safe
Safe Food Advocacy Europe

THE ULTRA-PROCESSED FOOD CHALLENGE

From Scientific Evidence to Public Health

Policy Brief



1. WHAT ARE ULTRA-PROCESSED FOODS?

Ultra-processed foods (UPFs) are industrial formulations produced through multiple processing steps and typically composed of chemically modified substances extracted from foods, along with additives used to enhance taste, texture, appearance and durability, with minimal or no inclusion of whole foods.

Ultra-processed foods are typically characterised by high energy density, high levels of free sugars, salt and unhealthy fats, while providing low levels of fibre and micronutrients and reduced satiety. **These characteristics may contribute to excess energy intake, poorer nutritional quality and an increased risk of metabolic disease.**

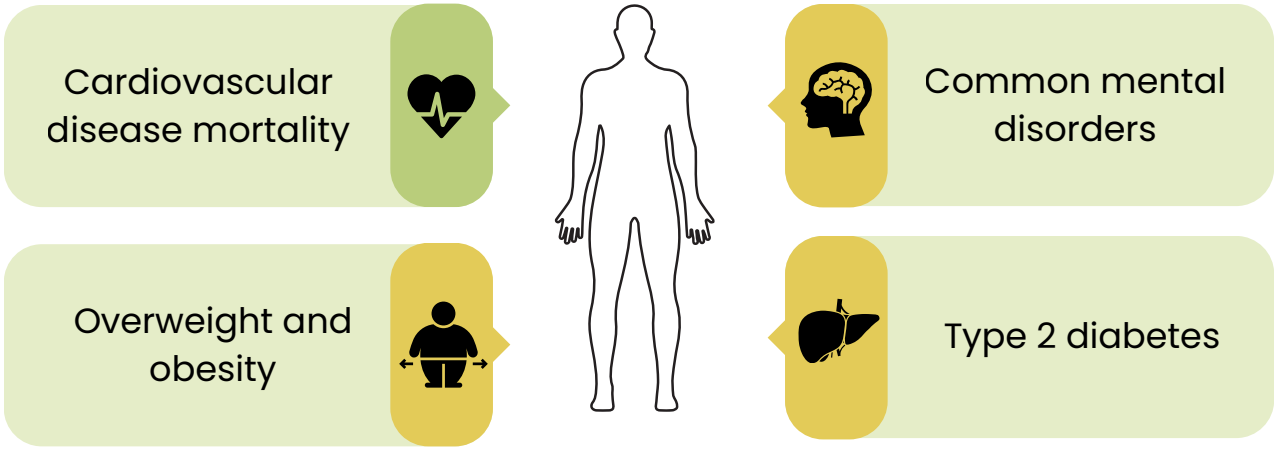
Industrial processing can remove or alter naturally occurring nutrients and bioactive compounds and can disrupt the physical structure, or matrix, of foods. This is why both nutritional composition and processing should be considered when assessing the potential health implications of foods.

Their increasing contribution to diets, together with growing evidence concerning their potential health effects, makes ultra-processing an important public health policy issue.

2. UPFs AND HEALTH

A substantial and growing body of research has examined associations between higher consumption of UPFs and an elevated risk of adverse health outcomes.

A 2024 umbrella review[1] covering more than 14 meta-analyses and 45 pooled analyses found that higher UPF exposure was associated with:



Several characteristics may contribute to these associations, including high energy density, lower fibre content, altered food structure, high palatability and the displacement of less processed foods from the diet.

Public health strategies aimed at reducing UPF consumption may therefore be essential for preventing food addiction and its associated health conditions.

Product reformulation may also be part of a broader strategy to reduce the presence of UPFs in the food market and improve the quality of the food supply. This approach should go beyond isolated changes to individual nutrients and encourage manufacturers to develop products with improved nutritional profiles and less intensive processing, where feasible.

Such measures should complement broader efforts to increase the availability and accessibility of unprocessed or minimally processed foods.

Taken together, these findings support consideration of UPFs as a relevant target within comprehensive public health strategies to reduce diet-related NCDs and improve food environments.

