

Plastic Credits White Paper

Exploring the risks and uncertainties with plastic credit schemes

Prepared 07-May-2024



Report For

Fauna & Flora

Project Team

Chris Sherrington, Eunomia

Emiliano Lewis, Eunomia

Ayesha Bapasola, Eunomia

Magdalena Kaminska, Eunomia

Corrigendum

This version has been updated following the identification of an inaccuracy relating to the use of the term plastic neutrality, to reflect the correct name of PCX Solutions (formerly Plastic Credit Exchange), to clarify the information made available on PCX Markets' website, and to amend the terms used by Verra for projects not listed on their platform.

Approved By



Chris Sherrington

Project Director

Acknowledgements

Eunomia Research & Consulting Ltd
37 Queen Square
Bristol
BS1 4QS
United Kingdom

Tel +44 (0)117 9172250

Fax +44 (0)8717 142942

Web www.eunomia.eco

Recent years have seen the proliferation of unregulated, largely unstandardised 'plastic credit' schemes. According to The Circulate Initiative, in 2020 there were as many as 32 of these schemes in operation globally,¹ which variously offered to 'offset' a company's 'plastic footprint' or enable the achievement of 'plastic neutrality'.

While such schemes typically operate in the voluntary market, they are also being presented as a complement to, or even as a means of complying with, regulatory requirements. The Philippines' Extended Producer Responsibility (EPR) Act of 2022 mandates companies with more than ₱1.4 million in assets to achieve 'plastic neutrality' by recovering or offsetting 80% of their 'plastic footprint' by 2028, whilst the zero-draft text of the UN Plastics Treaty mentions minimizing 'plastic pollution footprint(s)', and plastic crediting organisations have advocated for their use within the treaty.^{2,3,4,5}

As questions mount over the viability and governance of plastic credit schemes, this White Paper serves to provide initial insight into key concerns around plastic credit schemes. Early research raises multiple questions not only around the additionality of projects generating such credits and whether claims of 'plastic neutrality' made by purchasers of such credits can be justified, but also about risks to people (i.e. are waste pickers exploited by the trade, is burning of collected plastic harming human health) and risks to the environment (i.e. what evidence is there of the fate of 'collected' waste – is it burnt, is it dumped elsewhere, is it really recycled and to what standards).

This White Paper is a preview to a full study that will be published ahead of INC-5 in November to support informed decision making. The full study is urgently needed to better understand current activity and the potential ways in which the plastic credits market could, or indeed should, evolve.

What are plastic credits?

A **plastic credit** is a tradable unit that is issued to the developer of a plastic waste collection and/or recycling project, usually in the form of a certificate representing a specific weight (normally 1 tonne) of plastic collected or recycled.⁶ This credit can then be sold in the open market, to a company wishing to 'offset' their plastic pollution impact.

'Plastic neutrality' is claimed when a company has purchased enough plastic credits to 'offset' its entire **plastic footprint** for a set period of time.^{7,8} However there is currently no accepted harmonised method

¹ The Circulate Initiative (2021) A Sea of Plastics Claims and Credits: Steering Stakeholders Towards Impact. Available at: <https://www.thecirculateinitiative.org/insights>.

² See https://legacy.senate.gov.ph/republic_acts/ra%2011898.pdf. The Act defines plastic neutrality as referring to "a system or its desired outcome where, for every amount of plastic product footprint created, an equivalent amount thereof is recovered or removed from the environment by the product producers through an efficient waste management system". The Act notes that programs that may achieve plastic neutrality include offsetting. The act also notes that standards relating to plastic neutrality will be established. Accordingly there is some uncertainty as to exactly what will be permitted. A concern is thus that credits may be seen as providing equivalent outcomes to the establishment of collective EPR schemes whereby producers cover the costs of comprehensive packaging waste collection.

³ CleanHub (2023) How Does Extended Producer Responsibility Work in the Philippines? Available at: <https://blog.cleanhub.com/extended-producer-responsibility-philippines>.

⁴ UNEP (2023) Revised draft text of the international legally binding instrument on plastic pollution, including in the marine environment. Available at: <https://wedocs.unep.org/bitstream/handle/20.500.11822/44526/RevisedZeroDraftText.pdf>.

⁵ Verra (2022) Commentary: 5 Reasons for Using Plastic Crediting in the Global Plastic Treaty - Verra. Available at: <https://verra.org/commentary-5-reasons-for-using-plastic-crediting-in-the-global-plastic-treaty/>.

⁶ Plastic Standard (2023) Develop a Project under Verra's Plastic Program: A Quick Guide. Available at: <https://verra.org/wp-content/uploads/2022/10/Develop-a-Project-under-Verras-Plastic-Program-A-Quick-Guide-Aug-2023.pdf>.

⁷ Break Free From Plastic (2023) Smoke and Mirrors. The Realities of Plastic Credits and Offsetting. Available at: <https://www.breakfreefromplastic.org/smoke-and-mirrors/>.

⁸ This is analogous to companies claiming 'carbon neutrality' if they offset enough of their carbon emissions through purchasing carbon credits.

for determining the boundary of a company's footprint, nor how it should be measured, and there is little transparency or disclosure from companies on this matter.

