

# SHARED RESPONSIBILITY

Why the European Union and China should collaborate on plastic production controls in the Global Plastics Treaty.

## INTRODUCTION

While negotiations towards a new legally binding instrument to end plastic pollution have advanced substantially since the first Intergovernmental Negotiating Committee (INC) session in 2022, several critical elements essential for achieving the objectives of UNEA resolution 5/14 remain legally, procedurally and politically unresolved.

Central to this is the issue of addressing primary, or virgin, plastic production. To that end, many stakeholders and governments in the process have rallied around the call to bend the curve of plastic production in order to facilitate effective measures downstream.

While many developing countries and economies in transition have led the charge on measures to reduce production, several key developed countries have also given their support, culminating in 103 countries supporting text proposals for an article on the supply of primary plastic polymers at INC 5.1.<sup>1</sup> While the scope and structure of such a provision remains uncertain, undoubtedly the issue remains central to the framing of all measures across the plastics lifecycle

## BREAKING THE POLITICAL DEADLOCK

High Ambition Coalition countries have long targeted China as essential to conversations around upstream controls on plastics, positing their engagement as a serious partner with whom progress can be made compared to the obstructionist tactics of the Like-Minded Group led by Saudi Arabia and the United States' political unpredictability.

Furthermore, central to breaking the deadlock are bilateral efforts between the European Union (EU) and China. The EU, which has generally joined ambitious proposals on upstream elements, has signalled the importance of collaborating with China, the world's largest plastics producer, at this critical juncture.

In 2025, the EU and China agreed to "cooperate on achieving an ambitious and balanced international treaty on plastic pollution"<sup>2</sup> and reaffirmed the importance of continued dialogue and the sharing of best practices on "circularity, markets for recyclates, ecodesign, and... opportunities and challenges in the circular economy for plastics."<sup>3</sup>

While Chinese support for more ambitious measures in the Treaty is viewed by many countries as critical to its eventual success, thus far only a subtle shift in positioning on the issue of plastic production has been observed, with the red lines on which elements are palatable in the overall package currently the subject of extensive corridor speculation.<sup>4</sup>

## THE SHIFTING LANDSCAPE OF PLASTIC PRODUCTION AND TRADE

### PLASTIC PRODUCTION IN THE EU AND CHINA

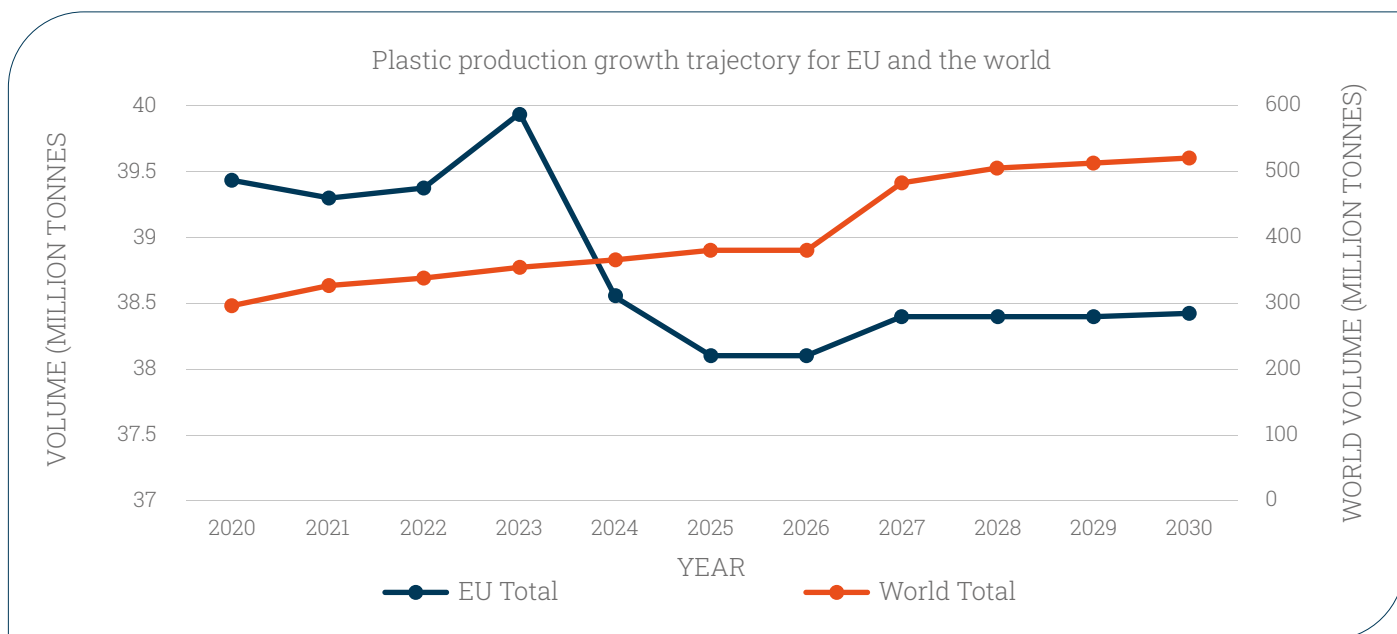
While countries grapple with the scope of a new legally binding instrument on plastic pollution, the on-the-ground reality of current plastic production capacity and projections for growth are mismatched.

