

**A practical guide to help members make informed, evidence-based decisions on sustainable products, packaging, and operations.**

**MYTH - Products made from recycled materials are always more sustainable than those made from virgin materials**

**FACT** - The sustainability of a product should always be backed up by data-based evidence. In some applications, the utilization of recycled raw materials may provide the best sustainability results, but it should not be taken for granted. It may be that because recycling requires, for example, a lot of extra chemicals and energy, the life cycle assessment results will be worse than corresponding products made from virgin raw materials. Virgin materials can be more safe, efficient or durable depending on the application. It is always essential to have real data to prove any assumption.

**MYTH - Carbon offsetting is just as valuable as reducing emissions at source**

**FACT** - Different types of climate actions are needed. However, the mitigation hierarchy framework is crucial: in simplified terms, companies should start by doing everything they can to reduce their emissions. In parallel, they need to collaborate to reduce emissions in the value chain. Carbon offsetting can be used to compensate for unavoidable emissions. A product cannot be claimed to be carbon neutral if offsetting has been utilized. It is important to note that an organization's carbon reporting offsetting has to be reported transparently and separately from its emission reductions. Some third parties that report on carbon reduction will not permit carbon offsetting to be in a company's carbon reduction strategy unless they are for residual emissions, i.e. the small portion of emissions that remain after feasible abatement measures.

**MYTH - Biodegradable products automatically break down harmlessly in any environment**

**FACT** - Claims of biodegradability must clearly indicate the product, product component or packaging to which it is applicable. Most materials require specific industrial composting conditions to biodegrade. In landfills or in the natural environment, the required conditions may not be present, and they may fail to break down as intended. It is important to specify the conditions and the test methods and certification schemes that support the biodegradable claim.

For cleaning chemicals, the term 'biodegradable' can only apply to the surfactant and not the product itself. In this context it is defined in current legislation (Detergent Regulation (EC) No 648/2004 and corresponding UK post Brexit legislation). It requires that surfactants used in cleaning products must 'mineralise' i.e. breakdown to water and carbon dioxide within a defined period after release to a foul sewer.

Given this is a legal requirement for all surfactants in the EU and UK, it is meaningless for any given supplier to declare their product is 'biodegradable'; if it were not, it would be illegal.

**MYTH - Buying locally always has a lower carbon footprint than importing goods**

**FACT** - Establishing the carbon footprint of a product or service requires the calculation of the full life cycle emissions for the product or service, which involves calculating the Scopes 1, 2 and 3. Scope 1 are the direct emissions released directly from a company's controlled assets, for example the combustion of fuels for heating. Scope 2 relates to indirect emissions that occur from the generation of purchased energy and steam for own use. Scope 3 covers emissions occurring up and down the value chain. They are out of the company's control. It is possible for, for example, via optimized shipping utilizing low-carbon fuels to outperform carbon-intensive local manufacturing.

**MYTH - Carbon footprint is the only metric that matters for sustainability**

**FACT** - Calculation of the full life cycle carbon emissions, or full carbon footprint, of a product or service is an important sustainability measure. However, as a one-off stand-alone figure, the carbon footprint does not indicate whether a product or service is environmentally less harmful than alternatives. Setting targets to reduce the carbon footprint and tracking the progress over time provides more valuable information. It is crucial to note that carbon footprint results are based on the best available data (at that moment) and the calculation process also includes assumptions. Carbon footprints calculated by different actors are not always comparable. In addition to carbon footprint other measures exist and include water use, toxicity, biodiversity impact, resource depletion, and social responsibility.

**MYTH - If a product is certified "eco-friendly," it must be sustainable in all aspects**

**FACT** - This term, used in relation to the product, implies it is not environmentally harmful. However, the term is ill-defined. It may only refer to the product itself. It may not refer to the packaging, the production and distribution processes, or the method of application and use. To be meaningful, this term must be defined in relation to all aspects of the product in question and be substantiated with data across the full product lifecycle.

**MYTH - Reusable products are always more sustainable than single-use ones**

**FACT** - Investing in reusable options may require a higher initial investment in terms of cost and higher manufacturing impacts. The difference may be significant if single use items are well-designed and care has been taken to reduce whole life cycle emissions. The environmental performance of reusables depends on whether the number of reuse times is high enough to balance out any extra emissions in the production and washing phases, for example.

**MYTH - Increasing recycling is always more important than reducing overall material use**

**FACT** - It is crucial to reduce the overall use of raw materials and not to rely solely on recycling. This is because reduction prevents environmental impact at every stage of a product's life cycle, from resource extraction to waste management, while recycling still has environmental costs and limitations.

Recyclability is complex. It is defined as the ability to recycle a product, which varies by material and application based on factors such as the composition, presence of impurities, and economic viability of the waste collection and recovery processes at scale.

**MYTH - Switching to electric vehicles (EV) immediately makes transport carbon neutral**

**FACT** - An accurate assessment depends on calculating full life cycle emissions. EVs may reduce tailpipe emissions, but battery production and electricity generation also have environmental impacts. The waste stream at the end of the product's life cycle also needs to be considered.

**MYTH - Replacing conventional ingredients with natural alternatives is always better**

**FACT** - The implication of natural is that the product exists in or is produced by nature. It contains no synthetic or artificially made ingredients. The common assumption is it is safer for people and the environment and more sustainable. The evidence does not always support this. Substances synthesised by chemists are not systematically more toxic than those synthesised by nature. Naturally occurring ingredients may be harmful or abrasive. For example, one of the most toxic substances known is the Botulinum toxin, a natural chemical produced by Clostridium botulinum bacteria. It is otherwise known as Botox, showing it can be the quantity and method of use rather than the chemical itself that matters.

When considering plant-based products, it is important to pay attention to the ingredients and their origin. For example, palm oil may be included in cleaning products. All palm oil is not produced sustainably: palm oil cultivation has been a big driver of tropical deforestation.

**MYTH - All biobased plastics biodegrade in nature**

**FACT** - If a plastic is biobased, it means all or part of its raw materials originate from biobased sources. Some biobased plastics biodegrade but often industrial or home composting conditions are required. Some biobased plastics are not at all biodegradable. For example, biobased polyethylene, bio-PE, has the same chemical structure as fossil PE, and both are non-biodegradable. The difference is in the raw materials: the main raw material of bio-PE is typically sugarcane whereas the production of fossil PE is based on refining oil. Nature produces many organic polymers too such as cellulose and starch. All other organic polymer layers except chemically non-modified natural polymers are considered as plastics in the EU and UK legislation.