

**#Break
Free
From
Plastic**



Smoke and Mirrors

**The Realities of Plastic Credits
and Offsetting**



Table of Contents

• Summary	2
• Introduction	4
◦ Verra	6
◦ PCX	7
• Blowing smoke - analysing the project data	
◦ Verra project analysis	8
◦ PCX analysis	10
• Areas of concern	
◦ Additionality	12
◦ Fuel to the Fire: Lessons from the Voluntary Carbon Market	13
◦ Plastic credits encourage the burning of plastic	16
◦ Murky finance	21
◦ Poor checks and balances	22
◦ Corporate greenwashing	24
• Learning from past mistakes	26
• Conclusion	29

Erratum: the original version of this report stated that only one project has issued plastic credits. In fact, three projects have been issued plastic credits, but only one has retired (sold) them. The report was updated to reflect this on 30th November 2023.

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Summary

Building on research published by SourceMaterial and Bloomberg with original research by Break Free From Plastic (BFFP) and the Global Alliance for Incinerator Alternatives (GAIA), this report uncovers serious flaws in plastic offsets, credits and plastic neutrality. The listed projects on two of the main proponents of plastic offsetting — Verra and Plastic Credit Exchange (PCX) — were analysed to provide a snapshot of the current realities of plastic offsetting, beyond the promises and marketing.

The research shows:

- Plastic credits are not only generated from recycling; in fact, only 14% of PCX's credit-generating projects are recycling, despite recycling being the most prominent way credits are marketed.
- Plastic credits are encouraging the burning of plastic — a practice that releases harmful toxic chemicals and greenhouse gases, with no environmental benefits. 86% of projects on the PCX database generate credits from burning, and 22% of projects on the Verra database will. PCX charges less for projects that send plastic waste to cement kilns than for projects that recycle.
- Verra — who is lobbying for plastic credits to be a key financing mechanism in a global plastics treaty — only has one project that has actually sold credits. Out of the 41 projects on the Verra database, 11 have been registered which requires third-party auditing, and three have been approved and issued with credits.
- There are serious doubts about additionality — a key concept in offsetting. 'Additionality' is the requirement that the credits are paying for an activity that would not have happened without the credits' financial support.
- The analysis shows that eight projects, applying for a total of 1.1 million credits, have been in operation for seven years or more. So if these are approved by Verra, the projects will be credited for the period they have already been operating.

- The majority of Verra projects (83%) have been in operation for more than a year, while 42% of projects will have been in operation for five years or more. This is despite Verra's claims that finance from the sale of plastic credits can enable the development of such waste management infrastructure 'that is otherwise not viable without the revenue from the crediting mechanism'.
- By 2030, Verra's existing projects could generate as many as 9 million credits (9,323,459), assuming all projects are approved and some projects are renewed. If each credit is sold for \$500 per tonne, this would amount to a total revenue of \$4.67 bn by 2030.

As the world's governments come together to negotiate a new international treaty to tackle plastic pollution across its lifecycle, it is vital that the reality of plastic offsetting is understood. A concept shrouded in smoke and mirrors should not be incentivised in a treaty designed to reduce plastic pollution.



Introduction

Plastic credits, plastic offsetting, and plastic neutrality are relative newcomers to the plastic-pollution-solution scene. Schemes offering to offset personal or corporate plastic use have proliferated and are gaining traction in some national and international policy spaces. This report aims to investigate the current state of play of plastic crediting projects organised by two of the main players — Verra and Plastic Credit Exchange (PCX). The analysis of the PCX database was conducted in a [joint investigation](#) by SourceMaterial and Bloomberg, and the Verra analysis was conducted by an independent researcher working for Break Free From Plastic (BFFP). These two organisations were selected because they are the most transparent about their projects, and they are actively advocating for plastic credits to play a key role in financing a future plastics treaty. Relatively little is known about how plastic credit projects are functioning, and misconceptions are rife amongst policymakers, businesses and the general public. It is imperative that stakeholders in the plastic pollution sphere understand exactly what plastic offsetting means in practice before considering whether to incentivise and support it in a future global treaty.

So what is plastic offsetting? At its most basic - one tonne of plastic is collected somewhere in the world, and used to generate a credit. A company or individual then purchases that credit to offset one tonne of their plastic use. This exchange is facilitated by accreditors like Verra, marketplaces like PCX, or private companies that trade in credits or organise credit-generating activities. Plastic neutrality or 'net-zero plastic' is claimed when a company has purchased enough plastic credits to offset its entire plastic footprint for a set period of time.