Many EU plastic production facilities are operating below capacity, in part due to decreased demand for virgin plastics

as consumers and industries shift toward alternatives materials and systems and markets react to the onset of regulatory changes.

This has resulted in production facilities across Europe closing their doors and a drop of 8.3 per cent in domestic production in 2023, according to Plastics Europe.<sup>5</sup> Consequently, the EU share of the global plastics production market declined from 28 per cent in 2006 to 12 per cent in 2023.<sup>6</sup> Based on current estimates, without intervention the EU production industry is projected to decline to levels last recorded in 2000.<sup>7</sup> Predictions currently show EU production stabilising around 38 million tonnes annually through to 2030, in sharp contrast to the global industry, which is expected to see increases from 402 million tonnes in 2024 to approximately 557 million tonnes in 2030 (see Figure1).

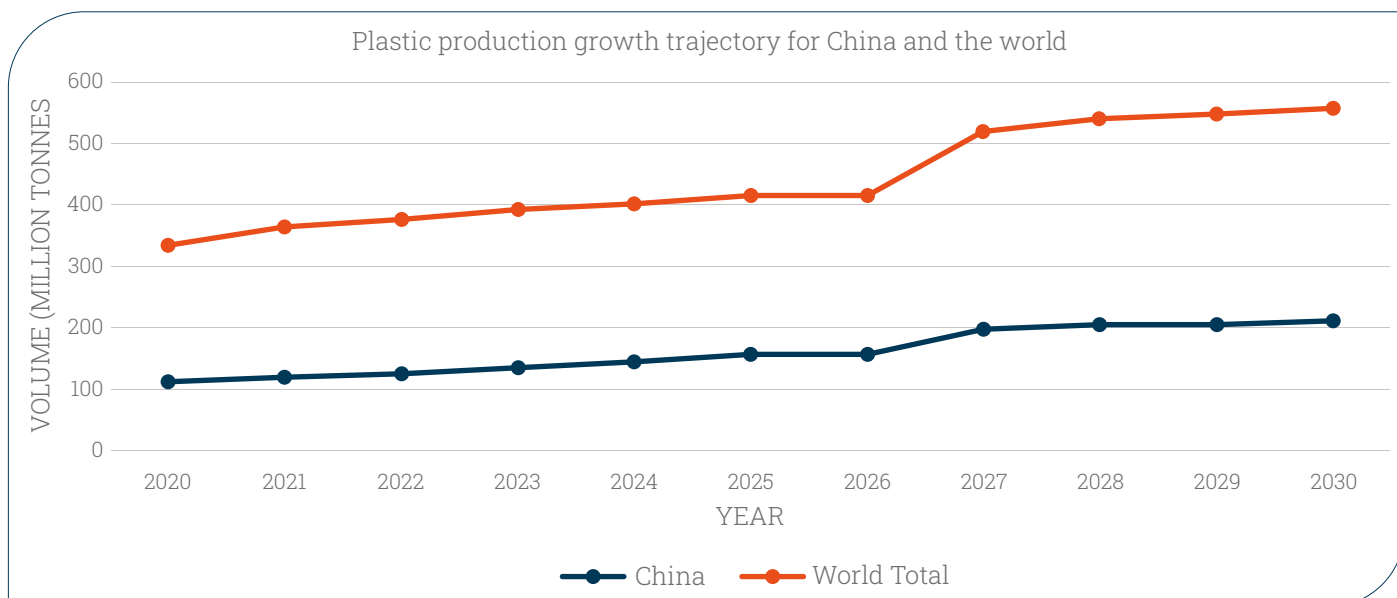
**Figure 1:** Graph showing projected growth scenario out to 2030 for global plastics production (minus EU) vs the projected scenario for the EU industry. Source: Polyglobe



As an example of the shifting geographical centre for global production, against a 2020 baseline the EU's share of global polymer production will decline to roughly 11 per cent (38.412 million tonnes) by 2030, while China's share will increase to about 36 per cent (210.318 million tonnes), creating an increasingly uneven global production landscape.