This paper draws on documentation from two of the more high-profile schemes⁹, Verra's Plastic Waste Reduction Program and PCX Solutions' Plastic Pollution Reduction Standard.

Verra, a non-profit organization that is also active in the carbon credit market, runs a plastic crediting mechanism called the Plastic Waste Reduction Program (Plastic Program). This includes a Plastic Waste Reduction Standard that projects must meet in order to be certified and eligible to generate credits.

Verra issues two types of credits, collectively known as Plastic Credits. Waste Collection Credits (WCCs) are designed to be issued to projects that enable plastic to be collected from the environment, whereas Waste Recycling Credits (WRCs) are meant to be issued to projects that enable plastic to be recycled.¹⁰ Projects may be issued both WCCs and WRCs for the same material where both collection and recycling is achieved by the project (i.e. the same tonne of material can be issued 1 WCC for having been collected from the environment, and 1 WRC if it is then recycled). WCCs and WRCs are assigned a unique serial number that details information (which is publicly available) about the project activity, the material type collected or recycled, and the end-of-life fate of that material.

Verra does not develop credit-generating projects, set the price for credits, or organise the sale of credits (this is the responsibility of the project developer). It owns the standard, and its role is to list and register projects, verify them according to their standard, and issue the plastic credits to the projects once they have been approved. Projects must pay a fee to Verra for each of the steps in the verification process – the impact these fees have on project developers and waste pickers merits further research.¹¹

At the time of writing, a total of 64 projects across 25 countries have applied to the Verra standard. Of these, 6 were “rejected, denied, on hold, or inactive”, 58 have been listed on the Verra platform, and 8 have moved from being listed to being registered (i.e. assessed and validated by an external VVB¹²).¹³ The 58 projects that have been listed have collected/recycled a total of 1.2 million tonnes of plastic.¹⁴ Of the eight registered projects, four have been issued a total of 7,061 plastic credits (for an equivalent amount of tonnes of plastic collected/recycled).¹⁵ Of these 7,061 credits issued, a total of 192 (equating to 2.7%) have been sold (retired) so far by one project (Second Life Thailand) to five buyers.¹⁶ At a price of \$500 per credit, this would equate to total revenue raised from those credits of \$96,000, though it is unclear how this price was set, or the revenue distributed.¹⁷

PCX Solutions established their Plastic Pollution Reduction Standard (PPRS) in March 2020 (and revised it in January 2022). It “provides a framework for the implementation of a credible and verifiable plastic offsetting program”.¹⁸ However, unlike Verra, who provide a standard but are not involved in the sale of the credits their scheme generates, PCX Solutions provides a standard and their sister company PCX

⁹ For which more information appeared to be available.

¹⁰ Plastic Standard (2023) Develop a Project under Verra's Plastic Program: A Quick Guide. Available at: <https://verra.org/wp-content/uploads/2022/10/Develop-a-Project-under-Verras-Plastic-Program-A-Quick-Guide-Aug-2023.pdf>.

¹¹ Plastic Standard (2024) Plastic Program Fee Schedule. Available at: <https://verra.org/wp-content/uploads/2022/11/Plastic-Program-Fee-Schedule-v1.3.pdf>.

¹² Validation/verification body (VVB).

¹³ Verra (n.d.) Plastic Waste Reduction Program database. Available at: https://registry.verra.org/app/search/PWRP?_gl=1*ejvt2y*_ga*OTk3ODczNzQ4LjE3MTIwNjUxNzA.*_ga_2VVGK901B6P*MTcxMzI1NjY2NC41LjEuMTcxMzI1NjY3Mi4wLjAuMA..

¹⁴ The unsuccessful applications collected/recycled ~360,000 tonnes.

¹⁵ Second Life Thailand Ocean-Bound & Land Plastic Recovery, Recycling and Reuse (Thailand), Far North Queensland Farm Plastics Project (Australia), Conceptos Plasticos - The WaY Cote d'Ivoire (Ivory Coast), Project STOP (Indonesia).

¹⁶ Vinventions, Bentley Motors, Escape Travel, GP-23 and Plastic Credit Exchange.

¹⁷ According to report author's communication with the founder.

¹⁸ PCX (n.d.). Plastic Pollution Reduction Standard. Available at: <https://www.pcxolutions.org/pprs-standard>.

Markets¹⁹ provides a platform for projects to sell the credits that PCX Solutions have issued. Their website lists 30 current projects²⁰ and the list of buyers²¹, with credit prices ranging from \$115-771 per tonne. PCX also supports potential buyers of these credits by providing a Plastic Footprint Calculator, and services to map solutions to offset this footprint. However, no information is published on how these credits are being priced.

Areas of Concern

A key area of concern relates to “additionality”, a concept central to both schemes described above. This concept means that credits are supposed to prove that without intervention, the plastic waste would have otherwise ended up in the environment (in the case of WCCs)²² or would have otherwise not been recycled (in the case of WRCs). However, given the time lag between the generation of credits and the sale of credits, the lack of a guaranteed purchaser and transparency about how plastic is disposed of/processed, and inevitable uncertainty over the price to be paid for an individual credit, it is very difficult to have confidence that purchasing credits leads to genuine additionality.