The promise is that purchasing credits is financing an activity that would not have taken place otherwise - thus you as the credit buyer are causing an amount of plastic to be removed from the environment.

Plastic credits are marketed with a heavy emotional component - that the individual or company is 'preventing ocean plastic', 'uplifting informal waste pickers', 'solving plastic pollution', with the promise that they can become plastic neutral if enough credits are purchased. The reality is more complex and this report aims to provide a more nuanced understanding of how plastic credits are false solutions to the plastic pollution crisis.



At present, plastic credits are unregulated and there is no standardisation across credit providers and marketplaces. The [Circulate Initiative](#) tracked 32 offsetting-type projects in 2020, and this number is likely to have increased.

Verra

Verra is a non-profit organisation, setting standards for climate action and sustainable development. It manages the largest voluntary carbon market programme, the Verified Carbon Standard Programme, and recently faced significant controversies around the management of a number of its carbon credits projects. Verra developed the Plastic Waste Reduction Standard through the 3R Initiative - a partnership between Verra, BVRio, Danone, Nestlé, Tetra Pak, Veolia, and several organisations involved in carbon offsetting. Verra does not develop credit-generating projects, set the price or organise the sale of credits. It owns the standard and verifies projects according to this standard. The projects must pay a fee to Verra for each of the steps in the verification process.

Verra offers two types of credits: the Waste Recycling Credit (WRC) and the Waste Collection Credit (WCC). The WRC is 'based on the volume [sic] of plastic waste recycled above what would have happened in the absence of the Plastic Program project,' according to Verra. 'WCCs are based on the volume of plastic waste collected and appropriately managed above what would have happened in the absence of the Plastic Program project'. Under Verra's rules, incineration with energy recovery and co-processing in cement kilns is considered to be appropriate waste management. Verra's description of credits is misleading - credits are actually based on the mass of plastic collected, not volume.



Plastic Credit Exchange (PCX)

Plastic Credit Exchange or PCX Markets is 'on a mission to accelerate the transition to a circular economy and build a future where no plastic waste ends up in nature', according to its [website](#). PCX provides a plastic footprint calculator and 'PCX Markets provides opportunities to invest in both small and large projects aggregating and recycling through its infrastructure fund'. PCX was established in 2019 in the Philippines - a country which faces severe challenges from plastic pollution. PCX has a Plastic Pollution Reduction Standard which credit-generating projects can be accredited by, but also offers credits for sale from projects that have been accredited by Verra. It offers a Net Zero Plastic Waste certification which brands may add to plastic packaging once they have purchased enough plastic credits to cover their self-reported plastic footprint. PCX appears to develop some of its own credit-generating projects, although public information about specific projects is limited.



Blowing smoke - analysing the project data

Verra project analysis

Verra currently has 41 plastic collection and recycling projects on its database, based across 16 countries - but so far only 11 projects have been registered, which requires an audit by a third-party verifier and only three projects have been issued plastic credits by Verra. Currently, just one of these — called the Second Life project in Thailand — has sold credits, selling them for \$500 per tonne of plastic collected, according to communication with the founder.

While still at a nascent stage, with just 112 credits sold so far, the market has the potential to be significant. BFFP estimates that by 2030, Verra's existing projects could generate as many as 9 million credits (9,323,459), assuming all projects are approved and some projects are renewed. If each credit is sold for \$500 per tonne, this would amount to a total revenue of \$4.67 bn by 2030.

Plastic does not need to be recycled for a project to generate credits. Analysis from BFFP reveals that more than a fifth of projects (22%) are openly sending plastic to cement kilns where it is burned as an alternative source of energy.

Experts say that issuing plastic credits for plastic incinerated in cement kilns could encourage the practice at the expense of more environmentally beneficial outcomes and slow down decarbonization efforts. Communities located near cement kilns have long protested about air pollution and other negative impacts.

