A collective vision for the global recycled materials industry

Recycled materials as strategic resources

The Bureau of International Recycling (BIR) is the collective voice of the global recycled materials industry. Bringing together national recycling associations and leading companies from across all continents, BIR represents an industry operating worldwide and essential to manufacturing, global trade, economic resilience and sustainable industrial development.

The global recycled materials industry produces the raw materials that feed manufacturing supply chains worldwide. For approaching 80 years, BIR has united this global industry around a shared conviction: materials do not lose their value at the end of a product's life. When properly collected, sorted and processed, they become high-quality raw materials that sustain manufacturing, reduce environmental impact and strengthen economic resilience.

At a time when governments are redefining industrial policy through the lens of climate neutrality, circular economy and economic security, recycling is no longer a peripheral activity; it is foundational. The global recycling industry transforms end-of-life products into specification-grade raw materials that re-enter supply chains across borders and sectors. It reduces reliance on natural resource extraction, lowers greenhouse gas emissions and enables industries to decarbonise at scale. Recognising this industrial reality is essential for coherent and effective policy-making.

A strategic global industry

Manufacturers worldwide rely on the recycled materials industry for a consistent supply of high-quality feedstock, feeding every sector of the global economy – from automotive and construction to healthcare, technology, packaging and infrastructure. The steel in bridges and buildings, the copper in electrical wiring, the aluminium in beverage cans, the plastics in medical devices and consumer electronics – all depend on recycled materials. Scarcely an hour passes without most people using a product made, in part, from recycled content.

Through innovation and advances in technology, as well as adherence to global specifications, recyclers are continuously finding new ways to increase efficiency, producing products at the volumes and of the quality demanded by manufacturers. Recycling itself is a critical manufacturing activity that produces essential industrial inputs indistinguishable in function from primary raw materials. All of this is accomplished while fostering an environmentally sustainable and economically resilient future for our planet.

Recent debates around strategic raw materials and economic security highlight the need for balance. The recognition of recycled materials as strategic assets is a welcomed development. However, proposals to restrict exports or impose protective trade measures without comprehensive analysis may weaken the very resilience they seek to enhance.

BIR (aisbl)
Avenue Franklin Roosevelt 24
1050 Brussels, Belgium

T. +32 2 627 57 70
F. +32 2 627 57 73

bir@bir.org
www.bir.org

Recycling markets operate on global supply and demand dynamics. Artificial constraints can reduce market-based incentives to collect and process, weaken competitiveness and discourage investment in recycling capacity. Effective policy must therefore be evidence-based, proportionate and globally coherent.

In sectors such as steel, aluminium, copper and paper manufacturing, recycled materials are indispensable feedstocks. Their use significantly reduces energy consumption and greenhouse gas emissions while supporting efficient and cost-effective manufacturing.
For many industries, recycled materials represent one of the fastest and most scalable pathways available to reduce industrial emissions while maintaining production capacity and economic competitiveness.

At the same time, recycled materials strengthen economic resilience by diversifying sources of raw material supply. Global supply chains for virgin materials are often geographically concentrated and vulnerable to geopolitical disruption. Recycled materials help mitigate these risks by expanding the pool of available manufacturing inputs and supporting more secure and flexible supply chains.

Central to decarbonisation and climate neutrality efforts

The environmental contribution of recycling is profound and measurable. The use of recycled materials significantly reduces energy consumption and greenhouse gas emissions by providing a sustainable alternative to the use of natural resources. Whether reducing the need to cut down trees for paper, mine ore to produce aluminium or steel, or extract fossil fuels for plastics production, recycled materials represent one of the most immediate and scalable decarbonisation levers available. Recycling reduces environmental footprints and directly contributes to national and international climate commitments. As we move towards a more sustainable future, recycled materials will be essential to supplying, for example, the metals and rare earth elements we need without depleting natural resources.

These benefits are not theoretical. They are embedded in daily industrial practice across the globe. In an era defined by net-zero targets and increasing climate accountability, policies must prioritise sectors that already deliver verified emission reductions. Recycling does precisely that. Any credible pathway to decarbonisation must therefore maximise the production and use of recycled materials.

Secure supply chains supported through innovation

Recycling enhances economic resilience. Modern economies depend on stable and reliable access to raw materials. Yet supply chains for primary resources are often geographically concentrated and vulnerable to disruption. Recycled materials diversify supply sources, strengthen domestic and regional industrial ecosystems, and provide flexibility within global markets. Circularity is not only an environmental objective; it is a strategic economic approach that reinforces competitiveness and supply chain security.

BIR (aisbl)
Avenue Franklin Roosevelt 24
1050 Brussels, Belgium

T. +32 2 627 57 70
F. +32 2 627 57 73

bir@bir.org
www.bir.org

The demand for recycled materials is driving growth globally, and the recycled materials industry is constantly innovating, leveraging AI, robotics, machine learning and advanced sorting technologies to recycle more material, more effectively than ever before. Through investments, the global recycled materials industry is unlocking the ability to recover materials that we were previously not able to recycle, thereby meeting manufacturers' increasing demand. This is all being done in partnership with businesses, policy-makers and communities around the world.

Importance of global market access

The recycling industry is inherently international. Materials arise where consumption occurs; they are processed where infrastructure, expertise and investment are available; and they are incorporated into new products where manufacturing demand exists. Over decades, global recycling markets have evolved through private investment, technological progress and rigorous quality control. This interconnected system enables materials to flow efficiently to the best-equipped facilities to transform them into high-quality inputs. It is a system built on cooperation, competition and continuous improvement.

