

A PLASTIC PROBLEM

**EUROPEAN WASTE
DESTINED FOR TÜRKIYE**

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JUNE 2025

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ACKNOWLEDGEMENTS

The author would like to thank Jean-Jacques Schwenzfeier for his support with the research and data collection, along with the many other individuals and organisations who have shared their knowledge and insights. The author would also like to thank the GI-TOC Publications team for working to an incredibly tight deadline.

This report was made possible with funding provided by the European Union through the ECO-SOLVE project.

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SUMMARY

Since 2018, Türkiye has been the primary destination for Europe's plastic waste exports, receiving over half of the EU's total shipments. This shift follows stricter import rules in Asia and reflects Europe's ongoing failure to manage its own recycling shortfalls. Although most exports are labelled as 'clean recyclables', investigation by the Global Initiative Against Transnational Organized Crime (GI-TOC) has revealed that contaminated and mixed plastic shipments are frequently misclassified, taking advantage of Türkiye's weak regulatory oversight and loopholes in EU export systems.

Systemic mislabelling, lax inspections, widespread corruption, and poor accountability in the private sector enable this transboundary flow. Turkish ports like Adana, Mersin and Ambarlı handle the majority of imports, with Adana alone processing over 60% of Türkiye's plastic waste. Its dense industrial clusters, logistics infrastructure and limited enforcement capacity make Türkiye a key hub for both legal and illegal operations.

The environmental toll is severe. Satellite imagery and primary interviews confirm widespread open-air dumping, illegal burning and unsafe storage of plastic waste, particularly in Adana and İzmir. Many of the facilities processing (or disposing of) this waste are formally registered but fail to meet regulatory or environmental standards, exacerbating pollution and health risks.

Exporters take advantage of fragmented regulations and enforcement gaps, operating in a legal grey zone where due diligence is often neglected. Large firms and waste brokers subcontract to smaller operators, blend waste types to evade detection, and obscure accountability. As a result, non-recyclable plastic waste is routinely shipped to Türkiye under the false pretence of recycling, shifting the environmental and financial burden of disposal onto Turkish facilities. This is further complicated by transshipments through intermediary countries, which obscure the waste's origin and enable regulatory arbitrage.

The plastic waste trade to Türkiye has also become a profitable channel for organized crime groups, corrupt officials and fraudulent businesses. Opaque networks – including shell companies and family-run enterprises – facilitate illegal shipments, often misdeclaring or

contaminating waste. As enforcement has tightened in South East Asia, criminal operations have shifted to Türkiye, with some linked to Italian mafia groups. Organized crime groups also exploit recycling incentive schemes like the UK's Packaging Recovery Note (PRN) system through carousel fraud, aided by falsified documents and audit trails.¹

Allegations of bribery and conflicts of interest among Turkish customs and trade officials further enable the illicit trade. Brokers also use informal digital channels – such as Facebook, WhatsApp and industry-specific marketplaces – to coordinate logistics and connect with exporters. These brokers often buy shipments without verifying contents, extracting resale value from recyclable portions while dumping or burning the rest. This deepens the environmental and social impact on local communities and further complicates enforcement.

European oversight is often undermined by staged visits to sanitized recycling facilities, masking the true conditions on the ground. However, satellite data has emerged as a vital tool for independent verification, identifying illegal waste stockpiles, open burning near cement plants and contamination of agricultural land. Adana and Izmir are major hotspots. The GI-TOC analysis showed that four of the UK's top eight waste importers operate in a 1-square-kilometre area in Adana, with satellite and Google imagery revealing mismanaged waste storage and potential illegal operations.

The challenges faced by Türkiye, an Organisation for Economic Co-operation and Development (OECD) country with limited waste management capacity, underscore the urgent need for the EU and UK to close legal and regulatory loopholes that allow illicit plastic waste exports. Although a 2.5-year ban on plastic waste exports to non-OECD countries will take effect on 21 November 2026, Türkiye remains the largest OECD recipient of European plastic waste, underlining the need for stronger controls and oversight.



Europe's failure to manage its own recycling shortfalls has led to mass export of plastic waste to Türkiye, taking advantage of Türkiye's weak regulatory oversight and loopholes in EU export systems. © Ozan Kose/AFP via Getty Images

To address the problem, this report outlines multiple recommendations. These include tightening pre-export inspections within the EU and UK, mandating full documentation before departure, increasing transparency in ownership networks, implementing digital tracking systems for waste shipments, closing regulatory loopholes and raising private sector accountability through stricter due diligence. Deeper cooperation between EU and Turkish authorities, targeted investigations into high-risk actors and financial flows, and better monitoring of online trade platforms are also essential to close enforcement gaps and dismantle illegal waste networks.

Methodology

The methodology for this brief combines desk-based research with primary interviews conducted with experts, including sector specialists and representatives from non-governmental organizations (NGOs). It also incorporates analysis of satellite imagery, customs and trade data since 2018, and a comprehensive review of existing literature. To protect their security, all participants in this research have been kept anonymous.

Key findings

- Türkiye has become Europe's leading recipient of plastic waste. Since 2018, the country has taken in over half of the EU's plastic waste exports, a trend driven by tighter regulations in Asia and Europe's limited recycling infrastructure. The city of Adana alone processes more than 60% of Türkiye's imported plastic waste.
- Regulatory loopholes continue to facilitate the mislabelling and illegal trade of plastic waste. Exporters frequently classify mixed or contaminated plastic as recyclable, while weak enforcement mechanisms in both Europe and Türkiye allow these violations of international waste trade laws to persist.
- The environmental damage resulting from this trade is extensive and poorly monitored. Evidence from satellite imagery and field interviews reveals illegal burning, open dumping and hazardous storage of plastic waste, particularly in the cities of Adana and Izmir. Many officially registered facilities fail to comply with environmental regulations without facing consequences.
- Large international corporations exploit legal grey areas in the plastic waste trade. They frequently subcontract to smaller, less-regulated operators, thereby obscuring accountability. These practices often involve mixing recyclable plastics with non-recyclable waste, effectively shifting the burden of disposal to Türkiye while avoiding financial and regulatory responsibilities in their own countries.
- Organized crime and corruption also play a significant role in the illegal plastic waste trade. Criminal networks exploit the system through shell companies, bribery and fraudulent recycling operations. These actors often take advantage of financial incentives such as the UK's PRN system.
- Oversight of export schemes such as the UK's PRN system remains weak, enabling widespread fraud. As PRNs can be issued based on export rather than actual recycling, the system incentivizes false claims, carousel scams and rewards to non-compliant actors, without ensuring genuine environmental benefits.
- Stronger enforcement and greater transparency are essential to dismantling illegal plastic waste networks. Cross-border cooperation is also crucial to closing regulatory loopholes that enable widespread abuse of the waste trade system.



