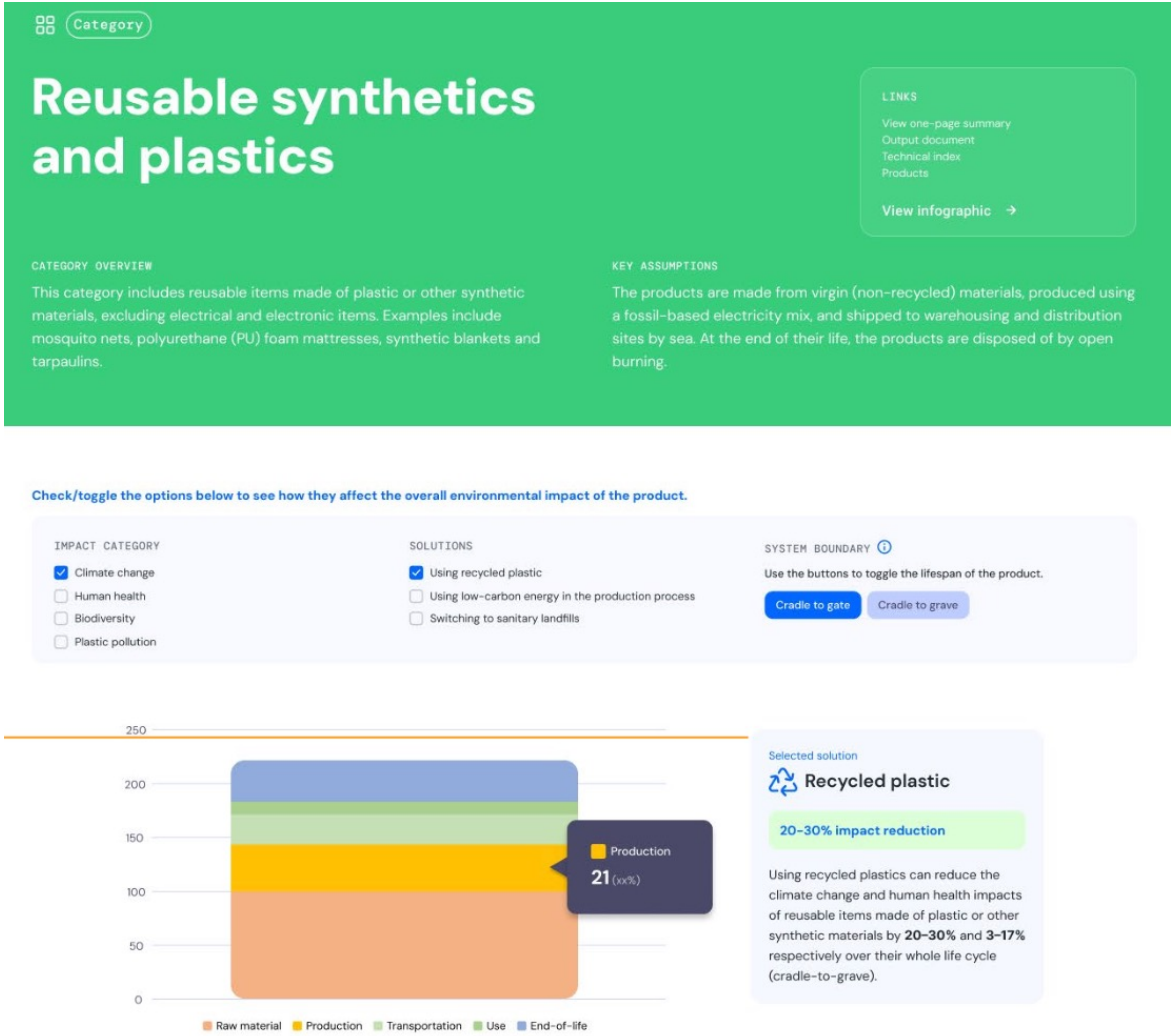


Project Methodology
to understand, replicate, challenge the results

The LCA Repository

Find your product's category




Category
Reusable synthetics and plastics
LINKS
View one-page summary
Output document
Technical index
Products
View infographic
CATEGORY OVERVIEW
This category includes reusable items made of plastic or other synthetic materials, excluding electrical and electronic items. Examples include mosquito nets, polyurethane (PU) foam mattresses, synthetic blankets and tarpaulins.
KEY ASSUMPTIONS
The products are made from virgin (non-recycled) materials, produced using a fossil-based electricity mix, and shipped to warehousing and distribution sites by sea. At the end of their life, the products are disposed of by open burning.
Check/toggle the options below to see how they affect the overall environmental impact of the product.
IMPACT CATEGORY
Climate change
Human health
Biodiversity
Plastic pollution
SOLUTIONS
Using recycled plastic
Using low-carbon energy in the production process
Switching to sanitary landfills
SYSTEM BOUNDARY
Use the buttons to toggle the lifespan of the product.
Cradle to gate
Cradle to grave
250
200
150
100
50
0
Production
21 (xx%)
Raw material
Production
Transportation
Use
End-of-life
Selected solution
Recycled plastic
20–30% impact reduction
Using recycled plastics can reduce the climate change and human health impacts of reusable items made of plastic or other synthetic materials by 20–30% and 3–17% respectively over their whole life cycle (cradle-to-grave).

Category key impact

Raw materials

Plastic is produced from fossil fuels, the extraction of which generates **greenhouse gas emissions** and is **harmful to human health**.

Production

Plastic production requires a **large amount of energy**, both to convert raw materials into polymers and to manufacture the end products.

End of life

The open burning or uncontrolled incineration of plastic releases **dioxins, heavy metals, black carbon and toxic fine particles**.

Assuming transport by sea, the transport of plastic has a negligible environmental impact due to its low weight.

The impact of these products during the use phase is generally negligible, as they do not require natural resources (water, oil, etc.) or energy during use.

Show less

Key solutions to reduce impact

Explore the solutions using the interactive graph above to see how they can reduce the environmental impacts of this product category.

