



A volunteer uses tongs to pick up trash at Baseco Beach during an event marking the International Coastal Cleanup Day in Manila on September 16, 2023.

TODAY 6:00 · 🕒 12 MIN

Big polluter but 'plastic neutral': how does PepsiCo's green pledge add up?



MIRA SYS



TIES GIJZEL

PepsiCo, which produces famous snacks including Cheetos, Doritos and Lay's, is one of the world's biggest corporate plastic polluters. Yet the conglomerate calls itself "plastic neutral" in some countries such as the Philippines, where its crisp packets litter the beaches and pollute the ocean. Can the booming plastic credits market tackle pollution or is it part of the problem?

THIS ARTICLE IN 1 MINUTE

- ➔ **Companies such as Coca-Cola, Nestlé and PepsiCo have bought plastic credits to offset some of the plastic they produce.**
- ➔ **Through this financial mechanism, offsets are traded and used to show that an equal quantity of plastic has been recycled or removed from the environment.**
- ➔ **However, many NGOs and environmental campaigners are critical of plastic credits and claims of “plastic neutrality”.**
- ➔ **Credits are often cheaper than recycling, one plastic is offset with another, and the plastic credit projects are often harmful for the environment.**

Strolling along litter-strewn shores in the Philippines – where many beaches have become de facto rubbish dumps – discarded Lay’s crisp packets catch the eye. The distinctive red, white and yellow logo has withstood the test of time better than the surrounding trash.

What’s even more striking is a claim by Lay’s parent company, PepsiCo, that it has been “100 per cent plastic neutral” with its food packaging in the Philippines since 2021. The company says that for every packet of crisps bought, an equal amount of plastic waste is removed from the environment, a claim that it has enlisted influences and celebrities to endorse on Instagram.

But PepsiCo is one of the biggest corporate plastic polluters globally, according to a 2023 report by Break Free From Plastic, a coalition of environmental groups tackling plastic pollution.

As part of its research, volunteers collected and analysed more than 537,000 pieces of plastic waste in 41 countries. At least 34,780 pieces were linked to PepsiCo, more than any other multinational and outnumbering The Coca-Cola Company for the first time since the

project began in 2018. Of PepsiCo's plastic waste, Lay's was found to be the most prevalent.

These findings – coupled with different studies showing that the Philippines is among the world's worst offenders for plastic pollution – call into question how a conglomerate such as PepsiCo can call itself “plastic neutral” while producing mountains of plastic waste, not just in the Southeast Asian nation but worldwide. Follow the Money investigated how companies do this through the growing market in so-called “plastic credits”, which has come under scrutiny.

Environmental and health concerns

Each year, an estimated 19 million tonnes of plastic waste are leaked into the environment, of which two-thirds ends up on land with the rest littering rivers and coastlines. Ultimately, 1.7 million tonnes are transported to the world's oceans, according to Our World in Data.

That plastic waste also eventually breaks down into tiny particles (microplastics and nanoplastics) in the environment, in our drinking water and in our food chain.

In our bodies, microplastics have been linked to an increased risk of heart attack, stroke and death, while a recent study detected their presence in pensies for the first time – raising concerns about their impact on erectile dysfunction.

PepsiCo says that it “shares the concern” that plastic and other waste are piling up in water sources and on land, and has set itself some sustainability goals. It wants to produce less plastic by 2025, and for more of its plastic to be recycled, without specifying how much.

Since PepsiCo does not do that recycling itself, it invests in others' projects by voluntarily buying “plastic credits”. In a model similar to carbon offsetting, plastic credits are a trading mechanism that allows corporations to technically cancel out the plastic they produce. In general, one tonne of collected or recycled waste is worth one plastic

credit. These are broken down into Waste Collection Credits (WCCs) and Waste Recycling Credits (WRCs).

A SPIN-OFF FROM CO₂ CREDITS

The voluntary carbon market is used by companies to offset their CO₂ emissions voluntarily. It differs from the mandatory emissions trading market in Europe, which is a lot bigger, and where big polluters get an ever-shrinking number of emission rights to trade every year.

