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The Global Plastics Treaty must include strict global controls on plastic waste trade

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Letter to the Editor

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Abstract

Global plastic production has more than doubled over the past two decades, fueling a parallel rise in transboundary plastic waste trade (PWT). Despite efforts to curb this through the Basel Convention and its 2021 Plastic Waste Amendments (BCPWA), loopholes and inconsistent implementation continue to allow large volumes of problematic and "hidden" plastic waste to bypass regulation. This flow of waste from high-income to lower-income countries has resulted in disproportionate environmental and social harms, often described as "waste colonialism." Three years after the BCPWA entered into force, its limited impact highlights the urgent need for stronger, clearer, and universally enforceable rules. As the Global Plastics Treaty (GPT) nears conclusion at INC-5.2, negotiators have a critical opportunity to strengthen global controls. Expanding the Basel Prior Informed Consent (PIC) procedure to cover all plastic waste—including currently unregulated categories such as synthetic textiles and B3011 plastics—would close existing regulatory gaps, promote transparency, and ensure environmentally sound management. While a full ban on PWT may be politically unattainable in the near term, universal PIC represents a pragmatic step forward. Ultimately, meaningful progress demands upstream solutions: the GPT must prioritize reducing plastic production at its source, especially for the most harmful and unnecessary applications.

Impact statement

This article presents an urgent call for closing critical regulatory gaps in the global governance of plastic waste trade. Despite existing international agreements, such as the Basel Convention and its 2021 Plastic Waste Amendments, millions of tons of plastic waste continue to be exported annually from high-income to low- and middle-income countries – often under the false premise of recycling. These flows have contributed to severe environmental degradation, public health risks and growing social injustice, particularly in vulnerable communities across Asia, Latin America and the Global South more broadly. By documenting the ongoing failures of current legal mechanisms – including the loopholes that allow "hidden" and inadequately categorized plastics to escape oversight – this article provides a roadmap for strengthening the effectiveness of the upcoming Global Plastics Treaty. The article argues that the most immediate and achievable reform is to require Prior Informed Consent (PIC) for all plastic waste exports, closing a gap that has enabled continued environmental dumping and weak accountability. It also highlights the need for strict operational standards for recycling facilities and positions plastic production reduction as a nonnegotiable solution. The recommendations have direct policy relevance for negotiators at the final INC-5.2 meeting in 2025 and for national governments seeking to protect their populations from imported plastic pollution. The work contributes not only to environmental law and waste management scholarship but also to broader global justice, trade and public health debates. By offering actionable, internationally scalable reforms, this article aims to shape treaty outcomes that move beyond symbolic gestures and toward real, enforceable protections for people and ecosystems worldwide.

Introduction

Increase in production equals an increase in waste trade

Global plastic production and plastic waste trade (PWT) have risen in tandem over the past two decades, highlighting an almost direct relationship between increased plastic manufacturing and use and heightened international waste exports. Global plastic production reached ~489 million metric tons (Mt) in 2023, with forecasts projecting an alarming 1.1 billion Mt by 2050 (PlasticEurope, 2024; Brown et al., 2025). This surge inevitably will drive an increase in plastic waste generation, intensifying pressure to export it under recycling claims. Currently, more than 4 million Mt of plastic waste enter international trade annually (Figure 1; Dell, 2024; Ishimura et al., 2024; Brown et al., 2025). Although China's import restrictions under the "Green Fence" (2013) and "National Sword" (2018) policies temporarily reduced global trade, exports swiftly shifted to alternate "recycling" destinations, primarily in Southeast Asia and Türkiye (Ediboğlu-Sakowsky and Gündoğdu, 2024; Comolli, 2024). In response to some of the shocking images and stories from those areas blazoned in the press, the Basel Parties adopted the Basel Convention Plastic Waste Amendments (BCPWA) (2019), which entered into force in 2021. These amendments, for the first time, began to curb problematic PWT (Ishimura et al., 2024). Indeed, although there was an initial decline in 2022, following the implementation of the BCPWA, recent data reveal increases in plastic waste exports, notably to countries such as Malaysia, Indonesia, Việt Nam and Türkiye, indicating regulatory limitations and improper implementation by exporting and importing nations alike (Figure 1; BAN, 2025). For instance, Malaysia's imports rose from 0.54 million Mt in 2022 to 0.61 Mt in 2023, while Türkiye's imports rebounded from 0.36 to 0.46 Mt during the same period (Brown et al., 2025).