From this underlying uncertainty, subsequent concerns relate to the claims that can credibly be made by purchasers of such credits. Where markets remain voluntary, it is arguably a case of *caveat emptor*²³, with the greatest potential for damage being to the reputations of purchasers whose claims relating to the purchase of credits may leave them open to accusations of greenwashing. Plastic credits will not prevent plastic pollution in the absence of upstream measures, and there are concerns that downstream solutions such as plastic credit schemes may give companies a perceived *carte blanche* to continue business-as-usual, rather than reducing their production and/or use of single-use, problematic and avoidable plastics.

In addition, a key risk relates to the negative social impact of projects on waste pickers if projects are poorly operated and monitored, including potentially unfair wages, poor working conditions and harm to human health from toxic air emissions associated with the burning of waste.

If plastic credits become a means of demonstrating compliance with regulatory requirements, as indicated in the example of the Philippines’ EPR Act, and under the auspices of the UN Plastics Treaty during final negotiations, then loosely defined terminology and genuine concerns over additionality become much more than a reputational risk.

Without a full understanding of the existing and potential shortcomings of plastic credit schemes, both as voluntary measures and, more importantly, as a possible form of achieving regulatory compliance, there is a considerable risk of undermining genuinely transformative collective action, such as could be achieved under EPR.

The full study, to be published ahead of INC-5 in November 2024, will involve a critical examination of the environmental and social concerns with plastic credit schemes, and seek to answer the key questions raised in this White Paper. The study will outline what good governance of plastic credit schemes could look like (and how they might work alongside EPR) and include recommendations for both potential buyers of credits and policymakers.

For further information and to register interest in receiving the full report, please contact Tanya Cox (Tanya.Cox@fauna-flora.org) or Emiliano Lewis (emiliano.lewis@eunomia.co.uk).

¹⁹ PCX Markets (n.d.). Available at: <https://www.pcxmarkets.com/>.

²⁰ PCX Markets (n.d.). Available at: <https://www.pcxmarkets.com/>.

²¹ PCX Markets (n.d.). Available at: <https://app.pcxmarkets.com/registry>.

²² While there is limited evidence on the fate of plastics for which only WCCs have been generated, it is understood that much goes to forms of energy recovery due to contamination issues.

²³ The principle that the buyer alone is responsible for checking the quality and suitability of goods before a purchase is made.

References:

Break Free From Plastic (2023) *Smoke and Mirrors. The Realities of Plastic Credits and Offsetting*. Available at: <https://www.breakfreefromplastic.org/smoke-and-mirrors/>.

CleanHub (2023) *How Does Extended Producer Responsibility Work in the Philippines?*. Available at: <https://blog.cleanhub.com/extended-producer-responsibility-philippines>.

PCX (n.d.). *Plastic Pollution Reduction Standard*. Available at: www.pcxolutions.org/pprs.

PCX Markets (n.d). Available at: <https://www.pcxmarkets.com/>.

Republic of the Philippines – Congress of the Philippines (2021) *An Act Institutionalizing the Extended Producer Responsibility on Plastic Packaging Waste*. Available at: https://legacy.senate.gov.ph/republic_acts/ra%2011898.pdf.

The Circulate Initiative (2021) *A Sea of Plastics Claims and Credits: Steering Stakeholders Towards Impact*. Available at: <https://www.thecirculateinitiative.org/insights>.

UNEP (2023) *Zero draft text of the international legally binding instrument on plastic pollution, including in the marine environment*. Available at: <https://wedocs.unep.org/bitstream/handle/20.500.11822/44526/RevisedZeroDraftText.pdf>

Verra Plastic Standard (2021) *Plastic Program Guide*. Available at: <https://stg.verra.org/wp-content/uploads/Plastic-Program-Guide-v1.0-1.pdf>.

Verra Plastic Standard (2021) *Plastic Program Fee Schedule*. Available at: <https://verra.org/wp-content/uploads/2022/11/Plastic-Program-Fee-Schedule-v1.3.pdf>.

Verra (2022) *Commentary: 5 Reasons for Using Plastic Crediting in the Global Plastic Treaty – Verra*. Available at: <https://verra.org/commentary-5-reasons-for-using-plastic-crediting-in-the-global-plastic-treaty/>.

Verra Plastic Standard (2023) *Develop a Project under Verra's Plastic Program: A Quick Guide*. Available at: <https://verra.org/wp-content/uploads/2022/10/Develop-a-Project-under-Verras-Plastic-Program-A-Quick-Guide-Aug-2023.pdf>.

Verra (n.d.) *Plastic Waste Reduction Program database*. Available at: https://registry.verra.org/app/search/PWRP?_gl=1*eiyt2y*_ga*OTk3ODczNzQ4LjE3MTIwNjUxNzA.*_ga_2VGK901B6P*MTcxMzI1NjY2NC41LjEuMTcxMzI1NjY3Mi4wLjAuMA.