Market players are coming up with creative solutions to protect animals and the climate, such as 'koala credits' or credits that could encourage investment in breastfeeding as a way to offset CO₂ emissions. Regarding the latter, investors reason that breastfeeding reduces the need for the production and use of infant formula, ultimately lowering CO₂ emissions.

Emerging market

Waste recycling or collection projects selling plastic credits are generally located in countries where waste management systems are deficient, such as the Philippines or Indonesia. Often, these are also the countries where western waste ends up. In 2023, EU plastic waste exports to Asia increased by 45 per cent from 2022 – totalling 750 million kilograms, according to data compiled by the Basel Action Network, an environmental NGO.

Plastic credit projects in Southeast Asia range from waste collectors who fish plastic out of the ocean and also collect it onland in Thailand to a company in the Philippines which turns PET bottles and other plastic into outdoor furniture, such as a garden table with benches made from plastic planks.



In this photo taken on December 27, 2023 a man sprays deodorizer onto trash collected at a waste recovery facility in Paranaque, Metro Manila.

© ANP

There is no universal oversight or regulation for which projects can and cannot sell plastic credits. Each trading platform or certification scheme has its own standards.

The concept behind plastic credits is the same everywhere, though: polluters such as PepsiCo voluntarily buy them from a project owner to offset their plastic waste somewhere else in the world. They buy these credits (either directly or through a trading platform) because their customers, investors and governments are increasingly holding them accountable for their negative impact on the climate and nature.

Buying these credits also has marketing advantages: for instance, companies can claim to be responsible, or plastic neutral. In this sense, the idea is very similar to trading carbon credits (see box).

ALSO IN THE NETHERLANDS

In the Netherlands, one project received a stamp of approval from the influential certifier Verra to start selling plastic credits at the end of May 2024. It is located near the southeastern municipality of Weert and operated by Braskem, a large petrochemical company specialising in plastic production. Since 2017, difficult-to-recycle plastics have been converted into *pallets, heavy-duty mats* and *road plates* at the Weert site.

The additional revenue from the plastic credits is "essential" for investing in new technologies and creating more capacity for recycling, Braskem's spokesperson told FTM.

Axel Michaelowa, head of the international climate policy group at the University of Zurich and founder of carbon market consultancy Perspectives, is not in favour of issuing plastic credits for such projects, which were underway long before applying for any plastic credits. Michaelowa specialises in the concept of 'additionality' – the idea that projects should be mobilised by credits – in the carbon credits market. When companies want to register their projects for plastic credits, certification schemes generally require them to prove additionality.

'This means that the revenue from the credits must be included in the financial plans in advance,' Michaelowa explained. 'Otherwise, the project can exist even without credits.'

It is very unlikely that Braskem's Dutch project already had the anticipated revenue from plastic credits in its financial plans before it went operational in 2017, Michaelowa said. 'In 2017, there was no market for plastic credits yet,' he told FTM.

So the project cannot claim additionality, which some certification schemes require at registration. Michaelowa said he sees this claim more often in the plastic credits market for projects that were already running before applying for credits.

A spokesperson for Braskem told FTM that while it is true that Verra was not issuing plastic credits in 2017, the situation around recycling was the same then as it is now, which is why the company believes it is still permitted to apply for credits at present. The owners expect projects in the future to "follow the same standards as the carbon credits market", and credits will then only be applied for at the beginning of a project, the spokesperson said.

The plastic credits market is still very much in its infancy, but the subject of growing interest and investment. The World Bank this year issued a 100-million-dollar plastic credits bond to support plastic collection and recycling projects in Indonesia and Ghana, the Asian Development Bank has said it is looking at how to scale up plastic credits schemes, and two NGOs specialising in plastics calculated that all such projects covered by a well-known certification programme will be worth almost five billion dollars by 2030.

Countries including India and the Philippines already encourage the procurement of plastic credits through legislation, and other nations such as Thailand are considering following suit. The plastic credits industry is also advocating for the credits to be included in the text of the United Nations plastics treaty, which is currently under negotiation and set to be finalised by the end of the year. The goal is to establish a global agreement to curb plastic pollution.