History calls us to adopt an effective and legally binding Plastics Treaty

Between 1975 and 1990, high-income countries enacted stringent legislation on waste production, treatment, transport, disposal and export. Notable legal frameworks included the US Resource Conservation and Recovery Act (1976) and the Comprehensive Environmental Response, Compensation and Liability Act (1980), which held polluters financially accountable, embodying the early "polluter pays" principle (Puckett, 2024). These measures internalized waste management costs for producers. However, rising global trade and efficient intermodal transport enabled companies to circumvent domestic regulations by exporting hazardous waste to lower-income countries, effectively externalizing environmental and economic burdens (Puckett, 2024; Stoett, 2024).

Numerous studies have demonstrated that inadequate regulatory enforcement in exporting nations and insufficient waste management infrastructure in importing countries cause severe environmental damage and reduced social welfare (Gündoğdu and Walker, 2021; Comolli, 2024). Historically, the waste trade has been linked to illegal activities and criticized as a form of waste colonialism, ecological imperialism and environmental injustice (Comolli, 2024; Danton and Walker, 2024). High-profile incidents like the Khian Sea[1] and Koko Beach[2] vividly illustrated these injustices, catalyzing international awareness and advocacy for reform, culminating in the 1989 Basel Convention on hazardous waste movements (Liboiron, 2018; Puckett, 2024; Stoett, 2024). Initially focused on industrial "hazardous" waste, the Convention has increasingly tackled post-consumer waste, particularly electronic and plastic waste, reflecting growing concerns over associated illegal and environmentally harmful practices – though plastic waste long remained largely outside the Convention's regulatory scope (Ishimura et al., 2024).

However, this changed at the 14th Conference of the Parties in Geneva (May 2019), when delegates led by Norway agreed to amend the Basel Convention (Ishimura et al., 2024; Puckett, 2024) with a package of new amendments – BCPWA, which became effective January 1, 2021. The biggest breakthrough of these amendments was the addition of a category of problematic or difficult to recycle plastics (Y48) placed into Annex II (wastes for special consideration). Such Annex II wastes, despite not being designated as hazardous per se, shall nevertheless be controlled as if they were hazardous under the Prior Informed Consent (PIC) procedure, which requires exporter notification and importer approval before shipment. The BCPWA listings also triggered some special geographic de facto trade bans going beyond the strict controls of PIC. As the United States is not a Party to Basel, and the Convention only allows trade between Parties for Basel-controlled wastes, Y48 plastic waste exports to Basel Parties from the United States are prohibited. Similarly, because when the European Union (EU) implemented Article 4a (the Ban Amendment), it included all Annex II wastes in its ban on exports to non-Annex VII (developing) countries; exports from the EU to non-Annex VII countries are likewise banned. While the BCPWA was seen correctly as a regulatory milestone, it is just as easy to see now, 3 years later, that it has not met its promise of dramatically reducing global PWT. After a brief drop, trade volumes are rebounding and now exceed pre-BCPWA levels in several target countries (BAN, 2025).

One reason for the limited effect is the failure to regulate all plastic waste under Basel's three new listings – A3210 (hazardous plastic), B3011 (non-hazardous plastic) and Y48 (plastics for special consideration) (Ishimura et al., 2024). First, there is the issue of determining the difference between B3011 and its mirror entry Y48. It is very challenging for customs agents or other on-the-ground agents to distinguish between the uncontrolled (B3011) listing from the controlled listing Y48 due to needing to know the invisible contamination levels and the mixed polymer complexity just by looking at a load. The overlapping criteria and the lack of global harmonization on what constitutes contamination create unnecessary complexity, enabling exporters to falsely label waste as B3011 and shift the responsibility onto governments. Second, any plastic wastes – textile plastics, synthetic rubbers, plastics mixed in paper bales, and refuse-derived fuels – remain exempt simply due to legacy classifications, not due to scientific assessment (Karlsson et al., 2023). These "hidden" or "forgotten" plastics are now estimated to constitute about half of all traded plastic waste, escaping effective regulation.