[1] **M M Lane et al (2024).** *Ultra-processed food exposure and adverse health outcomes: umbrella review of epidemiological meta-analyses.* BMJ 2024; 384 doi: https://doi.org/10.1136/bmj-2023-077310

3.UPFs AND ENVIRONMENTAL SUSTAINABILITY

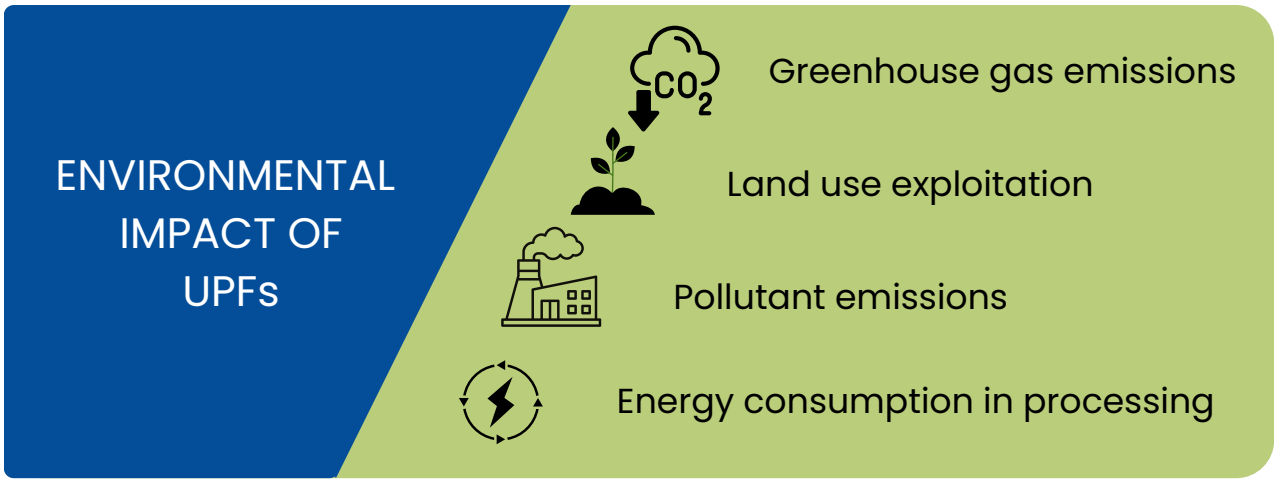
Food production and processing also affect greenhouse gas emissions, land use and other aspects of environmental sustainability.

Recent scientific literature quantifies a disproportionate environmental impact resulting from the production and consumption of UPFs. Measurements of ecological indicators confirm that an increased share of UPFs in global dietary patterns is directly correlated with greater exploitation of natural resources and elevated pollutant emissions.

Evidence[2] indicates that replacing UPFs with unprocessed or minimally processed foods can reduce environmental impacts.

The environmental footprint of UPFs is not uniform. Plant-based UPFs can have lower environmental impacts than animal-sourced UPFs while still having greater impacts than some minimally processed plant-based foods, particularly when considering the energy required for processing.

The objective should therefore not be to treat all UPFs as environmentally equivalent, but to promote dietary patterns that are both healthy and environmentally sustainable, with greater emphasis on diverse minimally processed foods.