But as with carbon credits, environmental experts have warned of the significant risks of greenwashing in the plastic credits market.



Environment campaigners hold a banner during collecting of plastics at Freedom island coastline in Paranaque city, 14 September 2017.

© ANP

Burning car tyres instead of crisp packets?

PepsiCo buys its plastic credits on trading platform PCX Markets, a Singapore-based trading hub that links buyers to sellers. PCX positions itself in the media and on its website as a green company. It has also secured partnerships with corporations such as L'Oréal and Microsoft.

In March 2023, PepsiCo bought nearly 370 plastic credits through PCX from one of the largest cement plants in the Philippines, Republic Cement, which uses household waste as fuel.

However, an FTM analysis of PCX's registry found that most of those credits were issued for old car tyres burned in cement kilns, rather than for the burning of packaging waste from PepsiCo's Lay's, Doritos and Cheetos, for example.

It is much easier for waste collectors to collect a tonne of plastic waste by collecting car tyres than it is to pick up a tonne of crisp bags, according to industry insiders and associations.

PepsiCo did not respond to multiple requests for comment.

A plastic credit does not specify what kind of plastic is being collected or recycled – meaning that a company can congratulate itself for producing hard-to-recycle plastics while buying credits for plastic waste that is easier to pick up or recycle.

This is why The Ocean Cleanup, a Netherlands-based NGO founded by Dutch inventor Boyan Slat, has chosen not to work with plastic credits.

“While we are positive about ways companies can undo the damage their products cause, we believe plastic credits in their current form are problematic because they treat every kilogram of plastic equally,” a spokesperson for the NGO told Follow the Money. “Whereas it makes a huge difference whether the plastic is collected in a landfill, on the street, in a river or in the ocean, in terms of the impact of disposing of that plastic.”

“People pay with their health”

The waste processing method behind all of the plastic credits bought by PepsiCo – burning garbage in cement kilns – has also raised concerns about the impact on nature.

The method is called 'co-processing', and it generates plastic credits for cement plants because, proponents of the scheme say, it prevents plastic waste from ending up in water sources or in a landfill.

“We believe plastic credits in their current form are problematic because they treat every kilogram of plastic equally”

Although these plastics also won the Goldman Environmental Prize in 2009 for her commitment to protecting the environment, proponents say burning plastic is better for the environment, the practice is still

damaging. Firstly, burning plastic emits carbon (research has found that 2.9 kilograms of CO₂ is released for every kilogram of plastic burned). Furthermore, it is often overlooked that plastic is processed with various kinds of harmful chemicals, according to Indonesian environmental engineer Yuyun Ismawati.

When old car tyres are burnt in cement kilns, toxic substances are released, combined with substances from all types of processed plastic, she explained.

“We still know far too little about how these chemicals react with each other and what damage they cause,” said Ismawati, who studied Environmental Change and Management at Oxford University and specialised in chemicals and waste.

In theory, the emissions of these substances can be measured, but in the countries where plastic credit projects are located, oversight is lacking, according to Ismawati's experience.

“There is too little capacity in the laboratories to measure properly,” she said.

In the Philippines, cement kilns largely self-report their emissions to the government.

“The plastic credit claimed for co-processing goes to the companies setting up the projects, who can choose what to do with it,” Ismawati said. “And the people pay with their health.”

Yet on PCX, the platform where PepsiCo buys its credits, almost half of the projects use the co-processing method, a FTM analysis of its registry found. In fact, according to PCX's latest impact report, nearly 70 per cent of waste was processed in this way by 2023.

PCX and PepsiCo did not respond to questions on the issue.

Virtually impossible to recycle

PepsiCo's crisp bags and other food packaging are virtually impossible to recycle, experts say, because they consist of several layers of plastic, usually with another layer of aluminium in between. This means that these crisps packets usually end up in landfills or cement kilns. In fact, this kind of packaging is the most concerning form of plastic pollution in the Philippines.

In the Philippines, large companies have been legally obliged since 2022 to take responsibility for an increasing proportion of their own plastic waste every year.