Burning waste in cement kilns — a dirty business

According to the **Global Alliance for Incinerator Alternatives**: ‘Cement plant emissions are often not well-regulated; heavy metals, particulates, and semi-volatile persistent organic pollutants (POPs) such as dioxins and furans (PCDD/PCDF) are released when waste is burned. POPs are what scientists call ‘forever chemicals’ — once they’re released, they are with us forever, travelling long distances and accumulating in our food chain.’ [See ‘Plastic credits encourage the burning of plastic’ for more information]

Our analysis of Verra’s databases has also raised serious concerns from experts about the concept of additionality. ‘Additionality’ is the requirement that the credits are paying for an activity that would not have happened without financial support. The analysis shows that eight projects, applying for a total of 1.1 million credits, have already completed a full crediting period of seven years. If these are approved by Verra, the projects accrue credit for the period they have already been operating.

In fact, the vast majority of projects (83%) have been in operation for more than a year, while 42% of projects will be credited for already having been in operation for five years or more. This is despite Verra’s claims that finance from the sale of plastic credits can enable the development of such waste management infrastructure ‘that is otherwise not viable without the revenue from the crediting mechanism’



Many projects listed on the Verra registry also receive additional and significant funding from major plastic polluters including Nestlé, Coca-Cola, Pepsico and Danone as well as huge chemical firms like Borealis AG and Braskem Netherlands.

In addition, 78% of projects claim to improve the lives of informal waste pickers, yet it is unclear if and how this is happening in reality. Waste pickers and other informal waste workers are often historically marginalised and vulnerable communities. When questioned about waste worker compensation, Verra stated that a project proponent must pay project actors the prevailing industry wage in the region. However, it clarified that the obligation is to 'strive to pay a living wage', which isn't an explicit requirement.

PCX analysis

PCX claims to help major brands become more circular but according to an analysis by [SourceMaterial](#), only 14% of PCX credits are generated from recycling while the remainder comes from 'co-processing', an industry term for incinerating waste in [cement kilns](#). The PCX website claims they 'encourage the elimination of unnecessary plastic while providing opportunities to enable a circular economy through prevention, reuse, substitution and recycling to avoid plastic waste from leakage into nature'.

SourceMaterial worked with academic experts in the US, scientists at Leeds University and the Global Alliance for Incinerator Alternatives. According to SourceMaterial 'PCX's current credits would release approximately 120,000 tonnes of carbon dioxide — the same as would be generated by driving 26,704 petrol cars for a year — if the plastic destined for cement plants was burned, the data shows.'

SourceMaterial found that Nestlé Philippines spent \$732,900 on credits, all to support projects where plastic is burned in cement kilns. This co-processing of plastic has released an estimated 16,544 tons of carbon dioxide. Nestlé Philippines is a major producer of single-use plastic sachets — one of the most damaging and prevalent forms of plastic waste across South East Asia. It is also one of the Philippines' top plastic polluting companies according to Break Free From Plastic's annual [brand audit research](#). Globally, Nestlé is the world's third worst plastic polluter based on five years of data. Yet despite its enormous contribution to plastic waste, Nestlé Philippines has been certified by PCX as 'plastic net zero', with further credits pending.

PCX rules require companies to submit their reporting to a third-party auditor for checks, however, in the majority of cases, this validation is not happening. The SourceMaterial analysis shows that of PCX's net zero-certified credit records, 60% had no third-party auditor.

SourceMaterial 'also found irregularities in the reporting of Century Pacific Food, a tinned food manufacturer owned by the Po family. Century's chairman, Chris Po, is the husband of PCX's founder, Nanette Medved-Po, who also chairs the [Po family council](#).' The Po family council was set up to ensure the longevity of the Po family business - Century Pacific Foods, and is composed of family members, leading to a clear conflict of interest where the family business is paying another business owned by the same family.

Areas of Concern

Additionality

Additionality is at the core of all types of offsetting. Offsetting the negative environmental impact of an activity can only be considered to have occurred when the sale of credits finances an additional activity that would not have occurred otherwise. For example, if a waste treatment company is already collecting 500 kilogrammes of plastic waste funded by a local municipality, the same waste cannot be used to generate plastic credits. The company must collect additional waste on top of its normal activities, to qualify for funding via the sale of credits. In simpler terms, a company seeking to offset its plastic usage should be assured that the money spent on plastic credits is actively contributing to something new and impactful.

However, an analysis of the Verra database reveals that eight projects (19,5%), applying to issue a total of 1,108,314 credits, have already begun and have completed a full seven-year crediting period. The vast majority of projects (83%) have been in operation for over a year and if approved by Verra, will be credited retroactively for the period they have already been operating. Meanwhile, 42% of projects will be credited for already having been in operation for 5 years or more.