Faced with high energy and operating costs, increased regulation and high feedstock prices, European facilities have begun closing their doors and selling off assets. The severity of the situation can be observed in Germany, the top plastic producer in the EU, where facilities are operating at 71 per cent capacity when 81 per cent is needed to turn a profit.<sup>8</sup> Plastics Europe has described this overall scenario as a "competitiveness cliff edge."<sup>9</sup>

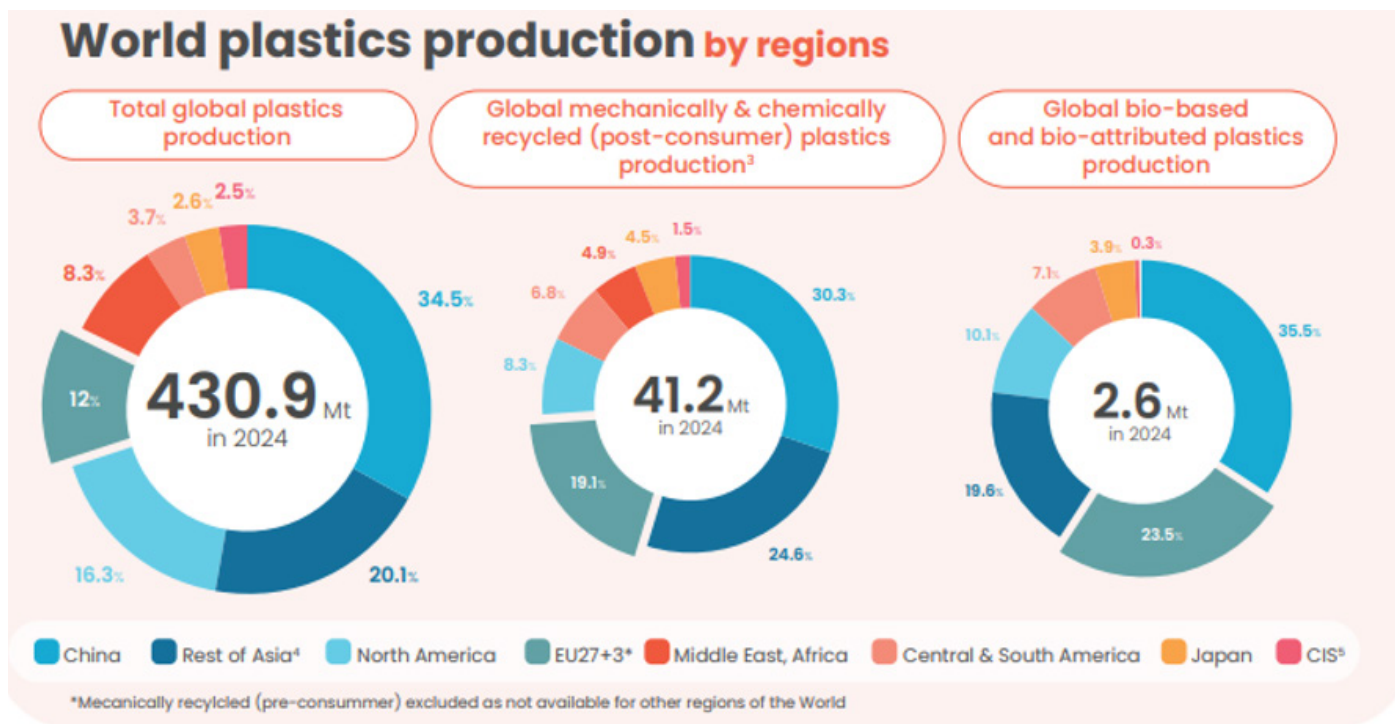
**Figure 2:** Graph showing projected growth scenario out to 2030 for global plastics production for China vs the global growth trajectory (minus China). Source: Polyglobe



Projections for the plastics industry globally are uncertain. While growth at the global level is likely at least in the coming decades, a slower global economic outlook, the emergence of alternative materials and systems, increasing geopolitical tension and resultant trade patterns, as well as opposition to plastics on environmental, climate and health grounds as the new Treaty begins its implementation phase, are likely factors in a less certain economic growth trajectory.<sup>10</sup>

This unpredictability underscores the necessity of targeted and holistic intervention to support a transition to a non-toxic circular economy.

