

Researcher: Ultra-processed foods are not only unhealthy, their production damages the environment

September 25 2023, by Laila Benkrima



Our grocery stores are increasingly filled with ultra-processed foods, which have little to no nutritional value and a huge environmental impact. Credit: Nathalia Rosa

Ultra-processed foods (UPF) have become [increasingly popular](#) and range from [chips to microwave meals and even bread](#). Even just a casual glance at supermarket shelves reveals a plethora of UPF offerings in all their elaborate and enticing packaging.

Besides their affordability, UPF not only offer time-saving convenience but also momentary satisfaction drenched in saturated fat, sugar, salt and additives. After all, who can resist enjoying a tasty snack when indulging in a football game or an electrifying new TV series?

Although much is discussed about the direct negative impact of these products on our health, including [obesity](#), [cardiovascular diseases](#) and [diabetes](#), little has been said about the impacts of UPF on the environment.

What are ultra-processed foods?

UPF can be defined as "formulations of ingredients, mostly of exclusive industrial use, that result from a series of industrial processes" and [contain little or no whole foods](#).

They are made using [industrial processing methods](#) that may include molding, chemical modification and hydrogenation (which can turn liquid unsaturated fat into a more solid form).

The consumption of ultra-processed foods is not new. In Europe, processed products on an industrial scale have been widely consumed [since the late 18th and 19th centuries](#). A [2020 Canadian study](#) shows that the percentage of total purchased calories attributed to UPF in Canada increased from 24 percent in 1938 to 55 percent in 2001 and, in 2013, Canadians purchased an astonishing average of 230 kg of UPF per person.

Even more alarmingly, 99 percent of Canadian adults consume UPF at least once a week. In comparison, [57 percent of people in the United Kingdom](#) consume some kind of UPF on a weekly basis.

[The consumption of UPF in Canada](#) is largely associated with men,

youth, those struggling with low income and those with obesity.

Unfortunately, UPF tend to be more affordable than fresh, whole foods. They have a longer shelf life, require no preparation and can be enticing due to [high sugar content](#) that trigger [feel-good dopamine responses](#).

However, consuming UPF comes at a high cost not just to our health but to our environment as well.

Cutting costs, raising emissions

UPFs rely on energy-intensive manufacturing processes and long supply chains, leading to [substantial greenhouse gas emissions](#).

The most substantial environmental impacts of UPF-rich diets predominantly stem from the post-farm stages, specifically [the final product creation and packaging processes](#).

One specific additive [that has the most environmental impact is palm oil](#). Palm oil is responsible for [deforestation](#) of some of the world's most biodiverse forests. It is the world's most consumed vegetable oil that can be found in half of our [food](#).

Another villain is [high-fructose corn syrup](#), which not only [leaves a long carbon footprint](#) but is also linked to obesity, [high blood pressure and Type 2 diabetes](#).

The massive waste generated by over-packaged UPF is another factor to consider. Their plastic packaging doesn't degrade in landfills or in nature, and has a dramatic impact on soil health and marine life.

One recent study published in [Nature Sustainability](#) demonstrates that UPF processing and packaging stages have the greatest environmental

impacts of the whole system, and are a major source of environmental waste worldwide.

The path to sustainability

There is no simple answer to the problem, but there are alternatives that can help reduce the pressure on the natural resources available on the planet. Embracing [sustainable agricultural practices that prioritize regenerative farming](#), waste reduction and local sourcing of ingredients can effectively lower the carbon impact of UPF.

In addition, companies should adopt water-efficient technologies and support initiatives that restore natural habitats, as these are essential steps towards water conservation and biodiversity preservation. Public and health agencies need to put pressure on governments to adopt new policies and implement measures that will protect [public health](#) and the environment.

Advancements in agricultural technology could play a pivotal role in mitigating the environmental impact of food additives. Precision farming techniques, data-driven decision-making, and [AI-driven supply chain optimizations can enhance resource efficiency and reduce waste](#).

Small and medium-sized agri-food enterprises and small family farms often prioritize sustainable and locally-sourced ingredients, contributing to a more sustainable food system and [enhancing biodiversity](#). Supporting [local businesses](#) not only encourages a healthier food ecosystem but also bolsters community resilience and regional economic development.

Indigenous communities as well possess a profound knowledge of [sustainable agroforestry practices](#), and collaborating with these communities can provide essential teachings into more sustainable food

production and responsible land and water management.

The [environmental impact of ultra-processed foods](#) cannot be ignored any longer. As we become more and more conscious about what we buy and how it is produced, we hold the responsibility to advocate for change.

High rates of UPF consumption indicates an essential failure of our food system to provide universal access to affordable, wholesome food. Whether such a goal is even possible may be up for debate, but what cannot be denied is that our current industry-driven proliferation of UPF is inflicting harm on both our planet and our health.

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