While the projects can be renewed for future crediting, it is unclear how the principle of additionality has been applied where plastic has already been collected or recycled. When asked why projects were applying for credits for work that had already been done, Verra said “additionality is assessed on a project basis. Additionality asks — would the plastic waste collected or recycled by the project have been collected or recycled in the absence of the project?”. This definition is at odds with other standard definitions of additionality, such as that used by the Clean Development Mechanism (the UN’s carbon market), which requires careful documentation of a baseline and evidence that the funds brought in by credit sales will fund activity over and above the baseline.

Fuel to the Fire: Lessons from the Voluntary Carbon Market

This is a different definition from the one above, which states that for the UN's carbon market, (the Clean Development Mechanism), additionality includes projects are only able to “go forward” because of the “extra financial support provided by the sale of carbon credits”.

Elsewhere in its literature, Verra claims that revenue from the sale of plastic credits can enable the development of waste management infrastructure that is otherwise not viable without the revenue from the crediting mechanism. The Plastic Waste Reduction Standard states that ‘a project activity is additional if it can demonstrate that the activity results in collected or recycled plastic waste that is more than what would most likely have occurred in the absence of the project activity and the activity would not have occurred in the absence of the incentive provided by the plastic crediting mechanism (emphasis added).’

Axel Michaelowa, a senior founding partner at the consultancy Perspectives Climate Group, has worked on international climate policy instruments and the UNFCCC process since 1994.

In an interview with BFFP, Michaelowa said it was “perverse” to allocate plastic credits for projects that have been in operation since 2016 and that “none of these projects is additional”.

Under Article 6.4 of the Paris Agreement, a project is only additional if it can show that the revenues from the sale of carbon credits have mobilised it, he noted.

“For many years, the Clean Development Mechanism has required a letter of prior consideration from projects that wanted to claim carbon credits in the future. This would be the minimum that any decent plastic credit standard would require.”

“Thus, allocating plastic credits for projects that have been in operation since 2016 is perverse. In 2016, nobody was talking about plastic credits so it is inconceivable that these projects were planned taking into account the revenue from plastic credits.”

Lecomte, CEO of the Second Life project, revealed that to ensure his project is additional, they decided to only focus on collecting plastic on remote islands and beaches, “because when you have a lot of tourism and four-star hotels, it should operate on its own”. The project also incentivises waste pickers to collect at least 20% non-recyclable plastic, which is of less value and would not otherwise have been collected, in order to improve the company’s additionality.

However, Lecomte said that additionality is the greatest “challenge” to plastic offsetting and that it can be hard to maintain it “even on a daily basis”. For example, a plastic collector “may stop at a hotel and fill his car with some bottles because he’s going to get added incentives,” he said.

On a larger scale, “there is a risk that big recyclers will abuse [the system] to make more profit while continuing business as usual,” said Lecomte.

On one occasion, after a call with a beverage giant and one of the biggest recycling companies in Thailand, the beverage company said it wanted to work with the project on generating plastic credits but the recycler then approached Lecomte separately asking him to “certify all his ongoing activities which show no additionality”.

“This is unfair competition for projects like ours which have had real additionality,” said Lecomte, who reported the recycler to Verra, although they were not on the Verra database.

Lecomte said Verra needs to increase checks over additionality. “As our project grows in volume we have to constantly be aware of additionality. Even if we have been validated, we have only been validated once,” he noted. The concern is that a project could be validated as additional and can then change its operations.

This is particularly important given the well-documented problems around additionality in the carbon offsetting market. A [Guardian investigation](#) published this year found that more than 90% of rainforest carbon offsets are worthless and could make global heating worse.

Lecomte, who has also been active in the carbon credit industry through his firm PUR, which credits the planting of trees, acknowledged these issues.

“The credit for carbon is like a currency. I am not a fan of the US dollar but I use it. In the same way at PUR, we were selling carbon credits but I never liked carbon credits because the carbon credit industry has nothing to do with what we do. It is mostly big factories and big investors in China and India who generate fake credits without any additionality in the energy space to get more money for their investment projects.”

“What is most important is the intention of the project developer – are you doing it for money or do you do that for an additional impact? It is true that in the carbon space and the credit space in general, since it was in league with the trading sector, some people have become greedy,” said Lecomte.