TÜRKİYE: EUROPE'S NEW PLASTIC WASTE DESTINATION

Türkiye has become the leading destination for plastic waste exports from the European Union. In 2023 alone, Türkiye imported over 622.7 million kilograms of plastic waste, valued at US\$202.9 million – with the UK being the top exporter.² This surge is driven by a stark mismatch between the volume of plastic waste generated in Europe and its limited domestic recycling capacity, alongside stricter import rules being introduced in South East Asia. Over the past 15 years, plastic waste generation in Europe has steadily increased, reaching nearly 20 million tonnes by 2020.³ However, as of 2023, the combined recycling capacity of facilities in the EU and the UK remains less than half of the annual plastic waste produced, creating a significant gap that continues to drive exports abroad.⁴

The EU's Waste Shipment Regulation (WSR) sets out controls for legal waste trade. When plastic waste is exported to OECD countries for recovery, it is subject to the same rules as intra-EU shipments. Hazardous waste and hard-to-recycle, non-hazardous plastic waste require prior written notification and consent.⁵ As of 21 November 2026, the export of plastic waste to non-OECD countries will be prohibited for a period of 2.5 years.⁶ In response, the proportion of plastic waste sent to non-OECD countries has dropped sharply – from over 50% in 2014 to under 20% in 2021.⁷

Despite these regulations, enforcement remains fragmented and under-resourced. Regulatory loopholes, weak interagency coordination, and poor data transparency continue to undermine oversight, allowing the systems in place to be exploited. As non-OECD exports decline, Türkiye stands out as the largest remaining OECD recipient of European plastic waste, raising urgent questions about the effectiveness of current enforcement mechanisms and the true fate of exported materials.

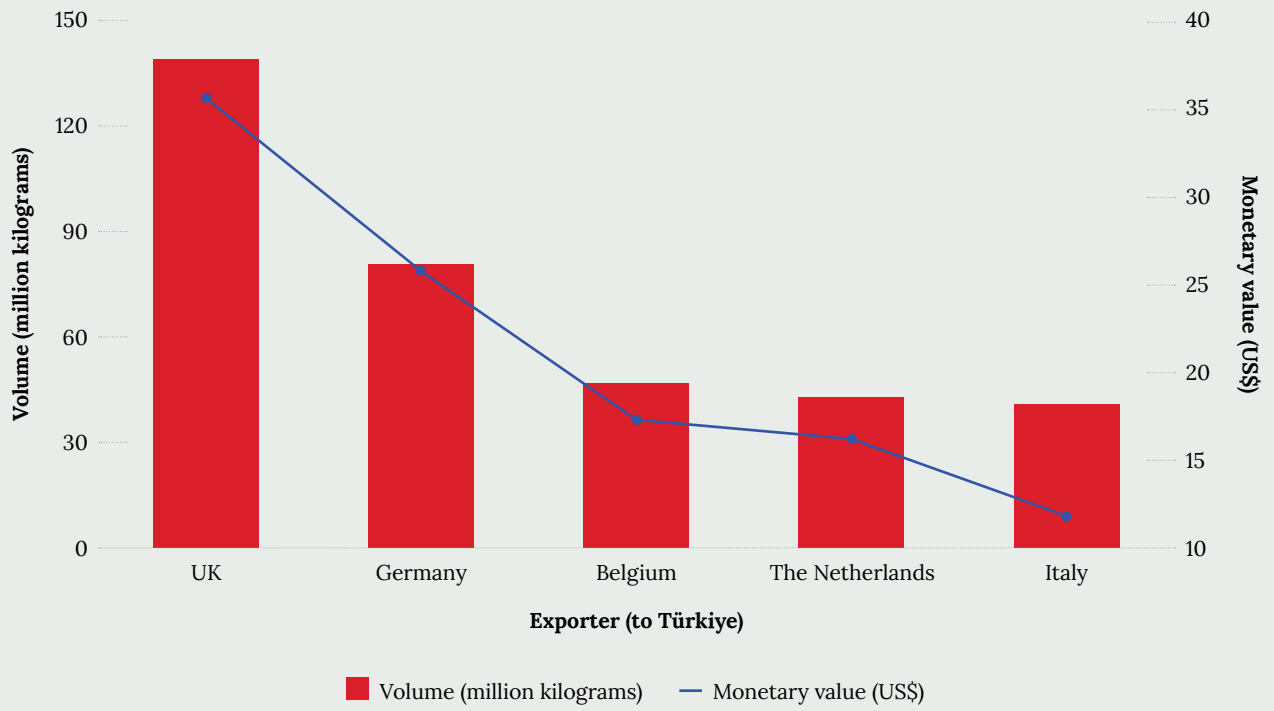


FIGURE 1 Volume and monetary value of plastic waste exports from the top five European origin countries in 2023.

SOURCE: United Nations Comtrade Database, <https://comtradeplus.un.org>



HOW PLASTIC WASTE REACHES TÜRKİYE – AND WHERE IT GOES OFF TRACK

Plastic waste destined for Türkiye follows a complex and opaque transport network that spans multiple countries and ports across Europe. This fragmentation creates ample opportunities for regulatory evasion, deliberate misclassification and illegal trafficking.

Waste typically begins its journey by road, transported by truck from across the EU to key seaports where it is consolidated for international shipment. Major European ports – particularly Antwerp (Belgium), Rotterdam (Netherlands) and Hamburg (Germany) – act as critical gateways, serving both legal exporters and traffickers.⁸ From these hubs, waste is shipped primarily to Türkiye's major import ports, including Mersin, Ambarlı (Istanbul), Izmir and Adana, where many plastic waste importers are based.

One growing vulnerability in this system is the increasing use of roll-on/roll-off (RORO) transport, particularly on routes like the UK–Netherlands corridor.⁹ RORO bypasses container inspections at ferry ports such as Dover, Harwich and Portsmouth, making it easier to traffic misdeclared or contaminated waste. Once in mainland Europe, waste may travel overland or via secondary shipping routes to Türkiye.

On the UK side, ports such as Felixstowe, Southampton, Liverpool, London Gateway, Immingham and Teesside are key exit points. Northern Ireland poses a particular risk, with weak regulatory oversight allowing exporters to ship waste to Türkiye via the Republic of Ireland with minimal scrutiny.¹⁰ The fragmented structure of environmental enforcement across the UK – split between England, Scotland, Wales and Northern Ireland – further complicates monitoring and enforcement efforts.