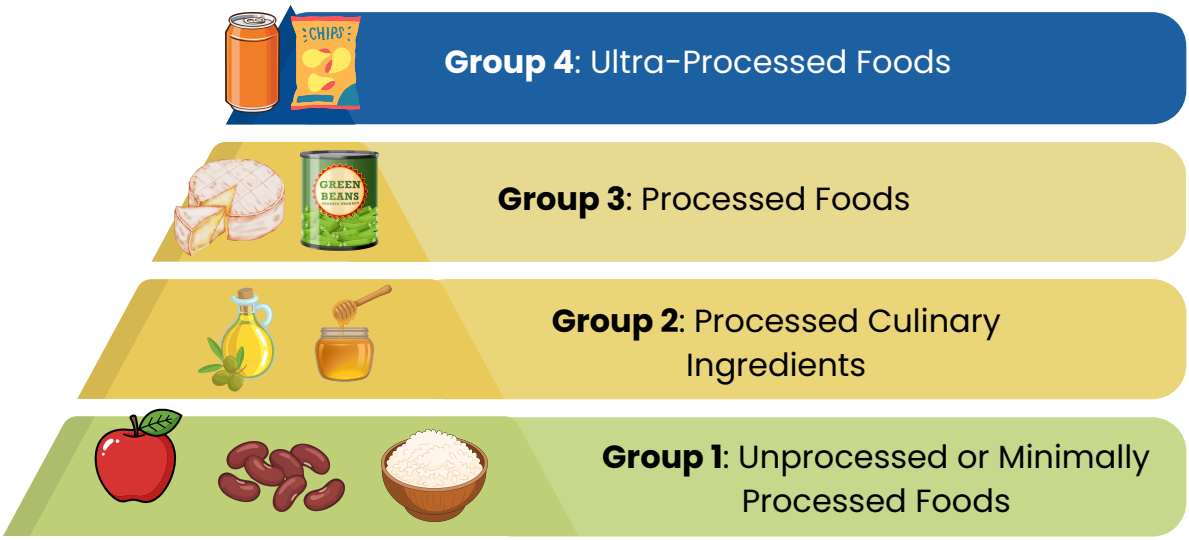


[2]**Jeroen Berden et al (2025).** *Quantifying the environmental and food biodiversity impacts of ultra processed foods: evidence from the European Prospective Investigation into Cancer and Nutrition (EPIC) study*. Public Health Nutr. 2025 Sep 11;28(1):e164. doi: 10.1017/S1368980025101067. Public Health Nutrition, Sep 2025.

4. WHY THE NOVA CLASSIFICATION MATTERS
Going beyond nutrient composition

European food policy already uses nutrient-based approaches to identify products high in sugar, salt, saturated fat or energy. These remain essential public health tools. However, nutrient profiling does not fully capture how a food has been produced and formulated. Two products can have similar nutritional profiles while differing substantially in their degree of processing, ingredients, additives and physical structure.

The **NOVA classification** addresses this additional dimension by classifying foods according to the extent and purpose of processing. Its value is therefore not that it replaces nutritional profiling, but that it **provides information that nutritional composition alone cannot capture.** The NOVA system groups foods according to the extent and purpose of processing into four categories:



The NOVA system is the most widely used classification method for UPFs within the scientific literature. **The SAFE position paper identifies more than 1,000 studies published over approximately 15 years using the NOVA framework.**

NOVA has been widely used in research and has been incorporated into several national dietary guidelines, including those of Brazil, Uruguay, Peru and Ecuador. NOVA has also been adopted or referenced by international organisations such as the WHO and FAO, further reflecting its practical applicability and relevance in policy and research contexts.

Its extensive application has contributed to a substantial evidence base examining relationships between food processing, dietary patterns and health.

5. POLICY RECOMMENDATIONS

To translate this evidence into effective public health governance, policymakers should implement a comprehensive regulatory framework built on five pillars:

1. Processing-Based Front-of-Pack Labelling

- The degree of food processing should be systematically and prominently displayed on product packaging, independently of conventional nutritional tables.
- The NOVA framework should be considered as a standard European metric for such disclosure.

2.Targeted Fiscal Measures and Producer Incentives

- To curb UPF exposure, particularly among socioeconomically vulnerable populations, fiscal policies modelled on the United Kingdom's *Soft Drinks Industry Levy* (SDIL) could be expanded across relevant UPF categories.
- This fiscal mechanism would not directly financially penalise low-income households; instead, it would place the financial incentive on manufacturers, encouraging changes to manufacturing practices and ingredient formulations to avoid the tax.