But Miko Aliño, project coordinator for corporate accountability at Break Free From Plastic, is concerned about how this is done. He said corporations can simply use plastic credits rather than changing their production processes to lower their environmental impacts.

“Plastic credits are a sham,” said Aliño, who is based in the Philippines. “Companies that produce plastic can simply evade responsibility by buying credits, without significantly reducing their plastic footprint or investing in reusable alternatives.”

For example, The Coca-Cola Company, which in 2022 said it was sceptical of plastic credits, is also now buying them in the Philippines. The company did not respond to FTM's questions on the issue.



Angeles City, Philippines: Aerial view of the Hadrians Extension slum and the trash strewn creek that the poorest use as a source of water.

© ANP

Co-processing credits in the Philippines usually cost between 100 and 120 dollars. "It is disturbingly cheap to continue on the old footing," Aliño added.

The [Ellen MacArthur Foundation](#), a UK-based charitable foundation focused on the circular economy, has advised governments to ensure that companies are being rightfully charged for the amount of plastic they produce.

The NGO estimates that charging around 1,100 euros per tonne of flexible plastic packaging produced is necessary in Europe, and says that European nations charge far too little today. For plastics with multiple layers that are harder to recycle, such as crisp bags, the fee should be even higher, in order to "incentivise packaging design changes", the foundation said.

Oversimplification

In addition to PepsiCo Philippines, Nestlé (e.g. in the [Philippines](#), [Costa Rica](#) and [India](#)) has also claimed to be plastic-neutral since 2020. A Nestlé spokesperson told Follow the Money that the company "does not believe in or use plastic credits" and that it instead "engages in direct partnerships for collection of plastic materials from the environment and ensures its end of life is managed".

However, Nestlé Philippines did buy co-processing plastic credits in 2020 from the cement company CEMEX via PCX, according to [the registry](#). And in a [2021 article](#) on its website, Nestlé Philippines said it was committed to maintaining plastic neutrality with the help of partners including PCX and CEMEX Holdings Philippines.



A Filipino young scavenger collects recyclable materials amongst trash along a coastline in Bacoor, south of Manila, Philippines, 19 September 2019.

© ANP

Going one step further, the Netherlands-based deodorant brand Nuud has even claimed to be plastic-negative: it said it would use credits to remove twice as much plastic from the environment than it uses in its production process.

In response to questions about the nature of the credits and their requirements, Nuud referred FTM to the platform where it buys the credits.

In a position paper published in 2021, the World Wildlife Fund wrote that claims like these around plastic neutrality “do not clearly reflect the real impact on the environment”.

Plastics cannot be produced and recovered in a manner that is truly neutral. Some is always left behind in the form of microplastics that leak into and ultimately damage the environment.

In addition, 75 per cent of plastic emissions are linked to its production, and are therefore released into the air before a product is even finished.

A company may describe products in which plastic is used as plastic neutral, but such claims are not independently monitored or scrutinised.

Even within the plastic credits industry, there are doubts about the term. The certifier Verra – which is one of the most vocal advocates for plastic credits – told FTM that it does not support claims around plastic neutrality.

“These claims oversimplify the management of plastics and do not properly reflect the environmental benefit of plastic credits,” said a Verra spokesperson.

Yet some sustainability experts question whether plastic credits have any benefits at all.

Frederic Hache, lecturer in sustainable finance and former member of the industry that designs these types of products, said that the industry is nothing more than “a PR exercise”.

“Buying these credits is worse than doing nothing because the credits are diverting the conversation towards waste management and away from the need for plastic legislation,” he said. “We need to curb plastic use, and these schemes, like carbon offsetting and plastic offsetting, delay meaningful action.”

When asked by FTM if he thinks the plastic credits market deserves time to prove its worth, Hache said: “We tried this multiple times already, it’s the same old playbook, the same framing. It doesn’t work. It’s criminal to do that in 2024, while emissions from plastics are expected to more than double.”



Author: **Mira Sys**

Investigative journalist. Specializes in soil, pollution and environmental law.



Author: **Ties Gijzel**

Investigates sustainable finance flows and environmental commodities, often as part of cross-border investigations.