1. Use recycled plastic
2. Use low-carbon energy in the production process
3. Switch to sanitary landfills

Other solutions

Doubling the lifespan of a reusable plastic product halves its impact on climate change and human health, as only one item needs to be purchased instead of two for the same use. Depending on the waste treatment options available locally, the waste can also be processed at municipal incineration sites or sent to Europe for sorting and recycling in appropriate facilities.

Sensitivity analysis

The results above are based on several key assumptions. If the product is transported by air freight, its total impact could increase by a factor of between 5 and 15. If the product is manufactured in a country with a lower-carbon energy mix, the impact of the production stage will be lower.

Methodological note

The results for each product category are based on a review of existing life cycle assessments of typical products in that category. They are intended to give an order of magnitude of the key impacts and to highlight the main levers for reducing climate change and human health impacts. They are not a substitute for a product-specific LCA.

LCA Framework for the aid sector

Core document to align the usages and the methods of LCA in the sector. Built through a consultation with the project's Advisory Group.

The document ***defines, helps, guides and recommends*** around 4 key questions:

- **What is an LCA?** Basic concepts, purpose, and language of Life Cycle Assessment.
- **How to read an LCA?** How to interpret system boundaries, functional units, data quality, and results.
- **When and How to conduct an LCA in an organisation ?** The simplified workflow, the roles and resources required, and how to manage a study internally, with your suppliers or with external support.
- **How to act with an LCA?** How to move from results to decisions, identify hotspots, and translate findings into concrete action.

The framework will continuously evolve through user testing and community feedback

Next steps

5 categories

All resources for the initial 5 analysed categories will be published by early November.

All remaining 10 categories

All resources for the remaining 15 categories will be published over the course of next year.

Q&A & Feedback

Please answer the survey and write down your questions in the Q&A section





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