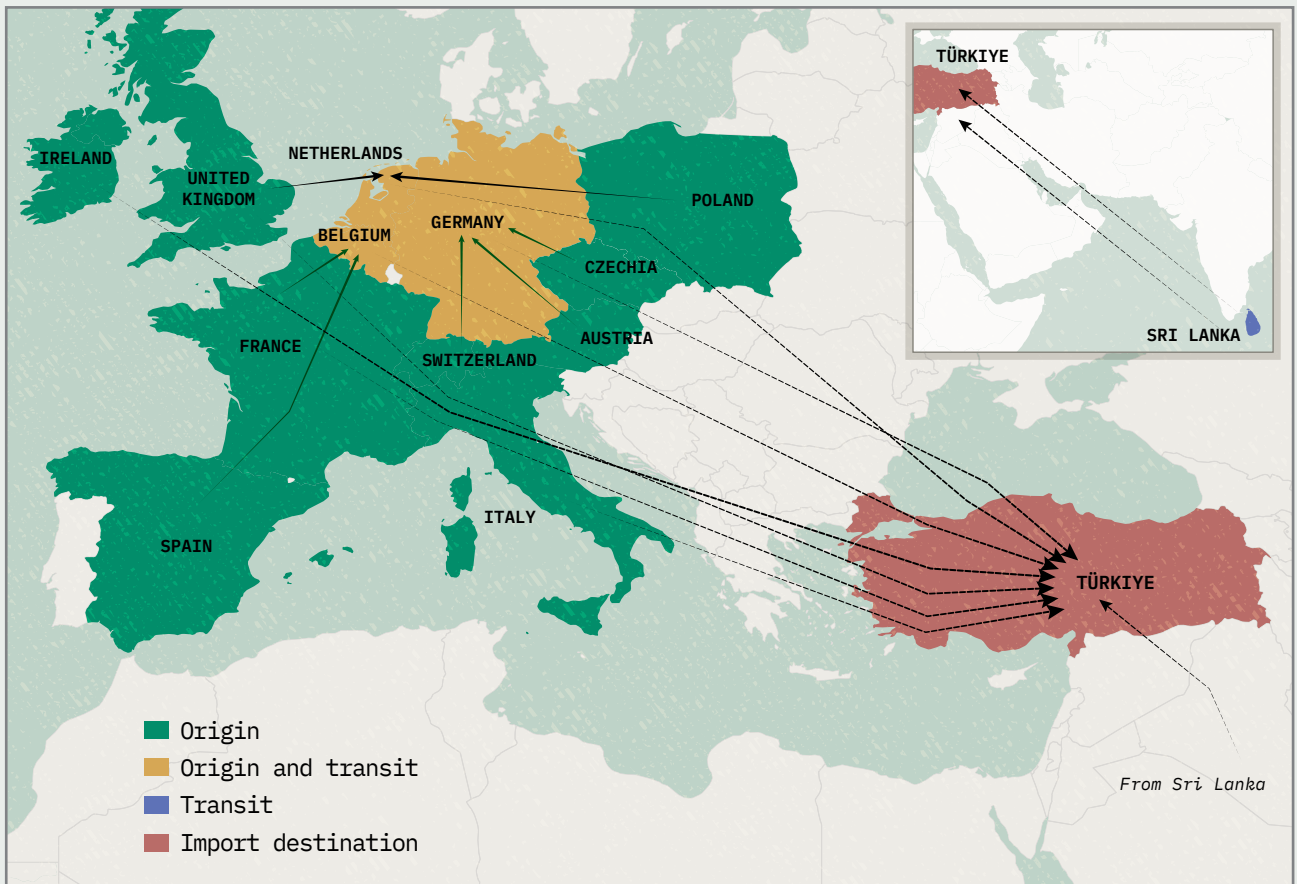


FIGURE 2 Identified routes for plastic waste connecting Europe and Türkiye.

Meanwhile, the Netherlands operates as a major transshipment hub, often receiving waste from both the UK and Poland. Here, interim storage or processing sites are reportedly used to launder the origin of waste, masking its path before final shipment to Turkish ports.¹¹ Elsewhere in Europe, ports such as Le Havre and Marseille in France, Genoa in Italy and Hamburg in Germany offer alternative routes for waste exports, especially as controls in Rotterdam have tightened. In some cases, shipments are routed through third countries, such as Sri Lanka, to disguise their true origin before final delivery in Türkiye.¹²

The movement of plastic waste to Türkiye is facilitated by a fragmented and porous transport system. Throughout this system trafficking networks take advantage of regulatory blind spots, weak border checks and poor coordination between customs and environmental authorities. Deliberate mislabelling of plastic waste, transit through poorly monitored ports and the use of intermediary countries all contribute to a system where illegal shipments can easily blend in with legitimate ones. This system severely undermines the effectiveness of EU waste export controls.



BLURRED LINES BETWEEN WASTE AND RECYCLABLES: HOW CORPORATIONS EXPLOIT LOOPHOLES

Significant volumes of non-recyclable plastic waste are being exported to Türkiye under the pretence of legitimate recycling. This is facilitated by a systemic lack of accountability in the private sector, where corporations operate within legal frameworks while simultaneously exploiting loopholes to offload environmental and financial burdens.¹³

A common tactic involves loading shipping containers with approximately 80% clean plastic and 20% contaminated or low-grade waste. This strategy allows exporters to shift the cost and responsibility of disposal to Turkish facilities, avoiding expensive processing fees in their home countries. Once in Türkiye, the clean plastics are separated and sold for industrial reuse or recycling, while the contaminated fraction is often burned, dumped or processed under hazardous, unauthorized conditions, and frequently involving exploited labour and ignored environmental standards.¹⁴

Major multinational corporations are central to this trade. For example, one of the world's largest waste management companies, which is headquartered in France and has agreements with major European supermarket chains, subcontracts waste processing to smaller firms.¹⁵ This has the effect of obscuring the origin, composition and final fate of plastic waste. These subcontractors operate under the legal banner of recycling, but the outsourcing structure shields parent companies from scrutiny and accountability, allowing misdeclaration of shipments and blending of different types of plastic and non-plastic waste to avoid detection.¹⁶

In the Netherlands, a major waste management company acts as a large-scale sorting and export hub. Although it operates as a legitimate recycling facility, the accuracy of waste classification and transparency in tracking shipments have reportedly been called into question.¹⁷

Similarly, some UK exporters reportedly rely on accredited intermediaries to leverage gaps in national and EU enforcement, and bypass environmental compliance in receiving countries.¹⁸ This widespread practice, known as regulatory arbitrage, involves exploiting inconsistencies between national waste regulations. Exporters use the legal definition of recyclables to ship materials that, once in Türkiye, fail to meet domestic standards for safe or environmentally sound processing. To further obscure the nature of shipments, some exporters intentionally mix plastic waste with paper, textiles or other materials, complicating inspections and undermining enforcement.¹⁹

Although many companies technically operate within the legal bounds of waste trade regulations, they often neglect due diligence, relying on weak oversight and complex subcontracting chains to avoid scrutiny. This creates a convenient legal grey zone: firms can claim compliance while profiting from practices that directly contribute to pollution, unsafe labour conditions and environmental degradation in importing countries.²⁰

In short, the line between legal recycling and illegal dumping is not just blurred – it is sometimes actively manipulated. The lack of corporate transparency, combined with lax enforcement and fragmented regulatory frameworks, enables multinational companies and brokers to export harmful plastic waste with minimal risk of accountability. Without stronger oversight, clearer chain-of-custody requirements and stricter private-sector obligations, the global waste trade will continue to fuel environmental injustice under the guise of recycling.



Large international corporations exploit legal grey areas in the plastic waste trade by shipping non-recyclable plastic to Türkiye under the pretence of legitimate recycling. © Yasin Akgul/AFP via Getty Images



PROFITING FROM PLASTIC: ORGANIZED CRIME, CORRUPTION AND RECYCLING FRAUD

The plastic waste trade to Türkiye is also a lucrative avenue for organized crime groups, corrupt officials and fraudulent businesses. Rather than supporting global recycling and resource recovery, the trade has, in some cases, become entangled with illicit networks that exploit regulatory gaps, weak oversight and financial incentives.