Plastic credits encourage the burning of plastic

Verra states that its standard ensures the plastic has been disposed of in a way that prevents environmental leakage and is instead recirculated in the economy — a phrase that could reasonably assume the plastic is recycled.

However, projects can claim credits for plastic waste that is collected and then sent to incinerators with energy recovery. At least 32% of projects are claiming credits for this, while a further 24% of projects are eligible to claim credits in this way.

These numbers include around a fifth of the projects (19.5%), which openly send plastic to cement kilns where it is burned and used as an alternative fuel.

Of the PCX credits claimed, 86% are for plastic that has been sent to cement kilns. Buyers are incentivised to 'offset' their plastic production as cheaply as possible, and cement-fuel credits cost less than recycling ones.

PCX's data, as analysed by SourceMaterial shows that 61% of credit purchases are for 'co-processing in Antipolo, Rizal', at \$115 per credit; in comparison, recycling credits start at \$130 each and have far fewer buyers. Many of the more expensive projects, such as 'Community Collection and Recycling in Thailand' at \$633 per credit, have no customers at all, as quoted on the PCX website.

The cement industry, responsible for about 7%-8% of global carbon dioxide emissions, argues that replacing coal or petcoke in cement kilns reduces emissions and energy costs, saving valuable fossil fuels for the future and recovering energy from waste, thereby reducing the need for landfills.

However the US Environmental Protection Agency disagrees. In a [statement](#) to Reuters, it said that “there is no significant climate benefit to be gained from substituting plastic for coal, and that burning this waste in cement kilns can create harmful air pollution that must be monitored”.

Verra says that third-party auditors are required to assess whether the project complies with the environmental safeguard requirements in the Plastic Standard. This includes a requirement that projects monitor their greenhouse gas emissions to ensure that any increase in emissions that result from the project activities, “where unavoidable, is minimal”.

Aside from potential GHG increases, there is also extensive evidence to suggest the burning of plastic, even with controls, is harmful to human health.

Toxic air emissions associated with waste incineration include metals (mercury, lead, and cadmium), organics (dioxins and furans), acid gases (sulphur dioxide and hydrogen chloride), particulates (dust and grit), nitrogen oxides, and carbon monoxide.

A 2019 report from the [Center for International Environmental Law](#) (CIEL) found workers and nearby communities can be directly and indirectly exposed to these toxic emissions through inhaling contaminated air, touching contaminated soil or water, and ingesting foods grown in an environment polluted with these substances.

Incineration technologies also produce highly toxic byproducts at various stages of thermal processing. Pollutants captured by air filtering devices are transferred to the byproducts of incineration, such as fly ash, bottom ash, boiler ash (also known as slag), and wastewater treatment sludge.

In addition, waste incineration expert Dominic Hogg thinks that issuing plastic credits for plastic that has been incinerated in cement kilns could encourage the practice at the expense of more environmentally beneficial interventions and slow down decarbonization efforts. He sees this as especially likely if governments introduce laws that place co-processing on an equal footing with material recycling.

Hogg said that in a situation where a cement kiln is replacing petcoke — a solid carbon rich material derived from oil refining, “it can probably pay to take the waste in and still make money but it usually doesn’t have to. In several countries, for example, all the cement kiln has to do is to charge a bit lesser than the alternative disposal route”.

‘If somebody’s also going to allow it to issue credits which it can sell, then it becomes easier still to charge less than the alternatives so it can pull more in’ says Hogg.

Costs depend on geography but sending plastic to cement kilns is a cheap fuel option for cement companies. Hogg estimates that it costs approximately €100/tonne to incinerate waste in a new incinerator in Europe. Cement kilns, on the other hand, where suitably equipped, can use waste to substitute for conventional fuels and can accept wastes at costs lower than that of incineration. If compared to full recycling of PET in an European country, “then you are probably talking about €600/tonne of plastic”, said Hogg.

In the Global South, informal waste pickers are much less inclined to target low-value unrecyclable plastics “so collecting difficult-to-recycle plastics incurs a cost; the question then arises as to what to do with unrecyclable plastics,” said Hogg.

“The costs can be kept relatively low if the wastes are combusted at cement kilns but what is potentially worrying is if those paying for collection credits believe the collected material is being recycled. It doesn’t help matters where countries effectively allow businesses to discharge recycling obligations through co-incineration at cement kilns”.