**Figure 3: World plastics production by region for total plastic production, mechanically and chemically recycled plastics and bio-based plastics.** This shows that while EU27+3 represent 12 per cent of total global plastics production, the figure for recycled plastics production is a higher share of the global picture, underscoring the impact of the EU’s investment in collection, sorting and recycling infrastructure and the broader circular economy agenda. Source: Plastics Europe.



The ownership structure of plastic production in the EU and China also reveals stark contrasts that shape their respective policy landscapes.

In the EU, state-owned producers account for only 3.9 per cent of total output (14.86 million tonnes), with the remaining 96.1 per cent (366.03 million tonnes) produced by privately owned firms (Table 1).

In China, the situation is more even, with state-owned companies slightly ahead in the sector, accounting for 52.6 per cent of national production (1.211 billion tonnes overall) compared to 47.4 per cent (1,093 billion tonnes) from private enterprises (Table 1).

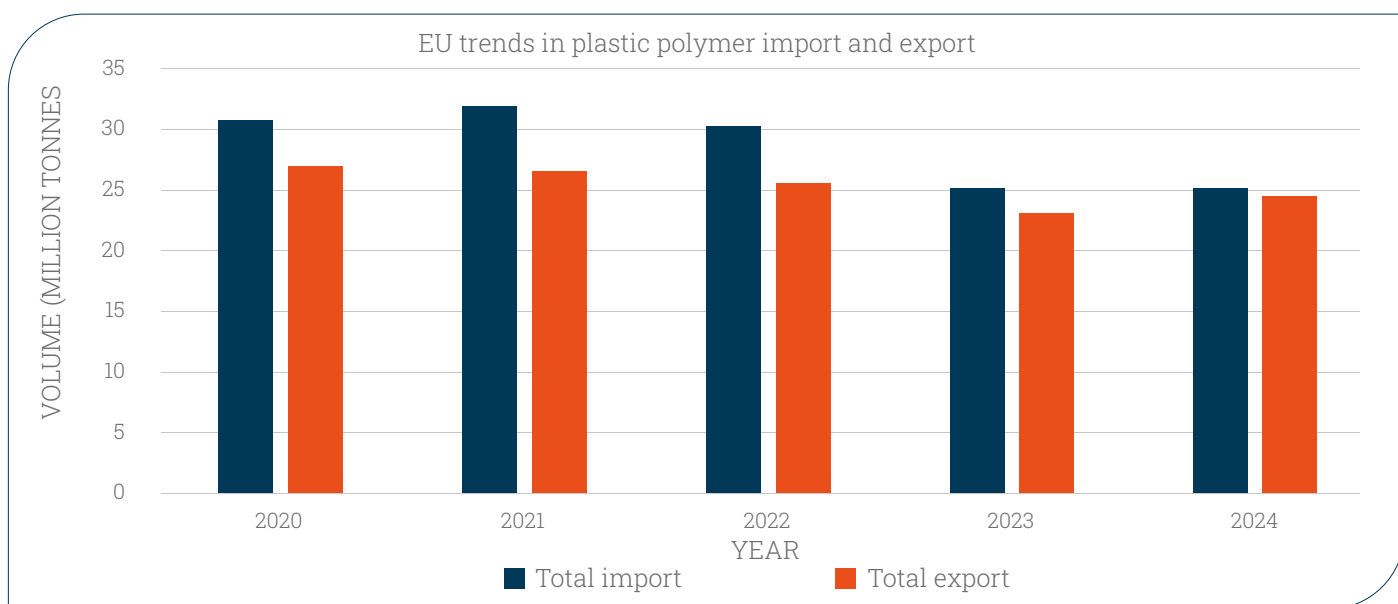
This structural divide has major implications for investment strategies, operating rates, competitiveness and the overall pace of transition towards a circular economy. It also directly influences the political economy of production control measures, emphasising the need for tailored approaches to EU-China cooperation in the plastics Treaty negotiations.