The illicit trade is dominated by opaque business networks, including family-run enterprises and organized crime groups, operating under multiple company names to obscure ownership and liability. Although not all actors involved in the plastic waste trade engage in wrongdoing, this investigation highlighted how Turkish brokers regularly use fake or dormant companies to process illicit shipments, with some importers reportedly specializing in handling misdeclared or contaminated waste.²¹ Traders from the Netherlands, Italy and India also play significant roles in facilitating illicit flows of plastic waste into Türkiye.²²

Efforts to curb this issue in other parts of the world – such as Malaysia and Thailand – have led to crackdowns on known trafficking networks, pushing many of these operations to shift their focus to Türkiye. Italian mafia groups have also been linked to plastic waste exports to Türkiye, reinforcing the transnational and organized nature of the trafficking networks.²³

One illustrative case identified in the investigation involved a German company and its Turkish partner sharing ownership and coordinating logistics to traffic hazardous plastic waste under the guise of legitimate recycling.²⁴ Such operations rely on shell companies registered in both the EU and Türkiye, allowing traffickers to conceal the real beneficiaries of waste shipments and evade detection.²⁵



A waste sorting facility in Istanbul. The plastic waste trade to Türkiye has become a profitable channel for organized crime groups, corrupt officials and fraudulent businesses. © Chris McGrath/Getty Images

Organized crime groups are also known to exploit national recycling incentive schemes, such as the UK's PRN system, by engaging in carousel fraud – exporting and re-importing the same waste to maximize profit from a single shipment.²⁶ Such schemes are often facilitated by tight-knit family networks, which further complicates efforts to enforce regulations and prosecute offenders. Documentation fraud, involving the falsification of shipment codes, weight records and audit trails, is a recurring issue, with the same actors appearing in multiple suspect transactions.²⁷

In Türkiye, weak customs enforcement and limited institutional capacity are significant challenges. Allegations persist that bribery and corruption among officials allow contaminated or inaccurately declared plastic waste to enter the country with limited scrutiny.²⁸ Reports also suggest that senior government officials have vested interests in the recycling industry, raising serious concerns over conflicts of interest that could hinder effective enforcement efforts.²⁹

Economic incentives further complicate this landscape. Türkiye offers tax exemptions on the export of plastic products, which unintentionally encourages the importation of low-cost or contaminated waste for reprocessing into items such as plastic granules or bags.³⁰ These activities, while legal on paper, frequently serve as fronts for broader money laundering operations where profits are obscured through complex financial networks or routed through offshore accounts.³¹ Corrupt customs and trade officials reportedly facilitate the flow of funds alongside physical shipments of plastic.³²

Here, a critical oversight lies in the limited scrutiny of financial flows connected to waste trafficking. Fraudulent invoicing and falsified export documentation often go un-investigated, allowing profits to circulate with minimal enforcement intervention.³³ Despite strong indicators of corrupt activities between exporters and customs agents, there is minimal risk of prosecution as enforcement actions remain inconsistent and under-resourced.

Investigators and journalists attempting to uncover illegal operations on the ground also often face deliberate deception. Site visits are carefully staged, with non-compliant processing



Plastic waste from Europe often ends up dumped illegally in the Turkish countryside, with much ending up in the province of Adana. © Yasin Akgul/AFP via Getty Images

facilities tipped off to temporarily shut down or replace their activities with sanitized operations that mask the illegal activity.³⁴ This corruption prevents authorities and observers from understanding the true scale of environmental and regulatory violations.

Corruption at all levels – customs, trade ministries and environmental regulators – enables the illicit plastic waste trade to thrive. To address the problem effectively, there is a pressing need for stronger international cooperation, enhanced financial auditing and digital tracking systems that can provide real-time transparency across supply chains. Without this, Türkiye – and other nations facing similar challenges – will remain a key hub in the global economy of waste crime, exacerbating environmental harm and undermining global recycling standards.

HOW THE PRN SYSTEM WORKS – AND HOW IT IS EXPLOITED

The PRN system in the UK was introduced to fulfil requirements under the EU Packaging and Packaging Waste Directive (94/62/EC).³⁵ It is a market-based compliance mechanism designed to place producer responsibility on businesses handling packaging materials. Companies that place packaging on the market are legally obligated to show that a corresponding proportion has been recycled. To do this, they purchase PRNs for domestic recycling, or Packaging Export Recovery Notes (PERNs) for waste exported for recycling, issued by accredited re-processors and exporters.

Essentially, each PRN or PERN represents 1 tonne of packaging waste recycled or exported for recycling, providing proof of compliance with national recycling targets. The system operates as a subsidy-style mechanism, transferring money from producers to recyclers and exporters to incentivize recycling. However, these payments only ‘top up’ the value chain – they do not cover the full cost of recycling or ensure its environmental integrity.

LOOPHOLES AND FRAUD

Despite its well-meaning objectives, the PRN system is deeply vulnerable to fraud and abuse, creating a parallel economy of false claims, misdeclared waste and regulatory blind spots:

- False declarations: Some companies falsely claim non-recyclable or contaminated waste as recyclable to obtain PRNs. Since PRNs are issued when the waste is exported (not when it is actually recycled), exporters can claim subsidies without verifying that the waste is properly processed.³⁶
- Carousel export scams: A particularly egregious form of fraud involves ‘carousel exports’, where the same shipment of waste is moved across borders multiple times – exported, then re-imported and exported again – to fraudulently generate multiple PRNs or PERNs for a single load.³⁷
- Forged documentation: Fraudsters use fake weighbridge tickets, PRN forms and fabricated audit trails to create the illusion of compliance. Some use shell companies and complex webs of subcontractors to obscure the true destination and content of waste shipments.³⁸
- Organized crime involvement: Sophisticated, family-run criminal networks and organized crime groups have infiltrated the system. They exploit weak oversight and regulatory gaps, particularly in the export chain, where the UK government does not routinely inspect overseas recycling facilities.³⁹

SYSTEMIC WEAKNESSES ENABLING ABUSE

Several structural issues allow the exploitation of the PRN system to persist:

- PRNs are issued before recycling occurs: Current rules allow PRNs to be issued once waste is shipped, not when it is confirmed as recycled. This allows exporters to profit from unrecycled – or unrecyclable – waste.⁴⁰
- Fluctuating market prices: PRN prices vary based on market conditions. When prices are high, the financial incentive for fraud increases, encouraging false claims and fraudulent exports.⁴¹
- Manual data entry and lack of real-time monitoring: The system lacks robust digital tracking and relies heavily on manual paperwork, making it easy to forge records and difficult to detect fraud in real time.⁴²
- Inadequate oversight: UK regulators lack the capacity and infrastructure to audit waste streams effectively. Overseas sites where UK waste is sent are rarely inspected, allowing fraudulent activity to go unchecked.⁴³

LOOKING AHEAD: REFORM AND RISKS

Reforms due in 2025 will require PRNs to be issued only after recycling has been verified. However, the risk of forged compliance records remains high unless enforcement and digital oversight are dramatically strengthened.