[1]The Khian Sea incident involved a Liberian cargo ship carrying 14,000 tons of incinerator ash from Philadelphia in 1986. After multiple failed attempts to find a disposal site, 4,000 tons were dumped in Haiti in 1988, with the remaining 10,000 tons reportedly discharged into the Atlantic and Indian Oceans. The case became emblematic of transboundary waste dumping and was a key catalyst for the adoption of the Basel Convention on hazardous waste.

[2]The 1988 Koko Beach incident involved the illegal dumping of toxic industrial waste from Italy in the Nigerian port town of Koko. The hazardous waste severely impacted local health and the environment, prompting international outrage and contributing to the adoption of the Basel Convention.

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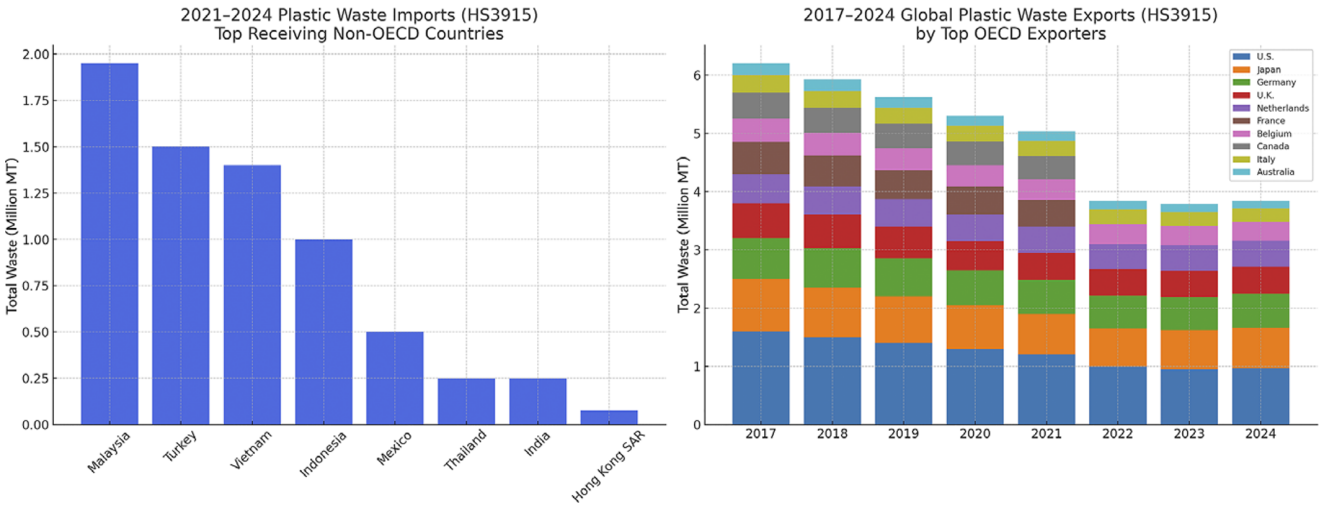

Figure 1. Global plastic waste exports and imports and top importing OECD and non-OECD countries (HS3915). (Source: https://www.ban.org/plastic-waste-transparency-project-hub/trade-data)

The consequence of PWT

All plastic waste flows discussed above have been rationalized through recycling claims, yet their environmental impacts remain severe. In practice, the PWT obscures the fundamentally noncircular nature of plastics. Recycling plastics presents numerous challenges, notably their low economic value compared to virgin materials, providing little incentive for effective collection and processing. Consequently, developed nations export plastic waste to Global South countries primarily to avoid costly recycling procedures domestically. These receiving countries, often lacking stringent legal frameworks and adequate societal safeguards, inadvertently become dumping grounds, externalizing environmental and public health costs. Significant fractions of exported plastic waste thus end up burned or openly dumped, releasing microplastics and harmful toxins into local ecosystems.

Moreover, even plastics that possess market value encounter critical recycling barriers due to harmful additives, microplastic contamination and freshwater pollution, making safe recycling practically unfeasible. The life-cycle environmental impacts of recycling these plastics frequently outweigh their purported benefits. Since China's 2018 import ban, Asian countries have particularly experienced increased plastic waste imports from the EU and other Global North regions (Comolli, 2024; Salamat, 2025). Despite existing national import bans and agreements like the Basel Convention, large volumes of waste – both legal and illegal – continue to enter these nations, severely impacting local health and environmental integrity (Ismawati et al., 2024; Wong, 2024; Zambrano and Donoso, 2024). Addressing these challenges remains achievable through a robust new Plastics Treaty, offering an opportunity to effectively tackle the inequitable global distribution of plastic waste (Salamat, 2025).