**Table 1: Overview of state-owned plastic production in the EU and China.** Source: Polyglobe

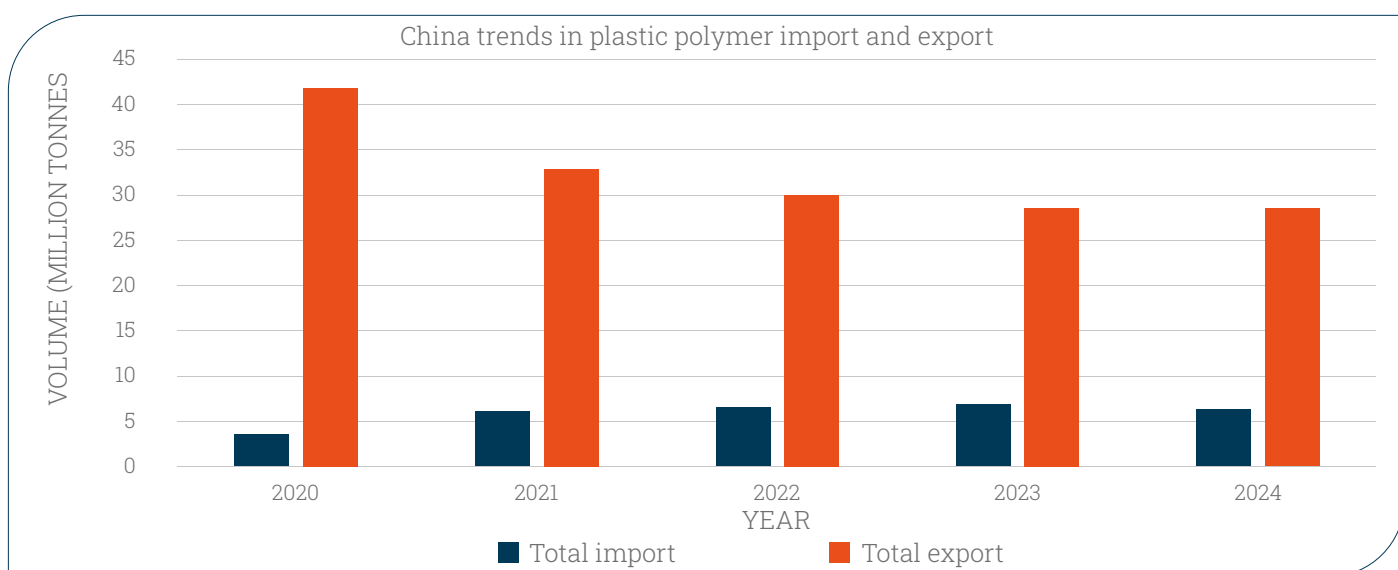
Region	Number of state-owned producers	Total state-owned production (MT)	Percentage of state-owned production	Percentage state-owned production globally	Number of private-owned producers	Total private-owned production (MT)	Percentage of private-owned production
China	78	1,211.89	53%	26%	131	1,093.60	47%
EU	3	14.85	4%	0.3%	51	366.03	96%

## TRADE DYNAMICS BETWEEN THE EU AND CHINA

**Figure 4:** EU's total plastic import and export of high-volume polymers (polypropylene (PP), polyethylene (PE), polyethylene terephthalate (PET), polyvinyl chloride (PVC) and polystyrene (PS)) from 2020-24. Source: UN Comtrade.



**Figure 5:** China's total plastic import and export of high-volume polymers (polypropylene (PP), polyethylene (PE), polyethylene terephthalate (PET) polyvinyl chloride (PVC) and polystyrene (PS)) from 2020-24, showing consistently higher export volumes compared to imports over the five-year period. Source: UN Comtrade.



The EU relies heavily on trade in plastics, both as an importer and exporter. For example, imported polymers comprise 20 per cent of the EU's polymer consumption. In 2020, this included nearly three million tonnes of polyvinyl chloride (PVC) and more than one million tonnes of polystyrene (PS).<sup>11</sup> The main trade partners for exports outside of the EU include the United Kingdom (UK), United States (US), Türkiye, China and Switzerland. For imports, the US, South Korea, China, UK and Saudia Arabia take the lead. Imports from China represent 10.3 per cent of the total value in imports and 11.6 per cent of the total value in exports,<sup>12</sup> underscoring the importance of China as a trade partner for the EU.