In its current form, the PRN system distorts recycling data, enables profiteering by criminal actors and creates a financial incentive for exporting environmental harm under the guise of compliance. Without real-time tracking, stricter cross-border audits and penalties for fraudulent issuers, the PRN scheme will continue to be less a tool for sustainable waste management and more a loophole-ridden subsidy for greenwashing.





WHAT HAPPENS TO PLASTIC WASTE IN TÜRKİYE?

Despite Türkiye being promoted by the EU as a ‘green light’ destination for waste exports, systemic issues persist in the country, allowing both legal and illegal waste flows to continue unchecked.⁴⁴ Although Türkiye is a member of the OECD – facing fewer restrictions on waste imports compared to non-OECD destinations – its domestic regulatory framework is fragmented and easily manipulated, making it an attractive dumping ground.⁴⁵ Proposals for comprehensive reforms, including a full ban on plastic waste imports, have consistently been blocked, in part due to close ties between government officials and the recycling industry.⁴⁶ Even initiatives like the high-profile ‘Zero Waste’ campaign lack enforcement mechanisms to curb plastic waste imports.⁴⁷

Institutional corruption plays a central role in Türkiye’s plastic waste crisis. Interviewees reported government involvement in waste import activities, with ministries having connections to private recycling firms, as well as a lack of enforcement.⁴⁸ In 2021, a temporary ban on polyethylene plastic waste imports was lifted within a week, exemplifying the volatility and vulnerability of Türkiye’s regulatory system.⁴⁹ Compliance audits are also often manipulated to satisfy European export requirements, masking illegal activity.⁵⁰

Türkiye’s western and southern coastal regions, particularly Izmir and Adana, serve as major entry points for imported plastic waste. Adana alone receives over 60% of the country’s plastic waste imports, making it both a processing centre and an unofficial dumping ground.⁵¹ Many recycling firms in these regions operate with little transparency, and even those that are technically legal often receive mislabelled or contaminated waste.

Much of the imported waste is of poor quality and unsuitable for recycling. Instead of being processed, it is often incinerated or dumped illegally. Bales of imported plastic waste have been found to contain hazardous materials, including municipal and medical waste, posing serious risks to public health and the environment.⁵²

In addition to environmental degradation, the trade fuels human rights abuses. Migrant workers and children are commonly exploited in waste collection and sorting operations, particularly in informal recycling sectors.⁵³ This adds a severe social cost to an already unsustainable system.

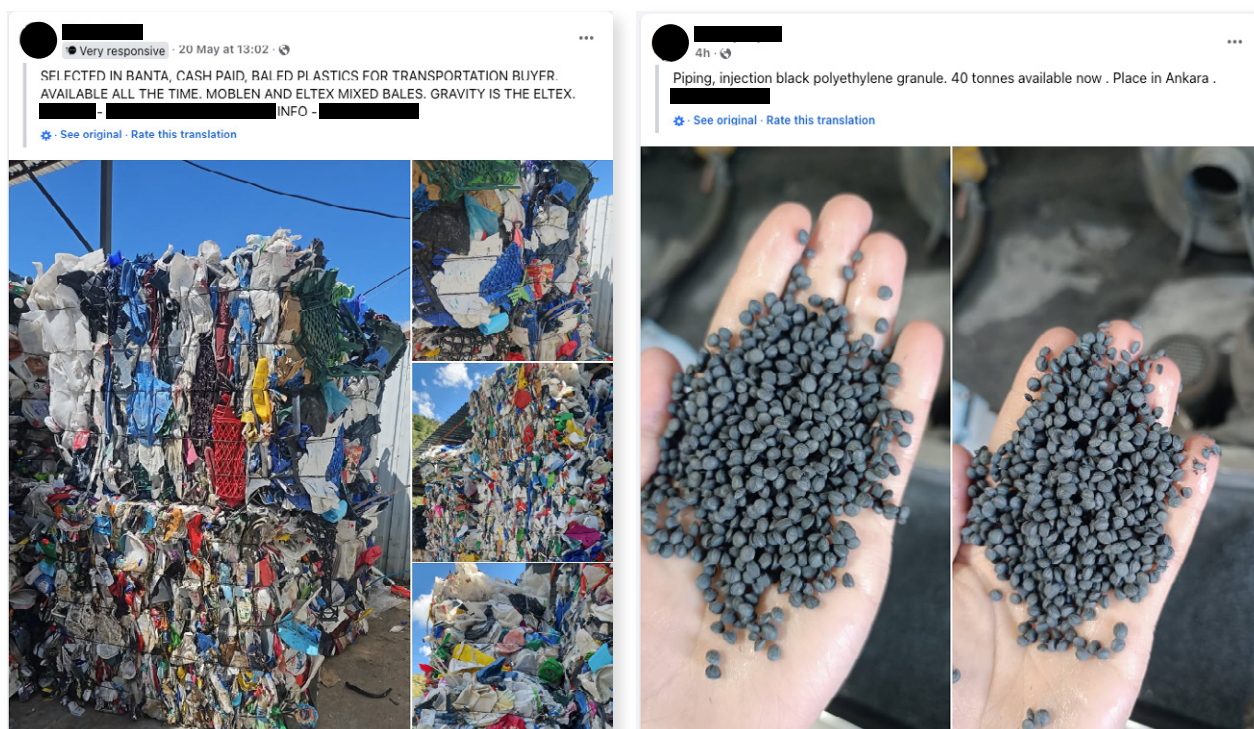
Online trading

Online platforms – particularly Facebook groups, WhatsApp channels and other digital marketplaces – play an increasingly central role in facilitating the illicit trade of plastic waste in Türkiye.⁵⁴ These platforms provide a low-risk environment to arrange deals, negotiate prices and coordinate logistics, all while operating outside the reach of formal regulatory oversight.

Waste brokers in Türkiye increasingly use social media and encrypted messaging apps to advertise services, connect with international exporters and manage shipments. Many of these brokers operate under multiple company names or deliberately mask their identities, making enforcement challenging.⁵⁵

One of the key illicit practices on these platforms is the reselling of imported plastic waste. Under legal frameworks, imported waste is supposed to be processed and recycled locally – not sold on in bulk. However, online networks allow brokers to circumvent this regulation, further turning Türkiye into a hub for unregulated redistribution rather than responsible recycling.⁵⁶

The use of digital channels enables traffickers to avoid detection and creates an ecosystem in which waste transactions are fragmented, anonymous and largely untraceable. Investigating these online broker networks is essential to understanding the true scale of Türkiye's role in global plastic waste trafficking and to closing the regulatory gaps that allow such practices to persist.