“The combustion of plastics releases fossil-derived CO² in much the same way as using petcoke. If we are serious about addressing both plastic pollution and climate change, then whatever the commercial benefits of a cement kiln, this can’t be a long-term solution. We need to ensure that what plastic is still used is recyclable at its end of life, and can help reduce the energy and carbon emissions associated with making those plastics still in use,” he added.

One project approved by Verra which has since been suspended from issuing credits is the [Reciki project](#), run by the international food giant, Danone.

During the verification process, it was found that one facility that converts plastic into Refuse Derived Fuel (RDF) for incineration failed to pass the standard SNI 8966:2021 for some of the parameters (Ash Content, Ash Fusion Temperature, Chlorine, and Hardgrove Grindability Index). Auditor Control Union was also unable to say whether the material going to the Jimbaran RDF facility would be used for illegal activities. Reciki said this is why it did not claim credits for this part of its operations until a review was carried out in November 2022.

Months later, Verra suspended the Reciki project and opened a quality control review because of 'substantive comments' from stakeholders about the Reciki project. Neither Verra nor Danone were able to confirm what the nature of the comments were but in May 2022, community representatives wrote to Danone calling for the closure of the facility which they said was poisoning the air. In the letter, the community identified 'a total of 14 cases of non-compliance, inconsistencies and lack of accountability in [Danone's] obtaining approval to build and operate the plant'. Verra publishes comments received during the public commenting period stipulated for all projects, so it is unclear why comments received outside of that period are not also made public.

A Danone spokesperson confirmed that the trial phase for the production of RDF had been successfully completed, and that the final product meets the SNI 8966:2021 standard.

A spokesperson for the consumer giant said: "At the time the facility was established, there were very few ways to standardise the measurement of collection volumes, which is vital to track how levels of plastic in Bali are changing.

Verra was one of the few options available, which is why Danone-AQUA conducted a trial with plastic credits for the project in TPST Lamongan & Jimbaran to test the standard. Danone has not processed any issuance of plastic credits from this project."

However, Danone failed to respond when asked why the project had been suspended from issuing credits. In a statement, the company said: "Further research is needed to test the effectiveness of plastic credits. We have used them for one project in the past, but we do not buy credits currently."

Murky finance

Verra claims that transparency is at ‘the core of what we do’ but the cost of plastic credits is not made publicly available.

According to its internal database, 112 credits generated by the Second Life project have been sold to companies including 22 credits to Bentley Motors. The project’s founder confirmed to BFFP that he had sold credits to the offsetting giant South Pole who further sold them on to Bentley. In March 2023, the South Pole faced allegations of exaggerating climate claims around its forest-protection projects, and failure to disclose how much it had charged for the transaction or what its exact role in the arrangement had been.

Bentley Motors said it could not disclose the amount it had paid for its plastic credits due to the commercial terms with its partner. Verra said. “As a non-profit, independent standard setter, Verra is not involved in the pricing, transaction, or retirement of Plastic Credits therefore, we cannot speak to the price at which a project sells their credits”. Retirement of credits is Verra’s term for a credit sold that is no longer available for purchase.

However, BFFP spoke with the founder and CEO of the Second Life Project, Tristan Lecomte, who described his project as a ‘private EPR system’. He uses plastic credits to incentivise the collection of plastic on remote and hard-to-reach shorelines of Thailand that otherwise would not have been collected.

According to Lecomte, on average, the project offers a credit for sale at \$500 per tonne of plastic collected. Of this, \$350 goes towards incentivising the collectors, the transporter, and the recycler, 'to make the collection process sustainable'. The remaining \$150 is used to pay for equipment like baling machines, boats, and a small warehouse. It is unknown what the cost breakdowns will be for other projects, or how much money is received by those doing the waste collection.

"The idea is to fill the gap in the circular supply chain because they are deficient in Thailand and they don't have an EPR system", clarified Lecomte.

Poor checks and balances

In the absence of government regulation, it is even more vital that companies claiming credits can be held to account. Yet it is clear that for PCX projects, verification relies on self-reporting by companies. Of PCX's net-zero-certified credit records, 60% included no third-party auditor. PCX's clients are expected to provide a 'declared plastic footprint'—a figure for how much plastic they produce.

For example, Myro USA, a vegan deodorant manufacturer, 'self-attested' a plastic footprint of 13.46 tonnes in 2020-2021, purchased 14 credits, and then received a 'net zero' designation.