With polymer production closely linked to oil and gas markets, the industry is highly susceptible to geopolitical tensions and resultant trade restrictions. The recent Middle East conflict in particular has laid bare the vulnerability of import-dependent economies amid disruption to petrochemical supply chains. For example, polymer prices surged by 41-42 per cent following the commencement of the US-Israel war with Iran, driven by steep increases in crude oil and naphtha prices.<sup>13</sup> The soaring operating costs and logistical barriers have constrained production and supply, but the impacts are then reflected in the rising cost of plastic packaging and other consumer goods. Moreover, with nearly 84 per cent of Middle Eastern polyethylene exports dependent on the Strait of Hormuz, the conflict has constrained availability in key importing regions including Asia and Europe<sup>14</sup> and has led importing countries to urgently seek alternative, more stable partners.



This is likely to particularly impact China, the world's biggest net importer of many primary plastics, where the import share from the Middle East has risen from 9.7 per cent in 2008 to 29.9 per cent in 2017<sup>15</sup> amid the strengthening of trade relations.

Beyond conflicts, trade dynamics have also become increasingly important in recent years as the Trump administration in the US has sought to use tariffs to control global trade and increase US competitiveness.

While US tariffs have led China to divert greater exports to the EU, described as a 'flooding' of the market with cheap virgin material that undercuts domestic EU production, the European Commission has responded with anti-dumping duties on imports of polyethylene terephthalate (PET) from China. The duties came after investigations showed the dumping of Chinese imports "... presented a threat of a clearly foreseeable and imminent injury to EU industry ... the influx of dumped Chinese imports at artificially low prices was undercutting EU industry's prices, forcing the EU industry to reduce its prices to such a low level that they were selling their products at a loss."<sup>16</sup>

Such trade defence measures form a core part of the Critical Chemical Alliance agenda and the action plan to ensure fair competition<sup>17</sup> as the industry mobilises to protect EU sovereignty and critical production in the face of geopolitical uncertainties which have revealed weakness on the region's reliance on imports.<sup>18</sup> The anti-dumping duties are likely to have a significant impact on Chinese exports as the PET export trade share has risen from 1.8 per cent in 1988 to 10.6 per cent in 2022,<sup>19</sup> making it a major polymer commodity for the country.

With a growing supply chain and geopolitical uncertainty, both the EU and China have strong incentives to collaborate on long-term policy and industrial planning to build greater resilience for their respective domestic industries while providing a stable option for potential trading partners.

## THE COST OF INACTION IN EUROPE

**Despite the prioritisation of the circular economy agenda and its importance to bilateral engagement between EU and China, current market dynamics undermine the potential for a genuine circular economy. For example, subsidies on plastic production are currently artificially suppressing the market for recycled content by distorting the true cost of the material.**

Globally, total process energy subsidies to polymerisation are estimated at \$2.2 billion in 2024 and \$4.5 billion in 2050.<sup>20</sup> These dynamics create challenges both in terms of pricing but also availability of recycled plastic feedstocks, exacerbated by the low recyclability of many plastic products due to their design and the chemical additives,<sup>21</sup> as well as hugely variable levels of efficient collecting and sorting of materials for recycling.

Industry estimates that investment in recycling capacity to accommodate 16 million tonnes by 2025 is required to meet the recycled content targets outlined in the Packaging and Packaging Waste Regulation.<sup>22</sup> Yet investments in product and system redesign to improve recyclability, effective separate waste collection and proven recycling infrastructure for close-loop recycling remain currently limited. Moreover, the main 'competition' for achieving recycling content targets with recycled EU plastics is not simply the threat of subsidised cheap virgin plastics and imports, but cheap imports of recycled content that are challenging to quality control or to verify as genuinely recycled due to lack of transparency in supply chains.<sup>23</sup>

As the EU restructures its economy to eliminate unnecessary use and harms associated with plastics, with strong bilateral cooperation with China and others as part of the plastics Treaty negotiations, a managed transition towards an industry focussed on high quality greener chemicals and products presents significant economic opportunities and trade partnerships.

To mitigate the risks of industry stagnation and ensure a just transition to green jobs in the circular economy, for example in reuse and recycling systems, policy and cooperation must be strengthened. This transition has the potential to create new jobs, foster innovation in sustainable technologies and build economic resilience for the industry. Reducing virgin plastic production stimulates innovation in alternative materials, products and systems and improves the value of recycled content, which is currently artificially non-competitive due to the market dynamics and subsidies which favour virgin material.

Combined with adequate measures to ensure the high-quality and safety of materials, including recycled materials, Europe would remain at the forefront of sustainable material development and a toxic-free circular economy while otherwise ensuring access to critical materials and protecting sovereignty.