To that end, allowing for continued market access globally for recycled materials is critical, and this is why BIR advocates strongly for open and fair trade in recycled materials. Sourcing renewable materials does not stop at national borders. Global circularity requires global circulation of materials.
Policies that unnecessarily impede legitimate trade distort markets, damage existing robust supply chains, discourage investment and reduce overall recycling performance. These policies are sometimes enacted in the name of environmentalism but, in reality, hinder sustainability by reducing the recycled material industry's ability to operate and invest in new technologies and infrastructure.

Measures to combat illegal trafficking of materials are both necessary and legitimate, yet they must be carefully targeted so as not to penalise compliant operators engaged in environmentally sound recycling. When regulatory frameworks treat high-quality recycled materials as waste by default or impose disproportionate administrative burdens, the unintended effect may be to favour virgin production and undermine climate objectives.

Policy priorities to strengthen recycling and manufacturing supply chains

Recycled content targets: The most powerful driver of circularity is demand for recycled materials. Mandatory recycled content requirements, design standards that make products easier to recycle, and green public procurement policies provide stable and predictable market signals. When manufacturers are required or incentivised to incorporate recycled inputs as raw material feedstock, recyclers can invest with confidence, scale operations and improve quality. Demand-driven policies align environmental ambition with industrial development and create the conditions necessary for a thriving circular economy.

Extended Producer Responsibility (EPR) schemes: These can support circularity objectives but only when carefully structured. They must complement existing recycling

BIR (aisbl)
Avenue Franklin Roosevelt 24
1050 Brussels, Belgium
T. +32 2 627 57 70
F. +32 2 627 57 73
bir@bir.org
www.bir.org

markets rather than distort them. Systems that centralise control without safeguarding competition and transparency risk limiting innovation and marginalising independent recyclers. Recycling markets frequently function efficiently where materials retain intrinsic value. Policy-makers should ensure that EPR frameworks enhance environmental performance while preserving open and competitive conditions.

Innovation: Mechanical recycling continues to form the backbone of material circularity. Emerging technologies, including the use of AI-based sorting and screening mechanisms, improve the efficiency of recycling operations and increase the quality and volume of recycled materials. Certain chemical recycling processes may provide complementary solutions for specific hard-to-recycle streams.

Clear definitions and robust standards: These are necessary to ensure environmental integrity and maintain public trust. Recycling must remain focused on material recovery and circular use, not on processes that divert materials from productive loops under ambiguous terminology.

Policy alignment: Climate policy, industrial strategy and trade policy must therefore be aligned to ensure that recycled materials are fully integrated as a renewable, reliable source of raw materials, part of the decarbonisation pathway. Particularly in the case of energy-intensive sectors such as steel, the role of recycled materials is critical. Recycled steel enables substantial emissions reductions compared with primary production routes and is immediately deployable at scale. Industrial decarbonisation strategies that fail to maximise the use of recycled materials risk overlooking cost-effective opportunities to reduce emissions.

Constructive, transparent and inclusive dialogue between regulators and industry: A collaborative approach is essential. Policies designed without practical understanding are risking unintended consequences that hinder environmental and economic progress. BIR contributes to policy discussions on behalf of the global recycled materials industry, through active engagement in international institutions and multilateral processes.

Design for Recycling: The cost of recycling is increased by the high level of complexity in the design of everyday products. These can incorporate a wide array of materials and components as well as, in some cases, hazardous substances. In certain instances, this makes recycling either impossible or commercially non-viable. The recycled materials industry is working on new solutions to tackle design complexity and BIR consistently campaigns for recycling to be taken into consideration at the earliest stages of product development.

Conclusion

The recycled materials industry is a cornerstone of sustainable industrial development. Recycled materials are high-value, renewable resources that support climate mitigation, supply chain security and global competitiveness. Recyclers are committed partners in delivering circular economy objectives at scale.

BIR (aisbl)
Avenue Franklin Roosevelt 24
1050 Brussels, Belgium
T. +32 2 627 57 70
F. +32 2 627 57 73
bir@bir.org
www.bir.org

The time has come for a decisive and coordinated policy approach worldwide. Governments and regulators should recognise recycled materials as strategic raw materials within industrial and climate strategies, and recycling as a manufacturing activity. They should ensure predictable and proportionate regulatory frameworks that facilitate legitimate trade while effectively targeting illegal practices. They should stimulate demand for recycled materials through binding recycled content targets, product design standards and sustainable public procurement. They should safeguard competition and transparency in Extended Producer Responsibility systems. They should align trade, environmental and industrial policies to ensure that recycled materials can circulate efficiently across integrated global markets.

This is a call for smart, coherent and evidence-based regulation that strengthens the common global objective of circularity.

The global recycled materials industry and its national trade association members stand ready to continue investing, innovating and collaborating. Through BIR, they offer expertise, data and constructive partnerships to policy-makers around the world. By creating an enabling framework that recognises recycled materials as strategic assets and supports their production, use and trade, governments can accelerate decarbonisation, reinforce economic resilience and deliver tangible progress towards a truly circular global economy.

BIR (aisbl)
Avenue Franklin Roosevelt 24
1050 Brussels, Belgium

T. +32 2 627 57 70
F. +32 2 627 57 73

bir@bir.org
www.bir.org