3. Strict Criteria for Structural Product Reformulation

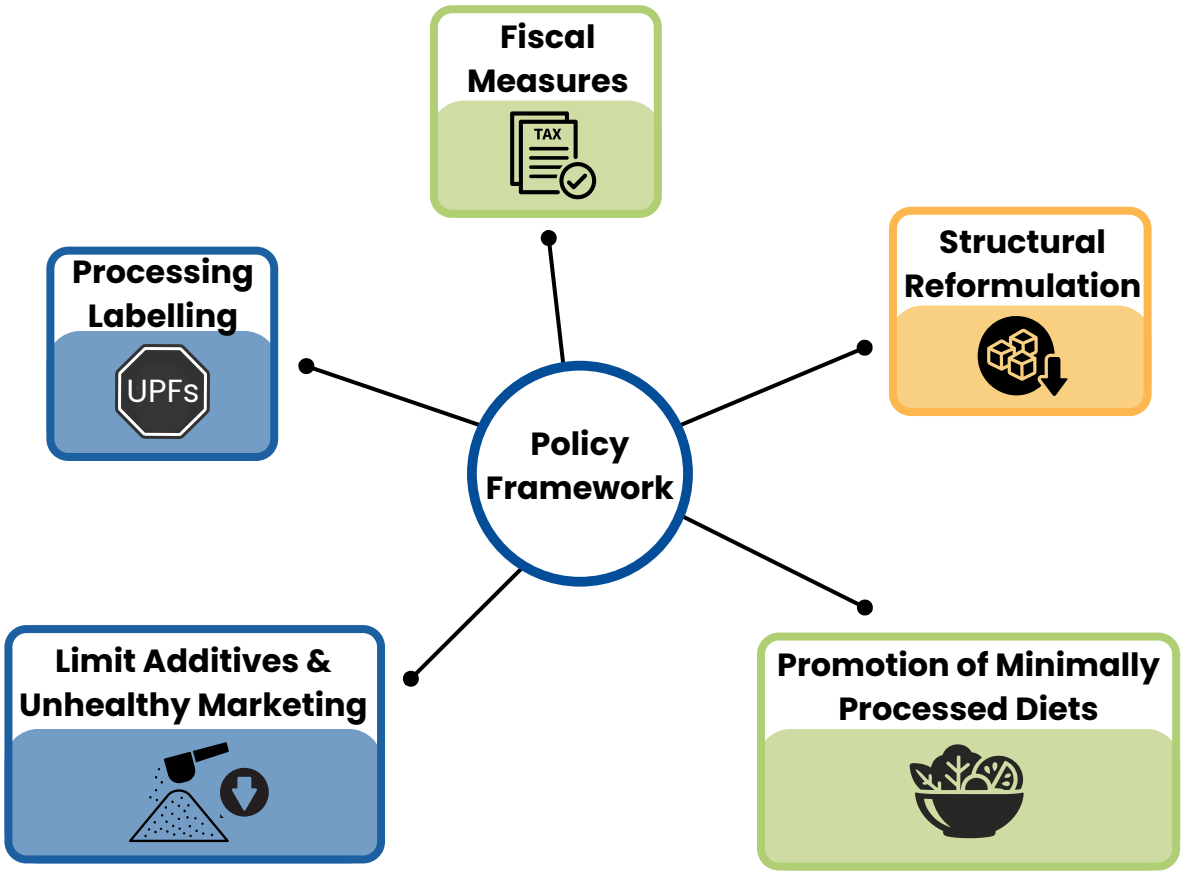
- Product reformulation can be an effective industry strategy to improve the quality of the food supply and reduce the presence of UPFs on the market, provided that it delivers meaningful improvements rather than superficial changes to individual ingredients.
- Manufacturers should move beyond isolated reductions in sugars, salt or saturated fats and adopt reformulation strategies that address the underlying manufacturing processes, reduce reliance on intensive processing and increase the availability of healthier, less processed alternatives.
- These efforts should be guided by clear, measurable criteria. The addition of isolated fibres or synthetic micronutrients to a highly degraded food matrix should not, in itself, be considered sufficient evidence of meaningful reformulation. Instead, reformulation should prioritise preserving or restoring the natural food matrix and improving the overall quality of the product.

4. Limiting Additives and Addressing Unhealthy Marketing Practices

- Restrict or ban additives designed solely to induce compulsive eating behaviours. Furthermore, digital and social media marketing of UPFs, which may foster patterns of excessive consumption, should be subject to appropriate regulation at the European level.

5. Promotion of Evidence-Based, Minimal-Processing Dietary Patterns

- Public communication campaigns and institutional procurement policies should be aligned with WHO and FAO guidance, explicitly educating the public to prioritise minimally processed foods and substantially reduce the intake of NOVA 4 products.



Rue Vilain XIIII, 17,
1050 Brussels, BELGIUM
B.C.E.: 0578.909.064
+32(0) 28983838
info@safefoodadvocacy.eu
www.safefoodadvocacy.eu

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