Beyond subsidies and challenges with feedstocks, continued production growth is misaligned with the EU's climate ambitions. Producing virgin plastics, especially from petroleum-based feedstocks, is highly energy-intensive, while countries such as China still rely heavily on coal-based production,<sup>24</sup> which undermines the environmental ambitions of importing countries.



Projections suggest that under the current suite of policies, greenhouse gas emissions from the plastics lifecycle will more than double by 2060, from 1.8 gigatonnes of carbon dioxide equivalent (Gt CO<sub>2</sub>e) to 4.3 Gt CO<sub>2</sub>e.<sup>25</sup> By reducing production, the EU can decrease its overall energy consumption and reduce its carbon footprint. This would help meet climate goals, particularly in the context of achieving net-zero emissions by 2050.

Modelling from Eunomia has shown that, from a carbon-budget perspective, a collective global polymer reduction target along the lines of 40 per cent by 2040, which has been explored in the context of the plastics negotiations, would represent a minimum ambition scenario to keep the plastics treaty objectives aligned with global climate aspirations and would require significant action along the value chain, in addition to industry decarbonisation efforts, to be feasible. More than half the carbon budget for plastics was expected to be spent by 2025.<sup>26</sup>

One thing is clear, the current distorted market dynamics for plastics ensure that continuous dependence on virgin plastics and single-use plastics locks in a system which neither reflects the true societal costs nor promotes the necessary benefits for environment and health of the circular economy.

Moreover, in an unmanaged transition scenario where global overcapacity is worsened, producers and converters may continue to shift towards cheaper polymers produced overseas, further undermining EU production. This impact could be compounded if production costs in the EU increase due to all-important efforts to decarbonise – a non-negotiable point for European industry.

In the end, the EU must stay the course but the transition is significantly facilitated, and associated risks reduced, if it can secure a comparable global framework with a critical mass of other countries.

## THE CASE FOR COLLABORATION IN CHINA

**The 2018 ban on imports of plastic waste to China under its Operation National Sword policy demonstrated China's critical role as a player in the plastics industry, with the ability to completely reshape global supply chains and industry. This power base has only increased as China continues to invest in increasing its production capacity.**

Between 2020-23, China produced an estimated 1.77 billion tonnes of plastic, accounting for 36 per cent of all global production during this period. In recent years it has emerged as a behemoth in low-cost production and export of plastics, cementing a position as the world's largest producer by far.

Dramatically lower feedstock prices since 2007 led to Chinese expansion into new ethylene crackers and plastic production which accelerated this growth. However, despite this new production capacity, operating rates for some precursor facilities are lower than 50 per cent, increasing operational costs and reducing profit margins.<sup>27</sup>

China produced 135.876 million tonnes in 2023 but exported only 6.54 million tonnes and imported 28.23 million tonnes,<sup>28</sup> demonstrating a significant internal supply-demand mismatch. Moreover, in a situation where supply is vastly outstripping demand and emerging markets are expanding their own capacity in order to reduce reliance on Chinese plastics, China's domestic industry is likely to face challenges in the near future.<sup>29</sup>

One area of potential concern for the future, considering the need for China to access global markets, is increasing regulation in Europe. For example, EU mandated recycled content targets are set to significantly increase demand for recycled polymers, with ICIS projecting EU producers will require approximately 5.4 million tonnes of rPE, rPP and rPET annually by 2030, rising to 11.5 million tonnes by 2040.<sup>30</sup>

These requirements will also shape sourcing strategies for exporters, as any products placed on the EU market must meet recycled content thresholds, driving demand for certified recycled materials in countries of origin. For China, one of the EU's largest trading partners, this is expected to translate into supplying more than one million tonnes of recycled plastics for export bound goods by 2040. This shift is likely to spur value chain transformation, reinforcing that compliance with EU standards is not only prerequisite for market access but an increasingly important dimension of global competitiveness.<sup>31</sup>

Despite the continued investment in growth and high volumes of plastic exports, the Government of China has adopted targets for carbon neutrality by 2060, an ambition currently misaligned with planned expansion. Moreover, the 15th five-year-plan released by the Government in 2026 sets a target to cut China's "carbon-intensity" by 17 per cent by 2030.<sup>32</sup> A reduction in production and transition to a genuine circular economy could provide a systemic and resilient framework to deliver prosperity, green jobs and a low-carbon future.<sup>33</sup>

In addition to the focus on circular economy, since 2020 China has also moved to adopt a series of laws and initiatives for the banning and phasing out of certain plastic products.<sup>34</sup> Beyond aforementioned challenges with overcapacity, increasing awareness of the scale and severity of plastic pollution on the environment as well as on major industries



has started to penetrate both consumers and policymakers. For example, plastic marine pollution has cost the fishing industry in China an economic loss of more than \$500 million per year.<sup>35</sup> Analysis of 21 types of near-shore fish has shown that the fish contain a microplastic content of 0.2–26.9 pieces/g and a 74.2 per cent concentration was discovered in the soft tissue of shellfish.<sup>36</sup> With pollution now threatening critical industries such as fisheries and agriculture, there is an imperative to act.