An effective plastics treaty can provide further PWT controls

The final negotiations to conclude a new Treaty on Plastic Pollution are set to conclude in Geneva this August 2025. Since the decision to initiate negotiations was made at the resumed fifth session of the United Nations Environment Assembly (UNEA-5.2) in Nairobi, Kenya, on 28 February–2 March 2022, the Intergovernmental Negotiating Committee (INC) on the Plastics Treaty has convened five times (Vince et al., 2024). Contrary to the initial roadmap, negotiations have yet to result in a finalized agreement and have been extended to a sixth session – named INC-5.2 (Farrelly et al., 2025). While it is not generally seen that this delay will result in a stronger, legally binding instrument than that initially envisioned by high-ambition governments and civil society, in certain areas, significant strides to curtail global plastic pollution are still possible. New waste trade restrictions fall into this category. In 2024, the EU adopted a revised Waste Shipment Regulation that extends beyond Basel by instituting controls on nonhazardous plastics and banning exports to non-OECD (Organisation for Economic Co-operation and Development) countries starting in November 2026 for 2.5 years. Exports to OECD countries like Türkiye will face stricter oversight, with potential inclusion in the future ban. However, exemptions may be granted from 2029, making this a conditional and potentially porous system that risks perpetuating global waste dumping in weaker economies. While the EU's efforts mark very significant progress, they fall short of the global comprehensive reform needed – specifically, implementing full Basel controls on *all* plastic waste. This idea would mirror recent Basel amendments on e-waste (June 2022), which reclassified all such waste under Annex II. For plastics, a similar step would mean moving all B3011 waste under Y48, subjecting all plastic waste to the PIC procedure. Currently, the INC chair has put in a placeholder statement in Article 8, paragraph 3, for addressing waste trade which states: "… *developed country Parties shall take measures to prohibit the export of plastic [waste] to developing country Parties.*" In our expert opinion, the Plastic Treaty should not reinvent a new mechanism for transboundary movement but certainly has the right to recommend a reform that Basel can easily adopt. While it may be seen as desirable to move in the direction of the Chair, a full ban on PWT would entail at Basel either defining all plastic waste as hazardous (unlikely to pass) or making modifications in the text of the current Article 4a (a change that will take many years of accumulating the requisite ratifications for entry into force). However, what we can easily do is call for what China asked for in 2019 and what Basel has already done for electronic waste. And that is, ensuring that all plastic, no matter how hazardous, is subject to Basel Controls, including PIC, and does that for all countries regardless of OECD status. This is a treaty reform within reach at INC-5.2 and subsequently achievable under the Basel Convention. Basel's current

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loopholes, which allow "hidden" plastics to evade control, can also be easily closed. Doing so would mirror the global regulatory progress seen with electronic waste and could enable countries to impose national-level bans on plastic waste exports to developing countries should they wish to go further, as the EU has done for non-OECD countries beyond the global PIC requirement.

The Basel Convention already requires that all waste operations follow environmentally sound management (ESM), but this remains aspirational in many cases. This is clearly an area for improvement, which will be facilitated by full transparency and disclosure by all of the importers of plastic waste. At a national level, to operationalize ESM, plastic recycling facilities should be required to operate under valid permits, maintain full mass balance reporting (inputs vs. residuals), prevent microplastic and volatile organic compound emissions, ensure proper downstream waste treatment and implement water conservation measures (Almroth et al., 2025). Many existing recycling operations are unlikely to meet such standards due to the inherently noncircular and toxic nature of many plastic materials. This recognition must ultimately catalyze a shift away from current production volumes and polymer types. Indeed, at the end of the day, the new plastics treaty must recognize that the only viable and just solution to the global plastic waste crisis is to reduce plastic production at its source. This is also the systemic change needed to curb the international waste trade, reduce plastic pollution and address the root causes of environmental injustice throughout the entire plastics life cycle. Establishing full transparency and universal controls under Basel for all plastic waste is the critical first step.

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