SourceMaterial's review of the database found that 52% of net zero certifications did not include a declared plastic footprint. These include records for Nestlé Philippines, which nevertheless received a 'net-zero' certification. The basis on which PCX certifies a company as 'net zero' is unclear, especially when it lacks information about the company's plastic footprint.

SourceMaterial found irregularities in the reporting of Century Pacific Foods credits. For example, in the majority of its records, the company's net-zero certification is listed as 'pending' in the PCX database. Publicly, however, Century Pacific Food claims to have been 'plastic neutral since 2019'. PwC Philippines is recorded as Century Pacific's third-party auditor.

In the Philippines, the Extended Producer Responsibility Act of 2022 mandates companies with more than PHP 100 million in assets, like Century Pacific Food, to achieve 'plastic neutrality' by recovering or offsetting 80% of their plastic footprint by 2028. Under the law, recovery and offsetting activities include co-processing of non-recyclable plastic waste in cement kilns, waste to energy and chemical recycling.

Medved-Po, PCX's founder, also runs a non-profit organisation, called GenerationHope, that uses PCX to offset the plastic water bottles it produces. The database shows GenerationHope, set up in 2012, has spent \$27,600 on 242 credits for co-processing projects.

The relationships between Century, PCX, and GenerationHope — all run by the same married couple — raise serious concerns about the conflict of interest and self-dealing. Offsetting is premised upon the idea that reputable, third-party firms have conducted independent inspections of the operations to verify that they live up to their claims. But in this case, it seems that Medved-Po is essentially certifying her husband's operations, as well as her own.

Credit-generating schemes can be developed with seemingly limited community stakeholder engagement. Of the 30 projects registered on the Verra database that have had a public commenting period completed, only two have received any documented input.

Corporate greenwashing

VeryNile, a [project on the Verra database](#) which seeks to improve the lives of fishermen while removing plastic from the Nile. From its first event in 2018, which included 150 volunteers and the collection of 1.5 tonnes of plastic, the project now has more than 700 partners, and has carried out 1200 cleanup events.

The initiative compensates fishermen for collecting plastic, which not only pollutes the Nile but has also led to the decline of fish, crucial for their livelihoods. While some high-value plastic is transported to Spain to be converted into textile yarns, half of the plastic is sent to be used as fuel at a cement kiln owned by CEMEX.

A source in Egypt closely linked to the project, who wished to remain anonymous, shared with BFFP that plastic credits pose a significant dilemma. Initially, they rejected partnerships with Pepsico and CEMEX due to concerns about greenwashing. However, they acknowledged the necessity of collaborating with major corporations as they have the financial capacity to support project requirements, such as financing boats.

“The whole thing is political and it’s much bigger than a small NGO like us. It is not in our power to stop firms like Nestlé or Unilever from producing plastic. What is the alternative? We are working on awareness about reducing, reusing”.

BFFP was also told that other funding came from banks that would partner with the project to put their logos on events, and then ‘afterwards disappear’. This prompted VeryNile to implement a rule, “that we never partner with the private sector without them contributing to a lot of our sustainability plans”.

Alban de Ménonville, the founder of VeryNile, confirmed that the project relies on grants from foundations and the private sector. It has already received \$450,000 from the Coca-Cola Foundation, which represents around 40% of the project's three-year funding.

"We believe polluters should be the first ones to fund plastic collection. However, we only work with the ones having a long term impact and don't accept collaboration with them when we believe it's only a marketing strategy. The frontier is however hard to define," he said.

A 2021 report from the NGO Changing Markets called out corporate funding of plastic pollution clean-ups as greenwashing if the companies continued to produce ever more plastic. Corporate initiatives such as paying for the collection of waste are often heavily promoted to consumers and shareholders as part of Corporate Social Responsibility programmes. Changing Markets classified corporate-funded clean-ups as part of the 'distraction' tactics that companies use to avoid implementing meaningful changes to their business models in reducing environmental impact.

Planet Tracker, in a January report noted that corporate greenwashing is becoming increasingly sophisticated and designated this type of greenwashing as 'Greenlighting'. That is, when 'company communications spotlight a particularly green feature of its operations or products, however small, to draw attention away from environmentally damaging activities being conducted elsewhere'.

Several companies such as Coca-Cola have made voluntary commitments to collect as many items of packaging as they put on the market, while simultaneously increasing the amount of plastic packaging produced, according to their own reporting. These very companies have been found to be the world's top plastic polluters by the Break Free From Plastic annual brand audit reports.