With the signalling of a potential position shift on lifecycle measures from China and sustained high-level and negotiator-level engagement between the EU and China in the recent negotiating sessions, the ground is ripe for increased collaboration in charting a vision for a circular economy that facilitates shared ambitions on climate, plastics policy and circularity which also acknowledges the need to reduce the overall volume of plastics entering the economy.

It is apparent that access to the EU market, particularly for recycled polymers, will require increased domestic investment and support greater quality and traceability of materials across circular systems globally.<sup>37</sup> Moreover, notwithstanding challenges with the technical feasibility of safe recycling, pivoting more production in China to recycled content would decrease reliance on fossil fuels and help to mitigate both the challenges of overproduction and capacity and the trade dynamics leading to the undercutting of EU markets with cheap virgin plastics

## CONCLUSION

**To support a just, orderly and managed transition towards alternative toxic-free circular systems and reduced plastic production and consumption, the EU and China should work together to establish a clear regulatory framework for this transition and so ensure predictability for industry and stability in markets. This would have clear benefits for the economy and environment while protecting the sovereignty of each player.**

At a high level, EU and Chinese industries face common challenges – the limited recyclability of plastic products, including textiles, due to chemical additives and current recycling techniques and infrastructure ill-equipped to meet increased legal targets on recycled content, especially for food contact applications.

Moreover, increasing global supply chain instability and tariffs place greater pressure on industry in a complex and unpredictable geopolitical environment. While China has a clear case to increase capacity for non-toxic and traceable recycled feedstock to meet growing demand by Fast Moving Consumer Goods Companies and global markets, the domestic collection of materials for recycling remains insufficient.<sup>38</sup>

In parallel, the EU faces a competitiveness dilemma as the market is flooded with cheap virgin imports, undermining EU industry and limiting the ability to achieve an ambitious circularity agenda.

Mutually beneficial trade agreements and collaboration on strong measures on toxicity, circular design, transition to reuse systems and high-quality separate collection and recycling systems could start to bridge this gap.

It is arguably in the interests of both parties to advance a global regulatory framework which addresses more than just waste management, with a set of global rules that protect domestic economies and establish a clear and level playing field for global industry.

# RECOMMENDATIONS

The negotiations for a new plastics treaty are at a critical inflection point where certain deals will need to be made and compromises reached in order to chart a path forward for addressing plastic pollution.

Those conversations do not happen in a vacuum and must account for the contextual realities of the plastics industry, projected growth and challenges, geopolitical developments and trade, as well as in the context of the environment and health. For that reason, sustained engagement between the EU and China and a pathway for securing provisions related to the upstream control of plastics and the transition towards a genuine circular economy are essential.

**In order to advance bilateral negotiations on production, support the ongoing plastic treaty negotiations and strengthen the national case for action, we recommend:**

- **sustained bilateral engagement between EU and China** to promote cooperation on reducing global overcapacity challenges and emissions reduction efforts as part of an holistic approach to plastics industry transition and decarbonisation efforts
- **strengthened cooperation and alignment on polymer and product design standards**, including recyclates, to promote a non-toxic circular economy and protect human health. This would include exploring policy alignment on the foundational aspects of a circular economy necessary in a legally binding instrument, including provisions related to reuse systems, design, transparency and waste management, among other initiatives
- **advancement of a shared vision for a comprehensive Global Plastics Treaty** with globally agreed measures across the full lifecycle of plastics, with upstream controls that facilitate measures downstream as well as more harmonised global trade
- **protection of the EU internal market from the introduction of polymers and products which undermine EU standards (in terms of safety and quality) and climate objectives**, including through restrictions on imports and transparency measures. This should be paired with a managed transition for the domestic plastic production industry and a strong focus on the transition to jobs and growth in the circular economy, supported by robust regulations and investment support as part of the Circular Economy package
- **promotion of mutual understanding on production of polymers** and products deemed critical to EU industries and sovereignty while reducing supply chain risks.



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