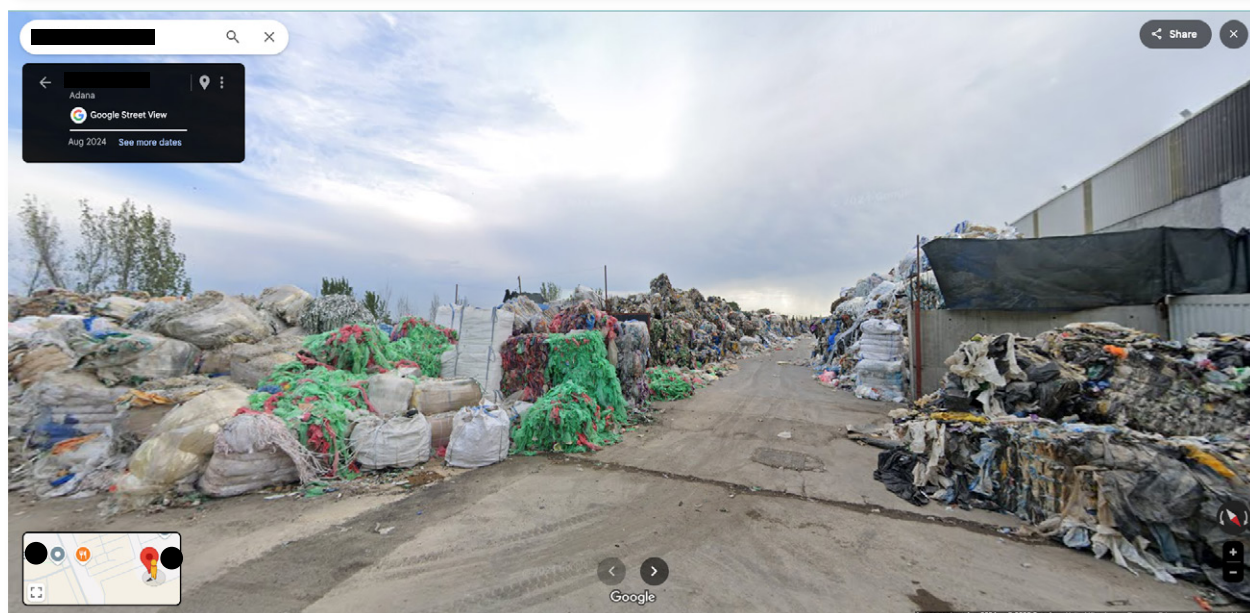


Online platforms, particularly Facebook groups, are increasingly being used to sell imported plastic waste in Türkiye, which is supposed to be processed and recycled locally, not sold on in bulk. *Photos: Social media*

Using satellite imagery to identify hotspots of illicit activity

When European investigators attempt to assess waste management practices on the ground, they are frequently misled and shown sanitized recycling sites, obstructing effective oversight of actual processing conditions.⁵⁷ In this context, satellite imagery presents a powerful tool for independent verification.

Satellite data has proven instrumental in identifying illegal plastic waste accumulation and dumping sites across Türkiye. Adana and Izmir have emerged as key hotspots, with evidence of large-scale waste stockpiles, open burning near cement factories and contamination of agricultural land.⁵⁸



Google Earth and Street View reveals a tight cluster of plastic recycling facilities within a 1-square-kilometre area in Adana, Türkiye, with large volumes of unsorted and probably non-recyclable plastic waste, indicating illegal storage and/or disposal.

The GI-TOC analyzed a sample of online waste shipment reports that identified the top eight UK plastic waste importers by volume. Satellite imagery revealed that four of these companies operate within a 1-square-kilometre area in Adana, Türkiye – an indication of concentrated plastic processing activity. Further investigation using Google Earth and Street View identified a tight cluster of plastic recycling facilities within the area, suggesting high operational intensity; a truck and trailer park near the facilities, likely serving as a logistics hub for the transportation and handling of significant volumes of waste; and at least one site visibly storing dirty, unsorted and likely non-recyclable plastic waste, pointing to potential mismanagement or illicit activity.

Google Earth and satellite imagery have also proven effective tools in countries such as Malaysia and India, where they have been used to identify unregulated waste accumulation sites.⁵⁹ Many of these locations reveal large volumes of unmanaged plastic waste, indicating possible illegal storage or disposal. To strengthen oversight, high-risk areas flagged through satellite analysis should be cross-referenced with customs and trade data to trace suspicious waste flows and investigate potentially non-compliant facilities. Although satellite tools are valuable for detecting large-scale stockpiles and dumping, they cannot reliably distinguish legal operations from illicit ones, making on-site inspections critical for verifying conditions and enforcing environmental standards.



CONCLUSION AND RECOMMENDATIONS

Given the state of plastic waste management in Türkiye, the EU must take urgent and decisive action to close legal and regulatory loopholes that facilitate the illicit movement of plastic waste to Türkiye and other countries. The challenges faced by an OECD nation lacking sufficient capacity for effective waste disposal and recovery highlight the critical need for enhanced enforcement coordination, real-time tracking systems and robust, systematic inspection protocols. These measures are essential to detect and intercept illegal plastic waste shipments before they leave EU ports. To address these challenges, the following recommendations are proposed:

- **Strengthen regulatory enforcement and pre-export inspections.** To prevent the export of misdeclared or contaminated plastic waste, the EU and UK should enhance regulatory enforcement at the point of export. Pre-departure inspections must be systematically strengthened to verify full compliance with recycling and waste management regulations. This includes thorough documentation checks and physical inspections where necessary. A critical reform involves mandating that the Prior Informed Consent (PIC) process⁶⁰ and all related declaration documents be fully completed, submitted and verified before cargo departs from the port of export. Currently, these documents are often finalized after departure, undermining the ability of enforcement authorities to intercept mislabelled or concealed waste during transit or at sea. Implementing a mandatory pre-departure verification system would significantly enhance the capacity of EU enforcement bodies to detect and prevent illegal plastic shipments. It would also reduce the regulatory and environmental burden placed on recipient countries with limited capacity to manage imported waste effectively.
- **Leverage digital and technological tools for enhanced monitoring.** The EU should adopt advanced digital and technological solutions to strengthen oversight of waste shipments and combat illegal waste trafficking. Establishing a real-time digital tracking system for

waste movements across member states would significantly improve transparency, enable the identification of high-risk shipments and transit points, and facilitate timely enforcement interventions. In parallel, the deployment of satellite imagery and drone-based surveillance technologies should be expanded to detect illegal waste sites, open dumping and illicit burning activities. Additionally, enforcement authorities should proactively monitor and, where appropriate, infiltrate online platforms facilitating waste trade (e.g. Facebook groups, private broker networks). This would allow for the early identification of illicit transactions and the flagging of suspicious actors for investigation, closing a critical gap in the enforcement landscape.