Many plastic credit projects are also funded separately by major plastic polluters. These include some of the world's largest Fast Moving Consumer Goods companies such as Nestlé, Coca-Cola, Pepsico, and Danone as well as major chemical firms like Borealis AG and Braskem Netherlands. Two of the projects are backed by the Alliance to End Plastic Waste, whose members include the consumer giants PepsiCo and P&G, and petrochemical firms like Shell and Exxonmobil. The Alliance has faced criticism from environmental groups, and [accusations](#) of greenwashing. In 2019, [the Guardian](#) found that the Alliance's members had committed \$1bn in total to reducing plastic pollution and increasing recycling rates while simultaneously investing tens of billions of dollars in ramping up plastic production.

Learning from past mistakes

The issues raised should come as no surprise. Verra has a track record spanning eighteen years as the world's leading carbon offsetting certifier. Its verified carbon standard (VCS), launched in 2005, has issued more than 1 billion carbon credits so far, but in the past year alone has faced mounting and severe criticism.

Earlier this year an investigation by the [Guardian](#), the German weekly [Die Zeit](#) and [SourceMaterial](#), found that, based on analysis of a significant percentage of the projects, more than 90% of their rainforest offset credits are likely to be “phantom credits” and do not represent genuine carbon reductions.

The investigation also found that the threat to forests had been overstated by about 400% on average for Verra projects. As with plastic credits, big brands including Gucci, Salesforce, BHP, [Shell](#), easyJet, Leon and the band Pearl Jam put their names to projects by purchasing rainforest offsets approved by Verra.

In September 2023, this was followed by research from Carbon Market Watch, which found that the majority of Verra's carbon credits did not represent a positive impact on the climate, that projects had routinely underplayed the risk of displacing deforestation elsewhere, and that auditors often failed to enforce Verra's own rules on generating credits.

Similarly, the vast majority of credits issued by the UN's Clean Development Mechanism were found to be non-additional. Similar problems have plagued California's regulatory carbon market program.

Carbon offset markets have yet to adequately address fundamental issues, including additionality, yet Verra and PCX are eagerly replicating the carbon-offset model. This is problematic even in purely voluntary markets, where the primary purpose seems to be enhancing a company's public image and reassuring customers about responsible plastic waste management. But as the example from the Philippines shows, there are additional dangers as the voluntary market becomes enmeshed in public policy.

Verra suggests that the new global plastics treaty, currently under negotiation, should adopt privately-run plastic credit programmes as official treaty mechanisms. This would allow companies to meet their legal obligations to reduce plastic by buying offset credits from programmes like Verra and PCX. Without first addressing the fundamental problems of offset crediting, this would make a mockery of the treaty's stated goal to eliminate plastic pollution.



The community of Angga Swara Neighborhood, in Bali, Indonesia, raised concerns about Danone's violations during the permit process and for receiving plastic credits from Verra, a US nonprofit that the companies engaged for their plastics credit scheme, despite the failures of their past carbon credits programme.

Image credits: Nexus3 Foundation, Indonesia.

Conclusion

These analyses of the publicly available databases of two of the most prominent proponents of plastic offsetting demonstrate how these schemes are often greenwashing for corporate players. Serious flaws have been found in financing, additionality, transparency, basic auditing requirements, and the removal of plastic from the environment. Collecting plastic waste and burning it in cement kilns is not removing plastic from the environment, it is simply turning it into another form of pollution. Plastic offsetting also fails to deliver on its basic promise of helping companies reduce their impact on the environment. The same amount of plastic is being produced, and without rigorous additionality, there is no guarantee that any additional plastic has been collected or recycled.

Both Verra and PCX are advocating for plastic credits and offsetting to play a key role in a future Plastics Treaty. Their claims that credits can help bridge the gap in financing for waste and recycling infrastructure do not stand up under scrutiny. Projects are claiming credits for infrastructure built years before any money was received from the sale of credits, massive waste collection firms are claiming credits for continuing their normal work, and people running valuable community projects aiming to clean up polluted waterways and islands are directly criticising the system.

Businesses that wish to act more sustainably are better served by reducing plastic use across their operations, and not by attempting to offset it. Governments looking for additional finance for waste treatment should develop well-thought-out Extended Producer Schemes, taxation systems on plastic producers and advocate for a dedicated fund in the future Global Plastics Treaty.