- **Strengthen transparency and data accessibility.** To address the persistent ambiguity surrounding the classification of ‘recyclable’ versus ‘waste’ plastics within the EU, greater transparency in waste trade operations is urgently needed. A publicly accessible database of exporters and importers should be established, enabling the identification of ownership structures and potential linkages between EU-based and Turkish entities. This would help expose concealed relationships, flag suspicious actors and support investigations into illicit activities. Additionally, national export data – such as that held by agencies like the Northern Ireland Environment Agency (NIEA) – should be made more broadly accessible across EU member states. Enhancing cross-border data visibility would improve the traceability of waste flows, support coordinated enforcement actions, and close information gaps currently exploited for regulatory evasion.
- **Conduct targeted investigations into high-risk actors and financial flows.** Coordinated, cross-border investigations should be launched into high-risk waste management companies and subcontractors operating across both exporting and importing countries – including Türkiye, the UK, Germany and the Netherlands. These efforts should focus on uncovering ownership networks that facilitate illegal plastic waste exports and evade regulatory oversight. Equally critical is the investigation of financial flows between these entities. Tracing transactions can help expose the abuse of PRNs, as well as instances of money laundering, fraud and corruption within the waste trade system. Strengthening financial scrutiny and enforcing anti-corruption measures will help dismantle illicit networks and reinforce accountability throughout the waste management chain.
- **Strengthen international and interagency cooperation.** Cooperation between the EU and Türkiye should be significantly reinforced through joint enforcement operations, real-time intelligence sharing and coordinated investigations involving customs, environmental and trade authorities. Establishing formal channels for bilateral information exchange will support faster responses to suspicious shipments and enhance enforcement capabilities on both sides. At the EU level, enforcement protocols should be harmonized across member states to reduce regulatory fragmentation. This includes developing interoperable, secure data-sharing platforms between national agencies – customs, environmental regulators and financial crime units – to enable cross-border visibility of waste flows, better detect anomalies and coordinate enforcement actions more effectively.
- **Address legal and policy gaps.** The EU and UK must close critical regulatory loopholes in their waste management systems, beginning with enhanced oversight and transparency of the UK PRN system and equivalent EU mechanisms to prevent fraudulent recycling claims and inflated recovery rates. These systems must be subject to regular audits, public disclosure requirements and stricter verification of end-destination recycling. Simultaneously, the EU should strengthen its export policies to better manage the environmental

and governance implications of restricting plastic exports to non-OECD countries. As an immediate measure, the EU could consider suspending plastics exports to Türkiye, given concerns about the impartiality and effectiveness of its national enforcement system in addressing the harmful impacts of EU plastic waste. To inform future revisions of EU waste law, the EU should also conduct a comprehensive review of waste management capacities across all OECD countries. This review would provide an evidence-based foundation for aligning waste exports with environmental and governance standards.

- **Strengthen private sector accountability.** Private sector actors, particularly shipping companies and waste exporters, must be held to higher standards of due diligence and accountability. Shipping companies should be legally required to screen and verify bills of lading for indicators of suspicious or misdeclared waste shipments before cargo departs EU ports. This screening process should include risk-based flagging mechanisms and mandatory reporting obligations to enforcement authorities. Similarly, waste exporting companies must be compelled to conduct thorough due diligence on the destination facilities receiving EU waste. This includes verifying that the receiving sites have the capacity, permits and infrastructure to process waste in an environmentally sound manner, rather than burning, abandoning or illegally dumping it. Verification should be documented and subject to third-party auditing or spot checks by competent authorities. Embedding enforceable accountability mechanisms throughout the export chain will help prevent environmental harm, reduce regulatory evasion and disrupt illicit waste trade networks.

NOTES

- 1 The PRN system is a market-based mechanism that helps businesses meet their packaging waste recycling obligations under the Producer Responsibility Obligations regulations. Accredited re-processors issue PRNs to confirm that a certain amount of packaging waste has been recycled, which businesses can purchase to demonstrate compliance. However, PRNs are issued at the time of export and not when recycling has occurred or been verified.
- 2 United Nations, UN Comtrade Database, 2025, <https://comtradeplus.un.org>.
- 3 European Commission, Packaging waste statistics, 10 October 2024, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Packaging_waste_statistics.
- 4 European Environment Agency, Drivers of EU plastic waste exports, ETC CE Report 2024/2, January 2024, <https://www.eionet.europa.eu/etcs/etc-ce/products/etc-ce-report-2024-2-drivers-of-eu-plastic-waste-exports>.
- 5 Ibid.
- 6 European Commission, New regulation on waste shipments enters into force, 20 May 2024, https://environment.ec.europa.eu/news/new-regulation-waste-shipments-enters-force-2024-05-20_en.
- 7 European Environment Agency, Drivers of EU plastic waste exports, ETC CE Report 2024/2, January 2024, <https://www.eionet.europa.eu/etcs/etc-ce/products/etc-ce-report-2024-2-drivers-of-eu-plastic-waste-exports>.
- 8 Interview with an NGO, Vienna, Austria, February 2025; interview with an NGO, Seattle, Washington, February 2025.
- 9 Interview with an NGO, Seattle, Washington, February 2025.
- 10 Interview with an industry specialist, London, February 2025.
- 11 Ibid.
- 12 Interview with an NGO, Vienna, Austria, February 2025.
- 13 EIA International, Dirty Deals – Part One, October 2024, <https://eia-international.org/report/dirty-deals-part-one>.
- 14 Interview with an NGO, Adana, Türkiye, January 2025; Beyond Plastics, ‘It’s as if they’re poisoning us’: The health impacts of plastic recycling in Turkey, 21 September 2022, <https://www.beyondplastics.org/reports/turkey-plastic-recycling-harms-health-environment>; Greenpeace, Trashed: How the UK is still dumping plastic waste on the rest of the world, May 2021, <https://www.greenpeace.org.uk/wp-content/uploads/2024/07/Trashed-Greenpeace-plastics-report-final.pdf>; Virginia Comolli, Plastic for profit: Tracing illicit plastic waste flows, supply chains and actors, GI-TOC, November 2021, <https://globalinitiative.net/analysis/illicit-trade-plastic-waste>.
- 15 Interview with an NGO, Vienna, Austria, February 2025.
- 16 Interview with an NGO, Vienna, Austria, February 2025; interview with an NGO, Adana, Türkiye, January 2025.
- 17 Interview with an industry specialist, London, February 2025.
- 18 Ibid.
- 19 Interview with an NGO, Vienna, Austria, February 2025; interview with an NGO, Adana, Türkiye, January 2025; Letsrecycle.com, Fresh Agency inspections find more ‘illegal’ waste shipments, 18 October 2005, <https://www.letsrecycle.com/news/fresh-agency-inspections-find-more-illegal-waste-shipments>.
- 20 Interview with an NGO, Adana, Türkiye, January 2025; EIA International, Dirty Deals – Part One, October 2024, <https://eia-international.org/report/dirty-deals-part-one>.
- 21 Interview with an NGO, Vienna, Austria, February 2025; interview with NGO, Adana, Türkiye, January 2025; Virginia Comolli, Plastic for profit: Tracing illicit plastic waste flows, supply chains and actors, GI-TOC, November 2021, <https://globalinitiative.net/analysis/illicit-trade-plastic-waste>.
- 22 Interview with an NGO, Adana, Türkiye, January 2025.
- 23 European Anti-Fraud Office, OLAF’s work against waste trafficking helps Italian authorities stop illicit waste, 2 September 2021, https://anti-fraud.ec.europa.eu/media-corner/news/olafs-work-against-waste-trafficking-helps-italian-authorities-stop-illicit-waste-2021-09-02_en.
- 24 Interview with an NGO, Malta, February 2025.
- 25 Interview with an NGO, Vienna, February 2025; Virginia Comolli, Plastic for profit: Tracing illicit plastic waste flows, supply chains and actors, GI-TOC, November 2021, <https://globalinitiative.net/analysis/illicit-trade-plastic-waste>.
- 26 Interview with an industry specialist, London, February 2025; EIA International, Dirty Deals – Part One, October 2024, <https://eia-international.org/report/dirty-deals-part-one>.
- 27 Interview with an NGO, Adana, Türkiye, January 2025; interview with an NGO, Malta, February 2025; interview with an NGO, Seattle, Washington, February 2025.
- 28 Interview with an NGO, Adana, Türkiye, January 2025; interview with an NGO, Malta, February 2025; Transparency International, Illegal waste imports to Turkey, <https://www.transparency.org/en/projects/climate-governance-integrity-programme/climate-corruption-atlas/illegal-waste-imports-to-turkey>.
- 29 Interview with an NGO, Malta, February 2025.
- 30 Interview with an NGO, Adana, Türkiye, January 2025.
- 31 Interview with an NGO, Vienna, Austria, February 2025; interview with an NGO, Adana, Türkiye, January 2025; EIA International, Dirty Deals – Part One, October 2024, <https://eia-international.org/report/dirty-deals-part-one>.

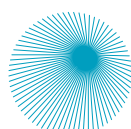
- 32 Interview with an NGO, Vienna, Austria, February 2025.
- 33 Interview with an NGO, Vienna, Austria, February 2025; interview with an NGO, Seattle, Washington, February 2025.
- 34 Interview with an NGO, Adana, Türkiye, January 2025.
- 35 Gov.uk, Extended producer responsibility for packaging: who is affected and what to do, May 2025, <https://www.gov.uk/guidance/extended-producer-responsibility-for-packaging-who-is-affected-and-what-to-do>.
- 36 Interview with an industry specialist, London, February 2025; EIA International, Dirty Deals – Part One, October 2024, <https://eia-international.org/report/dirty-deals-part-one>.
- 37 Ibid.
- 38 Interview with an industry specialist, London, February 2025.
- 39 Interview with an industry specialist, London, February 2025; interview with an NGO, Adana, Türkiye, January 2025.
- 40 Interview with an industry specialist, London, February 2025.
- 41 Ibid.
- 42 Ibid.
- 43 Ibid.
- 44 Interview with an NGO, Adana, Türkiye, January 2025; Leonie Cater, The Turkey-shaped hole in the EU's new waste export regime, Politico, 5 December 2023, <https://www.politico.eu/article/the-turkey-shaped-hole-in-the-eu-new-waste-export-regime>; Marga Zambrana, Turkey: Europe's rubbish dump, Equal Times, 20 November 2023, <https://www.equaltimes.org/turkey-europe-s-rubbish-dump>.
- 45 Ibid.
- 46 Interview with an NGO, Adana, Türkiye, January 2025; Alexander Clapp, Türkiye said it would become a 'zero waste' nation. Instead, it became a dumping ground for Europe's rubbish and was found to contain manipulation meant to manipulate public opinion, *The Guardian*, 18 February 2025, <https://www.theguardian.com/news/2025/feb/18/turkey-said-it-would-become-a-zero-waste-nation-instead-it-became-a-dumping-ground-for-europes-rubbish>.
- 47 Interview with an NGO, Adana, Türkiye, January 2025; Turkish Minute, Erdoğan pushes 'Zero Waste Initiative' at COP29, yet struggles to manage recycling of plastic waste imports, 14 November 2024, <https://www.turkishminute.com/2024/11/14/erdogan-pushes-zero-waste-initiative-at-cop29-yet-struggles-to-manage-recycling-of-plastic-waste-imports>.
- 48 Interview with an NGO, Adana, Türkiye, January 2025; interview with NGO, Malta, February 2025.
- 49 Interview with an NGO, Adana, Türkiye, January 2025; Karen Laird, Turkey backpedals on ban of imported PE waste, *Plastics News*, 14 July 2021, <https://www.plasticsnews.com/news/turkey-backpedals-ban-imported-pe-waste>; Virginia Comolli, Plastic for profit: Tracing illicit plastic waste flows, supply chains and actors, GI-TOC, November 2021, <https://globalinitiative.net/analysis/illicit-trade-plastic-waste>.
- 50 Interview with NGO, Adana, Türkiye, January 2025.
- 51 Greenpeace, Trashed: How the UK is still dumping plastic waste on the rest of the world, May 2021, <https://www.greenpeace.org.uk/wp-content/uploads/2024/07/Trashed-Greenpeace-plastics-report-final.pdf>.
- 52 Interview with an NGO, Adana, Türkiye, January 2025; Beyond Plastics, 'It's as if they're poisoning us': The health impacts of plastic recycling in Turkey, 21 September 2022, <https://www.beyondplastics.org/reports/turkey-plastic-recycling-harms-health-environment>; Greenpeace, Trashed: How the UK is still dumping plastic waste on the rest of the world, May 2021, <https://www.greenpeace.org.uk/wp-content/uploads/2024/07/Trashed-Greenpeace-plastics-report-final.pdf>; Sedat Gündoğdu and Tony R. Walker, Why Turkey should not import plastic waste pollution from developed countries?, *Marine Pollution Bulletin*, 2021, <https://www.sciencedirect.com/science/article/abs/pii/S0025326X21008067>.
- 53 Interview with an NGO, Adana, Türkiye, January 2025; Beyond Plastics, 'It's as if they're poisoning us': The health impacts of plastic recycling in Turkey, 21 September 2022, <https://www.beyondplastics.org/reports/turkey-plastic-recycling-harms-health-environment>.
- 54 Interview with an NGO, Adana, Türkiye, January 2025; interview with an NGO, Seattle, Washington, February 2025; interview with an NGO, Malta, February 2025.
- 55 Ibid.
- 56 Ibid.
- 57 Interview with an NGO, Adana, Türkiye, January 2025.
- 58 Interview with an NGO, Adana, Türkiye, January 2025; interview with an NGO, Seattle, Washington, February 2025; interview with an NGO, Malta, February 2025; interview with an NGO, Vienna, Austria, February 2025.
- 59 Interview with an NGO, Seattle, Washington, February 2025; Alice Ross, UK household plastics found in illegal dumps in Malaysia, *Unearthed*, 21 October 2018, <https://unearthed.greenpeace.org/2018/10/21/uk-household-plastics-found-in-illegal-dumps-in-malaysia>.
- 60 The Prior Informed Consent (PIC) process is a regulatory requirement under the Basel Convention that mandates exporters of hazardous, difficult-to-recycle or unsorted plastic waste to obtain consent from the importing country before shipment. This ensures that the receiving country is fully informed and agrees to accept the waste, aiming to prevent illegal or environmentally harmful trade.



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